SHEDS Source Vars File Creation

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July 26, 2017

# Purpose

This material documents the creation of the SHEDS-HT default source variables and source scenarios file. The file is generated by the code contained herein.

This builds on the habits and practices data reported in the the following reference:

*Isaacs KK, Glen WG, Egeghy P, Goldsmith MR, Smith L, Vallero D, Brooks R, Grulke CM, Özkaynak H. SHEDS-HT: an integrated probabilistic exposure model for prioritizing exposures to chemicals with near-field and dietary sources. Environ Sci Technol. 2014 Nov 4;48(21):12750-9.*

The relevant data records from sources are documented, along with final default values.

# General Rules

The following are some general rules that are applied when determining source scenario and source variable inputs

* Products intended for release to surfaces indoors will have a product.indirect scenario
* Durations of use are durations of direct active use of the product (as opposed to time on skin, e.g.)
* Specialty products or other rarely used products with no data will have an assumed population prevalence of 0.01

### Dermal Scenario Rules

* All products will have a direct dermal scenario
* Products assumed to have a wash-off post-use will have a 1% residual on the skin of mass of contact
* Powder products will have 30% residual on the skin of mass of contact due to brush-off
* Products applied to skin will have f.contact=1
* Products applied to hair will have an assumed f.contact= 0.5
* Spray products not applied to the skin are assumed to have an f.contact=0.01
* Home improvement products (excluding paints and primers and spray products) lawn and garden products, and pesticides are assumed to have a f.contact value = .5 g divided by the mean product mass (based on the general range of RIVM DIY product skin mass values ranging from .01-.5g)
* Home improvement products, (excluding paints and primers and spray products) are assumed to have a f.contact value = .5 g divided by the mean product mass (based on the general range of RIVM DIY product values ranging from .08-0.5g)
* Paints and primers (except Arts and Crafts paints and spray paints) will have an f.contact value equal to .03 g/min \*(the RIVM default value, 30 mg/min, see Paint Fact Sheet) multiplied by the mean product duration divided by the mean product mass
* Arts and Crafts paints will have f.contact = 1.4 g (the RIVM "poster paint" default value, see Children's Toys Fact Sheet) divided by the mean product mass
* Cleaning products will have a default value f.contact= .01 (See RIVM Cleaning product fact sheet)
* Other products have assumed/estimated custom values as noted in the tables below

### Inhalation Scenario Rules

* All products will have an inhalation of vapor scenario
* Products assumed to be primarily aerosol spray products will have a uniform distribution of fraction aerosolized of 0.5-1.0 based on RIVM cleaning product fact sheet Table 9
* Products assumed to be primarily trigger spray products will have a uniform distribution of fraction aerosolized of 0.1-0.2 based on RIVM cleaning product fact sheet Table 9
* Products assumed to be mix of aerosol/trigger spray products will have a uniform distribution of fraction aerosolized of 0.1-1.0 based on RIVM cleaning product fact sheet Table 9
* Products released outdoors will have an aerosol cloud volume of 480 m3
* Products released indoors will have an aerosol cloud volume of 24 m3

### Down the Drain Scenario Rules

*In general, personal care products (e.g. toothpaste, shampoo) and other products to be applied to skin (e.g. body paint), interior cleaners designed to be applied and then removed (e.g. surface cleaners), laundry products, products for application to clothes (e.g. antistatic spray), and other products for washing/cleaning of humans or pets (e.g., adhesive remover for hands, pet shampoo) are assumed to have a residential down-the-drain disposal fraction f.drain = 1.0*  
Products designed for permanent application to residential or other surfaces (e.g., paints, spray adhesives) were assumed to have f.drain values ranging from 0 to 0.1, to account for potential disposal of a portion of the mass used down the drain (e.g. via cleaning of containers or brushes) \*Other products (e.g., wood polishes, arts and craft products) with larger uncertainties as to ultimate fate (retention on surfaces or disposal) are assigned f.drain ranging from 0 to 0.3. Products designed solely for complete application to outdoor surfaces with little potential for clean-up indoors (e.g. exterior cleaners or lawn products) or products that would only be disposed of via solid waste (e.g. play dough) have no down the drain disposal

## 1 . P.AC.010.029 arts and crafts adhesive-spray

### spray adhesives for primarily craft purposes, including spray mounts and stencil placement sprays

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM DIY Fact Sheet | Glue - Tube glue (hobby, small tube) | 9 g | 1/week | 10 min |  |
| RIVM DIY Fact Sheet | Glue - Two-component glue | 20 g | 3 /year | 30 min |  |
| RIVM DIY Fact Sheet; vapor only | Glue - Hot melt adhesive | 65 g | 1/month | 25 min |  |
| RIVM DIY Fact Sheet | Glue - Spray glue | 170 s \* 1.5 g/s = 255 g | 1/month |  |  |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | assume 10 bursts of 1 s for hobby use of spray glue |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 18 | Lognormal | 0 | 99 | B | approx average of hobby glues (hobby tube/hot melt) |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 0 | 12 | B | hobby product prevalence for familes with children |
| Direct use prevalence (fraction) | use.prev | 0.26 | point | 13 | 99 | M | average of hobby product prevalence for families and older adults |
| Direct use prevalence (fraction) | use.prev | 0.26 | point | 13 | 99 | W | average of hobby product prevalence for families and older adults |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B | hobby product prevalence for familes with children |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 2 . P.AC.010.999 arts and crafts adhesive-NOC

### glue sticks, glitter glues, fabric glues, craft glue, and other adhesives used for primarily craft purposes

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM DIY Fact Sheet | Glue - Tube glue (hobby, small tube) | 9 g | 1/week | 10 min |  |
| RIVM DIY Fact Sheet | Glue - Two-component glue | 20 g | 3 /year | 30 min |  |
| RIVM DIY Fact Sheet; vapor only | Glue - Hot melt adhesive | 65 g | 1/month | 25 min |  |
| RIVM DIY Fact Sheet | Glue - Spray glue | 170 s \* 1.5 g/s = 255 g | 1/month |  |  |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | Approx average of reported |
| Frequency (per year) | use.freq | 22 | lognormal | 0 | 99 | B | Approx average of reported |
| Duration of Direct Use (min) | duration | 22 | Lognormal | 0 | 99 | B | Approx average of reported |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 0 | 12 | B | hobby product prevalence for familes with children |
| Direct use prevalence (fraction) | use.prev | 0.26 | point | 13 | 99 | M | average of hobby product prevalence for families and older adults |
| Direct use prevalence (fraction) | use.prev | 0.26 | point | 13 | 99 | W | average of hobby product prevalence for families and older adults |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B | hobby product prevalence for familes with children |
| Fraction of product mass in contact with skin | f.contact | 0.017 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 3 . P.AC.020.000 arts and crafts cleaner

### solvent-based products for cleaning paint, adhesives, etc. from hands or surfaces

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | ~.5 oz |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B | assumed less than general "hobby product" values |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B | assumed less than general "hobby product" values |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 4 . P.AC.030.029 arts and crafts finish-spray

### spray shellacs or polyurethane coatings for primarily craft purposes

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | Assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B | assumed less than general "hobby product" values |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B | assumed less than general "hobby product" values |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 5 . P.AC.030.999 arts and crafts finish-NOC

### shellacs or polyurethane coatings for primarily craft purposes

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B | assumed less than general "hobby product" values |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B | assumed less than general "hobby product" values |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 6 . P.AC.040.000 arts and crafts paint

### paints and colorants for primarily craft purposes (including acrylic and enamel paints)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Paints | 0.13-1612 (g/use; min-max ranges for North America) | 0.003-1 (per day; min-max ranges for North America) |  |  |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | ~1 oz |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 0 | 12 | B | Values for households with parents |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B | Values for households with parents |
| Fraction of product mass in contact with skin | f.contact | 0.047 | Point | 0 | 99 | B | See general rules for arts and craft paint |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 7 . P.AC.050.029 body paint-spray

### body paints, markers, glitters, play cosmetics, and halloween cosmetics (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Leg and Body Paints |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.003; 0.011; |  |  |
| RIVM Cosmetics Fact Sheet | Face paint: adults | 1.7 g | 6 /year | 480 min |  |
| RIVM Cosmetics Fact Sheet | Face paint: children | 1.4 g | 12 /year | 480 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | Approx face paint x 10 |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 12 | B |  |
| Frequency (per year) | use.freq | 6 | lognormal | 13 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B | assume 20 min to apply |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 8 . P.AC.050.999 body paint-NOC

### body paints, markers, glitters, play cosmetics, and halloween cosmetics

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Leg and Body Paints |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.003; 0.011; |  |  |
| RIVM Cosmetics Fact Sheet | Face paint: adults | 1.7 g | 6 /year | 480 min |  |
| RIVM Cosmetics Fact Sheet | Face paint: children | 1.4 g | 12 /year | 480 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | Approx face paint x 10 |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 12 | B |  |
| Frequency (per year) | use.freq | 6 | lognormal | 13 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B | assume 20 min to apply |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 9 . P.AC.060.000 bubble solution

### liquid bubble solutions, including solutions for bubble machines

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B | assume 4 x month in summer |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.6 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.05 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 10 . P.AC.070.000 craft kit

### multi-component crafting kits where individual products are not designated

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | All assumed; mass = ~ 1 oz |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.047 | Point | 0 | 99 | B | See general rules for arts and craft paint |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 11 . P.AC.080.000 crayons

### wax crayons for coloring or illustration

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 12 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 13 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 12 . P.AC.090.000 dye

### products for dying fabrics

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.028 | Point | 0 | 99 | B | See general rules for arts and craft paint |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 13 . P.AC.100.029 fabric paints and sealers-spray

### paints or sealers for treating fabrics (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | All assumed; mass = ~ .5 oz |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 14 . P.AC.100.999 fabric paints and sealers-NOC

### paints or sealers for treating fabrics

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | All assumed; mass = ~ .5 oz |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.093 | Point | 0 | 99 | B | See general rules for arts and craft paint |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 15 . P.AC.110.000 finger paint

### non-edible finger paints

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Children's Toys fact sheet | Finger paint | 20 g | 100/year | 45 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 100 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 45 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 16 . P.AC.120.000 flocking

### flocking and artificial snow

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Glass Frostings, Window Tints, and Artificial Snow | (ounces per year: mean; SD) 13.82; 14.91 | (per year: mean, SD) 2.78; 21.96 | (minutes: mean;sd) 29.45; 48.16 | 10% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 140 | Lognormal | 0 | 99 | B | ~13 oz/ 3 per year |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 17 . P.AC.130.000 fogger

### liquid solutions for fogger machines

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | Assumed |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 18 . P.AC.140.000 glaze

### liquid products for glazing craft pottery

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B | Assume uses will use relatively frequently |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.005 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 19 . P.AC.150.000 gun cleaner

### liquid solutions for cleaning interior or exterior of firearms

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | .5 oz |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.033 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 20 . P.AC.160.000 pens and markers

### writing utensils containing liquid or gel ink

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.1 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.05 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 21 . P.AC.170.000 play dough

### children's play modeling clays

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Children's Toys fact sheet | modelling clay | 350 g | 52/year | 60 min |  |
| SUPERB (Bennett et al. 2012) | Hobby products |  |  |  | 40; 12 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 350 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 0 | 12 | B | hobby product prevalence for familes with children |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B | hobby product prevalence for familes with children |
| Fraction of product mass in contact with skin | f.contact | 0.2 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 22 . P.AP.010.000 antifreeze

### antifreeze and/or coolant solutions for motorized vehicles

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 960 | Lognormal | 0 | 99 | B | ~32 oz |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.03 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.00052 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 23 . P.AP.020.029 auto air freshener-spray

### air fresheners for car interiors (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 6 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 24 . P.AP.020.999 auto air freshener-NOC

### air fresheners for car interiors, including products for vents

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 6 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.05 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 25 . P.AP.030.029 auto fluids and additives-spray

### power steering fluids, transmission fluids, brake fluids, fuel injector cleaners, gas treatments, or leak stoppers (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Battery Terminal Protectors | (ounces per year: mean; SD) 16.49; 87.84 | (per year: mean, SD) 3.95; 24.33 | (minutes: mean;sd); 9.61; 18.15 | 7% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Gasket Remover | (ounces per year: mean; SD) 13.25; 22.35 | (per year: mean, SD) 2.5; 4.39 | (minutes: mean;sd); 23.57; 27.18 | 3% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Ignition and Wire Dryers | (ounces per year: mean; SD) 9.02; 14.59 | (per year: mean, SD) 3.01; 5.71 | (minutes: mean;sd); 7.24; 8.48 | 5% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 115 | Lognormal | 0 | 99 | B | ~32 oz/ 3 per year |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | B | Consensus |
| Duration of Direct Use (min) | duration | 15 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.07 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.07 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 26 . P.AP.030.999 auto fluids and additives-NOC

### power steering fluids, transmission fluids, brake fluids, fuel injector cleaners, gas treatments, or leak stoppers

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Battery Terminal Protectors | (ounces per year: mean; SD) 16.49; 87.84 | (per year: mean, SD) 3.95; 24.33 | (minutes: mean;sd); 9.61; 18.15 | 7% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Gasket Remover | (ounces per year: mean; SD) 13.25; 22.35 | (per year: mean, SD) 2.5; 4.39 | (minutes: mean;sd); 23.57; 27.18 | 3% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Ignition and Wire Dryers | (ounces per year: mean; SD) 9.02; 14.59 | (per year: mean, SD) 3.01; 5.71 | (minutes: mean;sd); 7.24; 8.48 | 5% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 115 | Lognormal | 0 | 99 | B | ~32 oz/ 3 per year |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | B | Consensus |
| Duration of Direct Use (min) | duration | 15 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.07 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.07 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0043 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 27 . P.AP.040.029 auto lubricant-spray

### engine lubricants and belt dressings, not including motor oils (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Spray Lubricant for Cars | (ounces per year: mean; SD) 18.63; 54.74 | (per year: mean, SD) 10.31; 30.71 | (minutes: mean;sd); 9.9; 35.62 | 18% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | ~ 19 oz / 11 per year |
| Frequency (per year) | use.freq | 11 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.18 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.18 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.18 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 28 . P.AP.040.999 auto lubricant-NOC

### engine lubricants and belt dressings, not including motor oils

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Spray Lubricant for Cars | (ounces per year: mean; SD) 18.63; 54.74 | (per year: mean, SD) 10.31; 30.71 | (minutes: mean;sd); 9.9; 35.62 | 18% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | ~ 19 oz / 11 per year |
| Frequency (per year) | use.freq | 11 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.18 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.18 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.18 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 29 . P.AP.050.029 auto paint-spray

### paints and primers for auto body or engine (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Aerosol Spray Paints for Cars | (ounces per year: mean; SD) 44.95; 89.78 | (per year: mean, SD) 4.5; 9.71 | (minutes: mean;sd) 42.77; 71.39 | 12% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Auto Spray Primers | (ounces per year: mean; SD) 70.37; 274.56 | (per year: mean, SD) 6.42; 33.89 | (minutes: mean;sd); 51.45; 86.11 | 9% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 360 | Lognormal | 0 | 99 | B | ~60 oz / 5 year |
| Frequency (per year) | use.freq | 5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 50 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 30 . P.AP.050.999 auto paint-NOC

### paints and primers for auto body or engine

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Aerosol Spray Paints for Cars | (ounces per year: mean; SD) 44.95; 89.78 | (per year: mean, SD) 4.5; 9.71 | (minutes: mean;sd) 42.77; 71.39 | 12% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Auto Spray Primers | (ounces per year: mean; SD) 70.37; 274.56 | (per year: mean, SD) 6.42; 33.89 | (minutes: mean;sd); 51.45; 86.11 | 9% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 360 | Lognormal | 0 | 99 | B | ~60 oz / 5 year |
| Frequency (per year) | use.freq | 5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 50 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0014 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 31 . P.AP.060.000 auto refrigerant

### refrigerants and freon products for auto applications

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 0.5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.017 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 32 . P.AP.070.000 boat cleaner

### cleaners, washes, and polishes for exterior marine applications

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Moran et al 2012) Frequencies are per month | Car cleaner |  | 0.92; (1.45); 0.6; (0.77); 0.36; (0.48); 1.38; (1.68) Mean (SD) for W;M parents; W;M older adults |  | 32%; 47%; 20%; 34% (W;M parents W; M older adults) |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 33 . P.AP.080.000 boat engine fluids

### engine fluids for marine applications

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.005 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 34 . P.AP.090.000 body cleaner

### cleaners, shampoos, and washes for auto body exterior (not including wax products)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Moran et al 2012) Frequencies are per month | Car cleaner |  | 0.92; (1.45); 0.6; (0.77); 0.36; (0.48); 1.38; (1.68) Mean (SD) for W;M parents; W;M older adults |  | 32%; 47%; 20%; 34% (W;M parents W; M older adults) |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 150 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.41 | point | 13 | 99 | M | SUPERB average |
| Direct use prevalence (fraction) | use.prev | 0.26 | point | 13 | 99 | W | SUPERB average |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.41 | point | 0 | 99 | B | SUPERB average |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 35 . P.AP.100.029 body repair-spray

### products for repairing auto body exteriors, including bondo-type products and scratch fillers (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 150 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.03 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.03 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 36 . P.AP.100.999 body repair-NOC

### products for repairing auto body exteriors, including bondo-type products and scratch fillers

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Auto Spray Primers | (ounces per year: mean; SD) 70.37; 274.56 | (per year: mean, SD) 6.42; 33.89 | (minutes: mean;sd); 51.45; 86.11 | 9% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 150 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.03 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.03 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0033 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 37 . P.AP.110.029 body wax-spray

### auto body waxes and coatings, including combo wash/wax products (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Moran et al 2012) Frequencies are per month | Car cleaner |  | 0.92; (1.45); 0.6; (0.77); 0.36; (0.48); 1.38; (1.68) Mean (SD) for W;M parents; W;M older adults |  | 32%; 47%; 20%; 34% (W;M parents W; M older adults) |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 150 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.41 | point | 13 | 99 | M | SUPERB average |
| Direct use prevalence (fraction) | use.prev | 0.26 | point | 13 | 99 | W | SUPERB average |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.41 | point | 0 | 99 | B | SUPERB average |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 38 . P.AP.110.999 body wax-NOC

### auto body waxes and coatings, including combo wash/wax products

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Moran et al 2012) Frequencies are per month | Car cleaner |  | 0.92; (1.45); 0.6; (0.77); 0.36; (0.48); 1.38; (1.68) Mean (SD) for W;M parents; W;M older adults |  | 32%; 47%; 20%; 34% (W;M parents W; M older adults) |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 150 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.41 | point | 13 | 99 | M | SUPERB average |
| Direct use prevalence (fraction) | use.prev | 0.26 | point | 13 | 99 | W | SUPERB average |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.41 | point | 0 | 99 | B | SUPERB average |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 39 . P.AP.120.029 degreaser-spray

### auto, engine and brake degreasers (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Engine Degreasers | (ounces per year: mean; SD) 46.95; 135.17 | (per year: mean, SD) 4.18; 13.72 | (minutes: mean;sd) 29.29; 48.14 | 17% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Carburetor Cleaners | (ounces per year: mean; SD) 22; 50.6 | (per year: mean, SD) 3.77; 7.1 | (minutes: mean;sd) 13.57; 23 | 22% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Transmission Cleaners | (ounces per year: mean; SD) 35.71; 62.93 | (per year: mean, SD) 2.28; 3.55 | (minutes: mean;sd); 27.9; 61.44 | 2% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Brake Quieters Cleaners | (ounces per year: mean; SD) 11.72; 13.25 | (per year: mean, SD) 3; 6.06 | (minutes: mean;sd); 23.38; 36.32 | 3% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 300 | Lognormal | 0 | 99 | B | ~30 oz/ 3 per year |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.11 | point | 13 | 99 | M | average reported |
| Direct use prevalence (fraction) | use.prev | 0.11 | point | 13 | 99 | W | average reported |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.11 | point | 0 | 99 | B | average reported |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 40 . P.AP.120.999 degreaser-NOC

### auto, engine and brake degreasers

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Engine Degreasers | (ounces per year: mean; SD) 46.95; 135.17 | (per year: mean, SD) 4.18; 13.72 | (minutes: mean;sd) 29.29; 48.14 | 17% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Carburetor Cleaners | (ounces per year: mean; SD) 22; 50.6 | (per year: mean, SD) 3.77; 7.1 | (minutes: mean;sd) 13.57; 23 | 22% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Transmission Cleaners | (ounces per year: mean; SD) 35.71; 62.93 | (per year: mean, SD) 2.28; 3.55 | (minutes: mean;sd); 27.9; 61.44 | 2% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Brake Quieters Cleaners | (ounces per year: mean; SD) 11.72; 13.25 | (per year: mean, SD) 3; 6.06 | (minutes: mean;sd); 23.38; 36.32 | 3% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 300 | Lognormal | 0 | 99 | B | ~30 oz/ 3 per year |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.11 | point | 13 | 99 | M | average reported |
| Direct use prevalence (fraction) | use.prev | 0.11 | point | 13 | 99 | W | average reported |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.11 | point | 0 | 99 | B | average reported |
| Fraction of product mass in contact with skin | f.contact | 0.0017 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 41 . P.AP.130.029 detailing-spray

### products for cleaning, polishing, or protecting car interior surfaces, apholstery, leather, carpeting, tires, or rims (spray or aerosol formulation specified

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Tire/Hubcap Cleaners | (ounces per year: mean; SD) 31.58; 80.39 | (per year: mean, SD) 11.18; 18.67 | (minutes: mean;sd); 22.66; 23.94 | 16% |
| SUPERB (Moran et al 2012) Frequencies are per month | Car cleaner |  | 0.92; (1.45); 0.6; (0.77); 0.36; (0.48); 1.38; (1.68) Mean (SD) for W;M parents; W;M older adults |  | 32%; 47%; 20%; 34% (W;M parents W; M older adults) |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 90 | Lognormal | 0 | 99 | B | ~32 oz / 12 per year |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 25 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.16 | point | 13 | 99 | M | Use hubcap cleaner value |
| Direct use prevalence (fraction) | use.prev | 0.16 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.16 | point | 0 | 99 | B | Use hubcap cleaner value |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 42 . P.AP.130.999 detailing-NOC

### products for cleaning, polishing, or protecting car interior surfaces, apholstery, leather, carpeting, tires, or rims

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Tire/Hubcap Cleaners | (ounces per year: mean; SD) 31.58; 80.39 | (per year: mean, SD) 11.18; 18.67 | (minutes: mean;sd); 22.66; 23.94 | 16% |
| SUPERB (Moran et al 2012) Frequencies are per month | Car cleaner |  | 0.92; (1.45); 0.6; (0.77); 0.36; (0.48); 1.38; (1.68) Mean (SD) for W;M parents; W;M older adults |  | 32%; 47%; 20%; 34% (W;M parents W; M older adults) |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 90 | Lognormal | 0 | 99 | B | ~32 oz / 12 per year |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 25 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.16 | point | 13 | 99 | M | Use hubcap cleaner value |
| Direct use prevalence (fraction) | use.prev | 0.16 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.16 | point | 0 | 99 | B | Use hubcap cleaner value |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 43 . P.AP.140.000 motor oil

### petroleum-based or synthetic engine lubricants

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 910 | Lognormal | 0 | 99 | B | ~32 oz |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.25 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.25 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.25 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.00055 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 44 . P.AP.150.029 windows or windshield-spray

### products for washing or protecting windshields or windows (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 45 . P.AP.150.999 windows or windshield-NOC

### products for washing or protecting windshields or windows

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 46 . P.HM.010.029 adhesive remover-spray

### solvent products for removing adhesives from surfaces (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Adhesive Removers | (ounces per year: mean; SD) 34.46; 96.6 | (per year: mean, SD) 4.22; 12.3 | (minutes: mean;sd) 121.2; 171.63 | 6% |
| RIVM DIY Fact Sheet | Removers - Glue remover | 2 kg | .25 /year | 240 min |  |
| RIVM DIY Fact Sheet | Removers - Wall paper remover | 19 g to skin (no total given) | .5 /year |  |  |
| EFH 17-16; 17-17 | Adhesive Removers | 81.84 (210.44) fluid oz | 1.66 (1.67) /year | 173 (304.5) min | 58/240 |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 700 | Lognormal | 0 | 99 | B | ~average converted to g |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B | ~ average |
| Duration of Direct Use (min) | duration | 180 | Lognormal | 0 | 99 | B | ~average |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | M | ~average |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | W | ~average |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.15 | point | 0 | 99 | B | ~average |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 47 . P.HM.010.999 adhesive remover-NOC

### solvent products for removing adhesives from surfaces

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Adhesive Removers | (ounces per year: mean; SD) 34.46; 96.6 | (per year: mean, SD) 4.22; 12.3 | (minutes: mean;sd) 121.2; 171.63 | 6% |
| RIVM DIY Fact Sheet | Removers - Glue remover | 2 kg | .25 /year | 240 min |  |
| RIVM DIY Fact Sheet | Removers - Wall paper remover | 19 g to skin (no total given) | .5 /year |  |  |
| EFH 17-16; 17-17 | Adhesive Removers | 81.84 (210.44) fluid oz | 1.66 (1.67) /year | 173 (304.5) min | 58/240 |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 700 | Lognormal | 0 | 99 | B | ~average converted to g |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B | ~ average |
| Duration of Direct Use (min) | duration | 180 | Lognormal | 0 | 99 | B | ~average |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | M | ~average |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | W | ~average |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.15 | point | 0 | 99 | B | ~average |
| Fraction of product mass in contact with skin | f.contact | 0.00071 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 48 . P.HM.020.000 caulk or sealant

### caulks and sealers for household use, including silicone products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM DIY Fact Sheet | Caulk ( called "Sealant cartridge" in European terminology) | 75 g | 3/ year | 30 min |  |
| RIVM DIY Fact Sheet | Caulk for Gluing/Construction adhesive (Called "Sealant / joints / assembly (glue)" in European Terminology) | 390 g | 1 /year | 30 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 75 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.6 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0067 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 49 . P.HM.030.000 concrete

### products for patching or cleaning concrete surfaces

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 8000 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 6.2e-05 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 50 . P.HM.040.029 corrosion protection-spray

### products for protecting metal surfaces from corrosion or removing corrosion (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Aerosol Rust Removers | (ounces per year: mean; SD) 18.21; 81.37 | (per year: mean, SD) 6.17; 9.82 | (minutes: mean;sd) 18.57; 48.54 | 8% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 90 | Lognormal | 0 | 99 | B | ~18 oz / 6 year |
| Frequency (per year) | use.freq | 6 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.08 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.08 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.08 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 51 . P.HM.040.999 corrosion protection-NOC

### products for protecting metal surfaces from corrosion or removing corrosion

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Aerosol Rust Removers | (ounces per year: mean; SD) 18.21; 81.37 | (per year: mean, SD) 6.17; 9.82 | (minutes: mean;sd) 18.57; 48.54 | 8% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 90 | Lognormal | 0 | 99 | B | ~18 oz / 6 year |
| Frequency (per year) | use.freq | 6 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.08 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.08 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.08 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0056 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 52 . P.HM.050.000 degreaser

### products for degreasing indoor surfaces

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Solvent-Type Cleaning Fluids or Degreasers | (ounces per year: mean; SD) 58.3; 226.97 | (per year: mean, SD) 16.46; 44.12 | (minutes: mean;sd) 29.48; 97.49 | 28% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | ~ 1700 g / 17 per year |
| Frequency (per year) | use.freq | 17 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.28 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.28 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.28 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.005 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 53 . P.HM.060.029 finish-spray

### products for permanently coating and protecting wood surfaces, including polyurethane products (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Wood Stains, Varnishes, and Finishes | (ounces per year: mean; SD) 65.06; 174.01 | (per year: mean, SD) 4.21; 12.19 | (minutes: mean;sd) 117.17; 193.05 | 43% |
| RIVM DIY Fact Sheet | Coating - Coating large surfaces | 3 kg | .33 /year | 60 min |  |
| RIVM DIY Fact Sheet | Coating - Repair coatings |  | .1 /year | 240 min |  |
| EFH - 17-14-15 | Wood stains and Varnishes | .9 gallons | 4.0 (4.9)/year | 2.2 hours |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1730 | Lognormal | 0 | 99 | B | ~ average of 3000g and (1850 g /4 year) |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B | ~ average |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B | ~consensus |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.43 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.02 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 54 . P.HM.060.999 finish-NOC

### products for permanently coating and protecting wood surfaces, including polyurethane products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Wood Stains, Varnishes, and Finishes | (ounces per year: mean; SD) 65.06; 174.01 | (per year: mean, SD) 4.21; 12.19 | (minutes: mean;sd) 117.17; 193.05 | 43% |
| RIVM DIY Fact Sheet | Coating - Coating large surfaces | 3 kg | .33 /year | 60 min |  |
| RIVM DIY Fact Sheet | Coating - Repair coatings |  | .1 /year | 240 min |  |
| EFH - 17-14-15 | Wood stains and Varnishes | .9 gallons | 4.0 (4.9)/year | 2.2 hours |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1730 | Lognormal | 0 | 99 | B | ~ average of 3000g and (1850 g /4 year) |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B | ~ average |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B | ~consensus |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.43 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.00029 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.02 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 55 . P.HM.070.000 grout sealer

### products for coating and protecting tile or grout

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM DIY Fact Sheet | Coating - Repair coatings |  | .1 /year | 240 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 340 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0015 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 56 . P.HM.080.000 lock deicer

### products for deicing car or residential locks

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | All assumed, mass= ~.5 oz |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 57 . P.HM.090.029 lubricant-spray

### household maintenance lubricants (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Silicone Lubricants | (ounces per year: mean; SD) 12.5; 27.85 | (per year: mean, SD) 10.32; 25.44 | (minutes: mean;sd) 10.42; 29.47 | 18% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Other Lubricants (excluding automotive) | (ounces per year: mean; SD) 9.93; 44.18 | (per year: mean, SD) 10.66; 25.46 | (minutes: mean;sd) 8.12; 32.2 | 35% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | ~reported |
| Frequency (per year) | use.freq | 10.5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 9 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.27 | point | 13 | 99 | M | average reported |
| Direct use prevalence (fraction) | use.prev | 0.27 | point | 13 | 99 | W | average reported |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.27 | point | 0 | 99 | B | average reported |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 58 . P.HM.090.999 lubricant-NOC

### household maintenance lubricants

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Silicone Lubricants | (ounces per year: mean; SD) 12.5; 27.85 | (per year: mean, SD) 10.32; 25.44 | (minutes: mean;sd) 10.42; 29.47 | 18% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Other Lubricants (excluding automotive) | (ounces per year: mean; SD) 9.93; 44.18 | (per year: mean, SD) 10.66; 25.46 | (minutes: mean;sd) 8.12; 32.2 | 35% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | ~reported |
| Frequency (per year) | use.freq | 10.5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 9 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.27 | point | 13 | 99 | M | average reported |
| Direct use prevalence (fraction) | use.prev | 0.27 | point | 13 | 99 | W | average reported |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.27 | point | 0 | 99 | B | average reported |
| Fraction of product mass in contact with skin | f.contact | 0.017 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 59 . P.HM.100.000 mortar or grout

### products for attaching and grouting interior tiles

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM DIY Fact Sheet | Thinset mortar (called "Tile Glue" in European terminology) | 15 kg | .5 /year | 360 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15000 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 0.5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 360 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 3.3e-05 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 60 . P.HM.110.029 multipurpose adhesive-spray

### general purpose repair adhesives including all purpose glues, super glue, and epoxies; not including wood glues (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Adhesives | (ounces per year: mean; SD) 7.49; 55.9 | (per year: mean, SD) 8.89; 26.2 | (minutes: mean;sd) 15.58; 81.8 | 61% |
| RIVM DIY Fact Sheet | Glue - Bottled glue - universal/wood | 10 g | 1/week | 20 min |  |
| RIVM DIY Fact Sheet | Glue - Spray glue | 170 s \* 1.5 g/s = 255 g | 1/month |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 255 | Lognormal | 0 | 99 | B | "spray glue" value |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B | "spray glue" value |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.61 | point | 13 | 99 | M | "adhesives" value |
| Direct use prevalence (fraction) | use.prev | 0.61 | point | 13 | 99 | W | "adhesives" value |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.61 | point | 0 | 99 | B | "adhesives" value |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 61 . P.HM.110.999 multipurpose adhesive-NOC

### general purpose repair adhesives including all purpose glues, super glue, and epoxies; not including wood glues

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Adhesives | (ounces per year: mean; SD) 7.49; 55.9 | (per year: mean, SD) 8.89; 26.2 | (minutes: mean;sd) 15.58; 81.8 | 61% |
| RIVM DIY Fact Sheet | Glue - Bottled glue - universal/wood | 10 g | 1/week | 20 min |  |
| RIVM DIY Fact Sheet | Glue - Spray glue | 170 s \* 1.5 g/s = 255 g | 1/month |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 17 | Lognormal | 0 | 99 | B | ~average of "adhesives" and "bottled glue" |
| Frequency (per year) | use.freq | 35 | lognormal | 0 | 99 | B | ~average of "adhesives" and "bottled glue" |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.61 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.61 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.61 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.61 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.029 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 62 . P.HM.120.005 paint-exterior

### home improvement paints characterized as exterior use

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Latex Paint | (ounces per year: mean; SD) 371.27; 543.86 | (per year: mean, SD) 3.93; 20.81 | (minutes: mean;sd) 295.08; 476.11 | 55% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Oil Paint | (ounces per year: mean; SD) 168.92; 367.82 | (per year: mean, SD) 5.66; 23.1 | (minutes: mean;sd) 194.12; 345.68 | 30% |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Paints | 0.13-1612 (g/use; min-max ranges for North America) | 0.003-1 (per day; min-max ranges for North America) |  |  |
| RIVM Paint Fact Sheet | Brush / roller painting, solvent rich paint | 1000 g | 1/year | 120 minutes |  |
| RIVM Paint Fact Sheet | Brush / roller painting, high solid paint | 1000 g | 1/year | 120 minutes |  |
| RIVM Paint Fact Sheet | Brush / roller painting, waterborne paint | 1000 g | 1/year | 120 minutes |  |
| RIVM Paint Fact Sheet | Brush / roller painting, waterborne wall paint | 1000 g | 1/year | 120 minutes |  |
| EFH - 17-14-15 | Latex Paint | 3.9 gallons | 4.2 (5.5) /year | 3 hours |  |
| EFH - 17-14-15 | Oils-Based Paint | 2.6 gallons | 5.1 (12.0)/year | 2.1 hours |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2700 | Lognormal | 0 | 99 | B | Use upper reported value to account for "exterior" |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 300 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.43 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0033 | Point | 0 | 99 | B | See general rules for paints |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 63 . P.HM.120.009 paint-interior

### home improvement paints characterized as interior use

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Latex Paint | (ounces per year: mean; SD) 371.27; 543.86 | (per year: mean, SD) 3.93; 20.81 | (minutes: mean;sd) 295.08; 476.11 | 55% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Oil Paint | (ounces per year: mean; SD) 168.92; 367.82 | (per year: mean, SD) 5.66; 23.1 | (minutes: mean;sd) 194.12; 345.68 | 30% |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Paints | 0.13-1612 (g/use; min-max ranges for North America) | 0.003-1 (per day; min-max ranges for North America) |  |  |
| RIVM Paint Fact Sheet | Brush / roller painting, solvent rich paint | 1000 g | 1/year | 120 minutes |  |
| RIVM Paint Fact Sheet | Brush / roller painting, high solid paint | 1000 g | 1/year | 120 minutes |  |
| RIVM Paint Fact Sheet | Brush / roller painting, waterborne paint | 1000 g | 1/year | 120 minutes |  |
| RIVM Paint Fact Sheet | Brush / roller painting, waterborne wall paint | 1000 g | 1/year | 120 minutes |  |
| EFH - 17-14-15 | Latex Paint | 3.9 gallons | 4.2 (5.5) /year | 3 hours |  |
| EFH - 17-14-15 | Oils-Based Paint | 2.6 gallons | 5.1 (12.0)/year | 2.1 hours |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1300 | Lognormal | 0 | 99 | B | ~average reported |
| Frequency (per year) | use.freq | 5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B | consensus |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.43 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0028 | Point | 0 | 99 | B | See general rules for paints |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 64 . P.HM.120.029 paint-spray

### home improvement paints not characterized as to interior or exterior use (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Aerosol Spray Paint | (ounces per year: mean; SD) 30.75; 52.84 | (per year: mean, SD) 4.22; 15.59 | (minutes: mean;sd) 39.54; 87.79 | 35% |
| RIVM Paint Fact Sheet | Spraying paint with a spray can | .33 g/s x 15 min = 4.95 | 2/year | 20 min |  |
| RIVM Paint Fact Sheet | Pneumatic spraying of paint | .5 g s x 800 s = 400 g | 2/ year | 25 min |  |
| EFH 17-18 17-19 | Spray Paint | 83.92 (175.32) fluid oz | 8.23 (31.98) /year | 40.87 (71.77) minutes | 775/1724 |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 300 | Lognormal | 0 | 99 | B | ~consensus |
| Frequency (per year) | use.freq | 5 | lognormal | 0 | 99 | B | average rounded |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B | ~average |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 65 . P.HM.120.999 paint-NOC

### home improvement paints not characterized as to interior or exterior use

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Latex Paint | (ounces per year: mean; SD) 371.27; 543.86 | (per year: mean, SD) 3.93; 20.81 | (minutes: mean;sd) 295.08; 476.11 | 55% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Oil Paint | (ounces per year: mean; SD) 168.92; 367.82 | (per year: mean, SD) 5.66; 23.1 | (minutes: mean;sd) 194.12; 345.68 | 30% |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Paints | 0.13-1612 (g/use; min-max ranges for North America) | 0.003-1 (per day; min-max ranges for North America) |  |  |
| RIVM Paint Fact Sheet | Brush / roller painting, solvent rich paint | 1000 g | 1/year | 120 minutes |  |
| RIVM Paint Fact Sheet | Brush / roller painting, high solid paint | 1000 g | 1/year | 120 minutes |  |
| RIVM Paint Fact Sheet | Brush / roller painting, waterborne paint | 1000 g | 1/year | 120 minutes |  |
| RIVM Paint Fact Sheet | Brush / roller painting, waterborne wall paint | 1000 g | 1/year | 120 minutes |  |
| EFH - 17-14-15 | Latex Paint | 3.9 gallons | 4.2 (5.5) /year | 3 hours |  |
| EFH - 17-14-15 | Oils-Based Paint | 2.6 gallons | 5.1 (12.0)/year | 2.1 hours |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2000 | Lognormal | 0 | 99 | B | Average of interior and exterior |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | B | Average of interior and exterior |
| Duration of Direct Use (min) | duration | 210 | Lognormal | 0 | 99 | B | Average of interior and exterior |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.43 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0032 | Point | 0 | 99 | B | See general rules for paints |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 66 . P.HM.130.029 paint cleaner-spray

### paint removing products for clean-up (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Paint Removers/Strippers | (ounces per year: mean; SD) 63.73; 144.33 | (per year: mean, SD) 3.68; 9.1 | (minutes: mean;sd) 125.27; 286.59 | 30% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 67 . P.HM.130.999 paint cleaner-NOC

### paint removing products for clean-up

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Paint Removers/Strippers | (ounces per year: mean; SD) 63.73; 144.33 | (per year: mean, SD) 3.68; 9.1 | (minutes: mean;sd) 125.27; 286.59 | 30% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 68 . P.HM.140.000 paint texture

### textured paints including ceiling texture

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1000 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0036 | Point | 0 | 99 | B | See general rules for paints |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 69 . P.HM.150.000 paint thinner

### paint or lacquer thinners

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Paint Thinners | (ounces per year: mean; SD) 69.45; 190.55 | (per year: mean, SD) 6.78; 22.1 | (minutes: mean;sd) 39.43; 114.85 | 36% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | ~70 oz / 7 per year |
| Frequency (per year) | use.freq | 7 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 40 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.36 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.36 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.36 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.017 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 70 . P.HM.160.000 patch and repair

### drywall, ceiling, and joint compounds, spackles, or fillers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM DIY Fact Sheet | Plasters and equalizers-Wall plaster |  | .2 /year | 120 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 200 | Lognormal | 0 | 99 | B | Assumed |
| Frequency (per year) | use.freq | 0.2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0025 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 71 . P.HM.170.000 plumbing

### miscellaneous plumbing repair products (putties, tapes, cements)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 72 . P.HM.180.005 primer-exterior

### home improvement primers characterized as exterior use

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Primers and Special Primers | (ounces per year: mean; SD) 68.39; 171.21 | (per year: mean, SD) 3.43; 8.76 | (minutes: mean;sd) 91.29; 175.05 | 14% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 600 | Lognormal | 0 | 99 | B | ~ 70 oz / 3.5 per year |
| Frequency (per year) | use.freq | 3.5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 90 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.14 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.14 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.14 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0045 | Point | 0 | 99 | B | See general rules for paints |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 73 . P.HM.180.009 primer-interior

### home improvement primers characterized as interior use

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Primers and Special Primers | (ounces per year: mean; SD) 68.39; 171.21 | (per year: mean, SD) 3.43; 8.76 | (minutes: mean;sd) 91.29; 175.05 | 14% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 600 | Lognormal | 0 | 99 | B | ~ 70 oz / 3.5 per year |
| Frequency (per year) | use.freq | 3.5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 90 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.14 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.14 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.14 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0045 | Point | 0 | 99 | B | See general rules for paints |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 74 . P.HM.180.029 primer-spray

### home improvement primers not characterized as to interior or exterior use (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Primers and Special Primers | (ounces per year: mean; SD) 68.39; 171.21 | (per year: mean, SD) 3.43; 8.76 | (minutes: mean;sd) 91.29; 175.05 | 14% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 600 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 3.5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 90 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.14 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.14 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.14 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 75 . P.HM.180.999 primer-NOC

### home improvement primers not characterized as to interior or exterior use

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Primers and Special Primers | (ounces per year: mean; SD) 68.39; 171.21 | (per year: mean, SD) 3.43; 8.76 | (minutes: mean;sd) 91.29; 175.05 | 14% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 600 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 3.5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 90 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.14 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.14 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.14 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.00083 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 76 . P.HM.190.000 putty or filler

### putty-type crack, hole, and wood fillers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM DIY Fact Sheet | Fillers and putty-General filler from powder |  | 2/year |  |  |
| RIVM DIY Fact Sheet | Fillers and putty-Large hole filler | .5 g to fingers (no total amount given) | 1/year |  |  |
| RIVM DIY Fact Sheet | Fillers and putty-Filler/putty from tube | 40 g | 3/year | 20 min |  |
| RIVM DIY Fact Sheet | Fillers and putty-Two-component filler | 200 g | 2/year | 5 min |  |
| RIVM DIY Fact Sheet | Fillers and putty-Putty from spray | 135 s x 1.5 g/s = 202.5 | 1/ year | 30 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 150 | Lognormal | 0 | 99 | B | ~average |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B | consensus |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B | rounded average |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0033 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 77 . P.HM.200.000 refrigerant

### air conditioner or other refrigerants

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.033 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 78 . P.HM.210.000 roof

### products for roof maintenance or repair, including cleaners, sealers, or coatings

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5000 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 0.3 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 480 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1e-04 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 79 . P.HM.220.000 septic system

### septic system treatment products

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 80 . P.HM.230.000 spray foam

### spray insulation and weatherstripping products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM DIY Fact Sheet | Insulation foam | 825 g | .2 /year | 30 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 825 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 0.2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.00061 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 81 . P.HM.240.005 stain-exterior

### wood stains characterized as exterior use, including deck stains

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Wood Stains, Varnishes, and Finishes | (ounces per year: mean; SD) 65.06; 174.01 | (per year: mean, SD) 4.21; 12.19 | (minutes: mean;sd) 117.17; 193.05 | 43% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2000 | Lognormal | 0 | 99 | B | Assumed higher than reported for exterior use |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B | Assumed |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.43 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0018 | Point | 0 | 99 | B | See general rules for paints |
| Fraction of product mass on skin retained after direct use | f.residual | 0.02 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 82 . P.HM.240.999 stain-NOC

### wood stains not characterized as interior or exterior use

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Wood Stains, Varnishes, and Finishes | (ounces per year: mean; SD) 65.06; 174.01 | (per year: mean, SD) 4.21; 12.19 | (minutes: mean;sd) 117.17; 193.05 | 43% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B | approx 65 oz / 4 year |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.02 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 83 . P.HM.250.029 stripper-spray

### paint and finish strippers (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Paint Removers/Strippers | (ounces per year: mean; SD) 63.73; 144.33 | (per year: mean, SD) 3.68; 9.1 | (minutes: mean;sd) 125.27; 286.59 | 30% |
| RIVM DIY Fact Sheet | Removers - Paint remover | 1 kg | 1 /year | 60 min |  |
| RIVM DIY Fact Sheet | Removers - Sealant / foam remover | 100 g | 5 /year | 120 min |  |
| RIVM Cleaning Product Fact Sheet | Floor products- Strippers |  | 1/year |  |  |
| EFH 17-20 17-21 | Paint Removers/Strippers | 64.84 (157.50) fluid oz | 3.54 (7.32) /year | 144.59 (176) min | 316/1724 |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1400 | Lognormal | 0 | 99 | B | ~ average of reported |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | B | ~ average of reported |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B | consensus |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.24 | point | 13 | 99 | M | ~ average of reported |
| Direct use prevalence (fraction) | use.prev | 0.24 | point | 13 | 99 | W | ~ average of reported |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.24 | point | 0 | 99 | B | ~ average of reported |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | Assume averting behavior |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 84 . P.HM.250.999 stripper-NOC

### paint and finish strippers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Paint Removers/Strippers | (ounces per year: mean; SD) 63.73; 144.33 | (per year: mean, SD) 3.68; 9.1 | (minutes: mean;sd) 125.27; 286.59 | 30% |
| RIVM DIY Fact Sheet | Removers - Paint remover | 1 kg | 1 /year | 60 min |  |
| RIVM DIY Fact Sheet | Removers - Sealant / foam remover | 100 g | 5 /year | 120 min |  |
| RIVM Cleaning Product Fact Sheet | Floor products- Strippers |  | 1/year |  |  |
| EFH 17-20 17-21 | Paint Removers/Strippers | 64.84 (157.50) fluid oz | 3.54 (7.32) /year | 144.59 (176) min | 316/1724 |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1400 | Lognormal | 0 | 99 | B | ~ average of reported |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | B | ~ average of reported |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B | consensus |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.24 | point | 13 | 99 | M | ~ average of reported |
| Direct use prevalence (fraction) | use.prev | 0.24 | point | 13 | 99 | W | ~ average of reported |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.24 | point | 0 | 99 | B | ~ average of reported |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | Assume averting behavior |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 85 . P.HM.260.005 surface sealer-exterior

### products for coating and protecting household surfaces characterized as exterior use

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Water Repellents/Protectors | (ounces per year: mean; SD) 11.38; 22 | (per year: mean, SD) 3.5; 11.7 | (minutes: mean;sd) 14.46; 24.1 | 36% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Outdoor Water Repellents (for wood or cement) | (ounces per year: mean; SD) 148.71; 280.65 | (per year: mean, SD) 2.07; 3.71 | (minutes: mean;sd) 104.94; 115.36 | 9% |
| RIVM Cleaning Product Fact Sheet | Floor products- Sealers |  | .1 /year |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2250 | Lognormal | 0 | 99 | B | ~value for "outdoor water repellents" |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B | ~value for "outdoor water repellents" |
| Duration of Direct Use (min) | duration | 105 | Lognormal | 0 | 99 | B | ~value for "outdoor water repellents" |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.09 | point | 13 | 99 | M | ~value for "outdoor water repellents" |
| Direct use prevalence (fraction) | use.prev | 0.09 | point | 13 | 99 | W | ~value for "outdoor water repellents" |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.09 | point | 0 | 99 | B | ~value for "outdoor water repellents" |
| Fraction of product mass in contact with skin | f.contact | 0.00022 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 86 . P.HM.260.029 surface sealer-spray

### products for coating and protecting household surfaces not characterized as interior or exterior use (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Water Repellents/Protectors | (ounces per year: mean; SD) 11.38; 22 | (per year: mean, SD) 3.5; 11.7 | (minutes: mean;sd) 14.46; 24.1 | 36% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Outdoor Water Repellents (for wood or cement) | (ounces per year: mean; SD) 148.71; 280.65 | (per year: mean, SD) 2.07; 3.71 | (minutes: mean;sd) 104.94; 115.36 | 9% |
| RIVM Cleaning Product Fact Sheet | Floor products- Sealers |  | .1 /year |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1150 | Lognormal | 0 | 99 | B | ~ average of reported |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B | ~ average of reported |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B | ~ average of reported |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.23 | point | 13 | 99 | M | ~ average of reported |
| Direct use prevalence (fraction) | use.prev | 0.23 | point | 13 | 99 | W | ~ average of reported |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.23 | point | 0 | 99 | B | ~ average of reported |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 87 . P.HM.260.999 surface sealer-NOC

### products for coating and protecting household surfaces not characterized as interior or exterior use

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Water Repellents/Protectors | (ounces per year: mean; SD) 11.38; 22 | (per year: mean, SD) 3.5; 11.7 | (minutes: mean;sd) 14.46; 24.1 | 36% |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Outdoor Water Repellents (for wood or cement) | (ounces per year: mean; SD) 148.71; 280.65 | (per year: mean, SD) 2.07; 3.71 | (minutes: mean;sd) 104.94; 115.36 | 9% |
| RIVM Cleaning Product Fact Sheet | Floor products- Sealers |  | .1 /year |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1150 | Lognormal | 0 | 99 | B | ~ average of reported |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B | ~ average of reported |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B | ~ average of reported |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.23 | point | 13 | 99 | M | ~ average of reported |
| Direct use prevalence (fraction) | use.prev | 0.23 | point | 13 | 99 | W | ~ average of reported |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.23 | point | 0 | 99 | B | ~ average of reported |
| Fraction of product mass in contact with skin | f.contact | 0.00043 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 88 . P.HM.270.000 welding

### miscellaneous welding products including gases, fluxes, and adhesives

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.025 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 89 . P.HM.280.000 wood adhesive

### adhesives specifically characterized as wood glues

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM DIY Fact Sheet | Glue - Bottled glue - universal/wood | 10 g | 1/week | 20 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | M | Assumed |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W | Assumed |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B | Assumed |
| Fraction of product mass in contact with skin | f.contact | 0.05 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 90 . P.HO.010.000 printer ink

### ink for inkjet printers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0 | Point | 0 | 99 | B | assume enclosed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 91 . P.HO.020.000 printer toner

### laser printer toners

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0 | Point | 0 | 99 | B | assume enclosed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 92 . P.HO.030.000 white out

### correction fluids for ink or type

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Typewriter Correction Fluid | (ounces per year: mean; SD) 4.14; 13.72 | (per year: mean, SD) 40; 74.78 | (minutes: mean;sd) 7.62; 29.66 | 26% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 40 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 8 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M | Assumed reduced prevalence since study |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W | Assumed reduced prevalence since study |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B | Assumed reduced prevalence since study |
| Fraction of product mass in contact with skin | f.contact | 0.17 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 93 . P.IH.010.007 air freshener-gel

### home air fresheners (gel formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Air freshener |  |  |  | 63; 82 pct hshlds parents;older adults |
| SUPERB (Moran et al. 2012) | Oils or Air Freshening Candles |  | 12.24 ( 24.62 ); 14.79 ( 16.87 ) per month parents/older adults |  | 14%;16% parents/older adults |
| SUPERB (Moran et al. 2012) | Plug-ins |  | 0.67 ( 0.81 ); 0.87 ( 1.82 ) per month parents/older adults |  | 25%;19% parents/older adults |
| SUPERB (Moran et al. 2012) | Air Fresheners Solids or Gels |  | 0.37 ( 0.36 ); 0.47 ( 0.49 ) per month parents/older adults |  | 5%;7% parents/older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 6 | lognormal | 0 | 99 | B | ~ average of "gel" and "plug in" values |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B | Assumed |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | M | ~ average of "gel" and "plug in" values |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | W | ~ average of "gel" and "plug in" values |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.15 | point | 0 | 99 | B | ~ average of "gel" and "plug in" values |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 94 . P.IH.010.013 air freshener-liquid

### home air fresheners (liquid formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Essential oils -Air Freshener | 1.08 g | 52 /year | 240 min |  |
| SUPERB (Bennett et al. 2012) | Air freshener |  |  |  | 63; 82 pct hshlds parents;older adults |
| SUPERB (Moran et al. 2012) | Oils or Air Freshening Candles |  | 12.24 ( 24.62 ); 14.79 ( 16.87 ) per month parents/older adults |  | 14%;16% parents/older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 100 | lognormal | 0 | 99 | B | ~ average of reported |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | M | Average of SUPERB values |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | W | Average of SUPERB values |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.15 | point | 0 | 99 | B | Average of SUPERB values |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 95 . P.IH.010.016 air freshener-oil or diffuse

### home air fresheners (oil formulations or diffusers)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Essential oils -Air Freshener | 1.08 g | 52 /year | 240 min |  |
| SUPERB (Bennett et al. 2012) | Air freshener |  |  |  | 63; 82 pct hshlds parents;older adults |
| SUPERB (Moran et al. 2012) | Oils or Air Freshening Candles |  | 12.24 ( 24.62 ); 14.79 ( 16.87 ) per month parents/older adults |  | 14%;16% parents/older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B | ~ average of reported |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | M | Average of SUPERB values |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | W | Average of SUPERB values |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.15 | point | 0 | 99 | B | Average of SUPERB values |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 96 . P.IH.010.029 air freshener-spray

### home air fresheners (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Air freshener |  |  |  | 63; 82 pct hshlds parents;older adults |
| SUPERB (Moran et al. 2012) | Air Freshener Sprays |  | 32.83 ( 127.34 ); 24.7 ( 34.28 ) per month parents/older adults |  | 46%;58% parents/older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | ~.5 oz |
| Frequency (per year) | use.freq | 345 | lognormal | 0 | 99 | B | Average of SUPERB values |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.52 | point | 13 | 99 | M | Average of SUPERB values |
| Direct use prevalence (fraction) | use.prev | 0.52 | point | 13 | 99 | W | Average of SUPERB values |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.52 | point | 0 | 99 | B | Average of SUPERB values |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 97 . P.IH.010.999 air freshener-NOC

### home air fresheners

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Essential oils -Air Freshener | 1.08 g | 52 /year | 240 min |  |
| SUPERB (Bennett et al. 2012) | Air freshener |  |  |  | 63; 82 pct hshlds parents;older adults |
| SUPERB (Moran et al. 2012) | Air Freshener Sprays |  | 32.83 ( 127.34 ); 24.7 ( 34.28 ) per month parents/older adults |  | 46%;58% parents/older adults |
| SUPERB (Moran et al. 2012) | Oils or Air Freshening Candles |  | 12.24 ( 24.62 ); 14.79 ( 16.87 ) per month parents/older adults |  | 14%;16% parents/older adults |
| SUPERB (Moran et al. 2012) | Plug-ins |  | 0.67 ( 0.81 ); 0.87 ( 1.82 ) per month parents/older adults |  | 25%;19% parents/older adults |
| SUPERB (Moran et al. 2012) | Air Fresheners Solids or Gels |  | 0.37 ( 0.36 ); 0.47 ( 0.49 ) per month parents/older adults |  | 5%;7% parents/older adults |
| SUPERB (Moran et al. 2012) | Plain or Scented Candles |  | 404% ( 7.79 ); 4.8 ( 870% )p per month arents/older adults |  | 73%;61% parents/older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | ~.5 oz |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.73 | point | 13 | 99 | M | Average of SUPERB values for "Air freshener" |
| Direct use prevalence (fraction) | use.prev | 0.73 | point | 13 | 99 | W | Average of SUPERB values for "Air freshener" |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.73 | point | 0 | 99 | B | Average of SUPERB values for "Air freshener" |
| Fraction of product mass in contact with skin | f.contact | 0.033 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 98 . P.IH.020.000 automatic dishwashing additive

### rinse aids, spot removers, and dishwasher cleaners

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Machine dishwashing products - - Liquid rinse aids | 500 g | 35/year | .75 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B | Assumed - RIVM value seems high |
| Frequency (per year) | use.freq | 35 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.001 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 99 . P.IH.030.007 automatic dishwashing detergent-gel

### detergents for automatic dishwashers (gel formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Machine dishwashing products - Powders |  | .35/day |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | Assumed |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B | Assumed - RIVM value seems low |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B | Assumed |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 13 | 99 | M | Assumed |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 13 | 99 | W | Assumed |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.7 | point | 0 | 99 | B | Assumed |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 100 . P.IH.030.023 automatic dishwashing detergent-powder

### detergents for automatic dishwashers (powder formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Machine dishwashing products - Powders |  | .35/day |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 200 | Lognormal | 0 | 99 | B | Assumed |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B | Assumed - RIVM value seems low |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B | Assumed |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 13 | 99 | M | Assumed |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 13 | 99 | W | Assumed |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.7 | point | 0 | 99 | B | Assumed |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 101 . P.IH.030.999 automatic dishwashing detergent-NOC

### detergents for automatic dishwashers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Machine dishwashing products - Powders |  | .35/day |  |  |
| RIVM Cleaning Product Fact Sheet | Machine dishwashing products - - Liquid rinse aids | 500 g | 35/year | .75 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 150 | Lognormal | 0 | 99 | B | Average of gels and powders |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B | Assumed - RIVM value seems low |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B | Assumed |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 13 | 99 | M | Assumed |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 13 | 99 | W | Assumed |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.7 | point | 0 | 99 | B | Assumed |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 102 . P.IH.040.029 bathroom cleaner-spray

### bathtub, tile, and toilet surface cleaners (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Sanitary products - Bathroom cleaners- Sprays | .39 g /s \* 1.5 min = 35.1 g | 52 /year | 25 min |  |
| RIVM Cleaning Product Fact Sheet | Sanitary products - Toilet cleaners | 55 g | 120 -260 /year | 3 min |  |
| RIVM Cleaning Product Fact Sheet | Sanitary products - Toilet rim cleaners | 30-70 g | 365/year |  |  |
| SUPERB (Moran et al 2012) Frequencies are per month | Tub/shower cleaner |  | 5.06; (6.45); 3.62; (5.9); 7.48; (9.68); 7.78; (10.97) Mean (SD) for W;M parents; W;M older adults |  | 79%; 68%; 81%; 68% (W;M parents W; M older adults) |
| SUPERB (Bennett et al. 2012) | Bathroom products |  |  |  | 90; 100 pct hshlds parents;older adults |
| EFH - 17-12 | Bathroom Tile Cleaners |  |  | 47 hours per year |  |
| EFH 17-37 Weegels and Van Veen 2001 | Toilet Cleaner | 9 - 153 g | .28 (0.55) /day | 74 (204) minutes |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 35 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 25 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.68 | point | 13 | 99 | M | SUPERB average for tub and shower cleaners |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W | SUPERB average for tub and shower cleaners |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B | SUPERB average for tub and shower cleaners |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 103 . P.IH.040.999 bathroom cleaner-NOC

### bathtub, tile, and toilet surface cleaners

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Sanitary products - Bathroom cleaners- Sprays | .39 g /s \* 1.5 min = 35.1 g | 52 /year | 25 min |  |
| RIVM Cleaning Product Fact Sheet | Sanitary products - Bathroom cleaners- - Liquids | 260 g /45 = 5 g | 4 /year (shower stall cleaners) | 20 min |  |
| RIVM Cleaning Product Fact Sheet | Sanitary products - Toilet cleaners | 55 g | 120 -260 /year | 3 min |  |
| RIVM Cleaning Product Fact Sheet | Sanitary products - Toilet rim cleaners | 30-70 g | 365/year |  |  |
| SUPERB (Moran et al 2012) Frequencies are per month | Tub/shower cleaner |  | 5.06; (6.45); 3.62; (5.9); 7.48; (9.68); 7.78; (10.97) Mean (SD) for W;M parents; W;M older adults |  | 79%; 68%; 81%; 68% (W;M parents W; M older adults) |
| SUPERB (Bennett et al. 2012) | Bathroom products |  |  |  | 90; 100 pct hshlds parents;older adults |
| EFH - 17-12 | Bathroom Tile Cleaners |  |  | 47 hours per year |  |
| EFH 17-37 Weegels and Van Veen 2001 | Toilet Cleaner | 9 - 153 g | .28 (0.55) /day | 74 (204) minutes |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | ~average, rounded |
| Frequency (per year) | use.freq | 130 | lognormal | 0 | 99 | B | approximate average of reported |
| Duration of Direct Use (min) | duration | 16 | Lognormal | 0 | 99 | B | average of 25,20,3 |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.68 | point | 13 | 99 | M | SUPERB average for tub and shower cleaners |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W | SUPERB average for tub and shower cleaners |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B | SUPERB average for tub and shower cleaners |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 104 . P.IH.050.000 bleach

### bleaches (including color-safe bleaches)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 105 . P.IH.060.000 candles

### candles

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | No use of this product currently |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | assume nearly solid- small transfer |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 106 . P.IH.070.029 carpet cleaner-spray

### carpet cleaning products and machine solutions (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Carpet products - Liquids | 500 g | .5 / year | 110 min |  |
| RIVM Cleaning Product Fact Sheet | Carpet products - Spray extraction machine | 500 g | .5 / year | 110 min |  |
| RIVM Cleaning Product Fact Sheet | Carpet products - Spray foams spot cleaner | 4 g | 10 / year | 10 min |  |
| SUPERB (Moran et al 2012) Frequencies are per month | Carpet cleaner |  | 1.46; (3.74); 0.91; (1.65); 0.68; (0.92); 0.92; (1.32) Mean (SD) for W;M parents; W;M older adults |  | 50%; 47%; 52%; 52% (W;M parents W; M older adults) |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 4 | Lognormal | 0 | 99 | B | RIVM |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B | Use North America values (average of SUPERB) |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.49 | point | 13 | 99 | M | average of SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.52 | point | 13 | 99 | W | average of SUPERB |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.52 | point | 0 | 99 | B | average of SUPERB |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 107 . P.IH.070.999 carpet cleaner-NOC

### carpet cleaning products and machine solutions

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Carpet products - Liquids | 500 g | .5 / year | 110 min |  |
| RIVM Cleaning Product Fact Sheet | Carpet products - Spray extraction machine | 500 g | .5 / year | 110 min |  |
| RIVM Cleaning Product Fact Sheet | Carpet products - Spray foams spot cleaner | 4 g | 10 / year | 10 min |  |
| SUPERB (Moran et al 2012) Frequencies are per month | Carpet cleaner |  | 1.46; (3.74); 0.91; (1.65); 0.68; (0.92); 0.92; (1.32) Mean (SD) for W;M parents; W;M older adults |  | 50%; 47%; 52%; 52% (W;M parents W; M older adults) |
| EFH - 17-12 | Rug Cleaners/Shampoos |  |  | 12.00 hours per year |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B | Use North America values (average of SUPERB) |
| Duration of Direct Use (min) | duration | 110 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.49 | point | 13 | 99 | M | average of SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.52 | point | 13 | 99 | W | average of SUPERB |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.52 | point | 0 | 99 | B | average of SUPERB |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 108 . P.IH.080.000 carpet deodorizer

### carpet deodorizers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Carpet products - Powders | 1.7 s \* 22 min= 2244 g | .5 /year | 22 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B | assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B | assumed higher for the U.S. |
| Duration of Direct Use (min) | duration | 22 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 109 . P.IH.090.000 dish soap

### hand dish washing liquids and detergents

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Dishwashing products - Hand dishwashing liquids | 500 g | 462/year | 16 min |  |
| EFH 17-37 Weegels and Van Veen 2001 | Dishwashing Liquid | 5 (3) g | .63 (0.79) /day | 11 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Dishwashing liquids-hand wash (dishes) | 3-28 (g/use; min-max ranges for North America) | 0.43-3.0 (per day; min-max ranges for North America) |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 16 | Lognormal | 0 | 99 | B | North American mid range |
| Frequency (per year) | use.freq | 680 | lognormal | 0 | 99 | B | North American mid range |
| Duration of Direct Use (min) | duration | 15 | Lognormal | 0 | 99 | B | rounded average |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 0 | 12 | B | assumed |
| Direct use prevalence (fraction) | use.prev | 0.9 | point | 13 | 99 | M | assumed |
| Direct use prevalence (fraction) | use.prev | 0.9 | point | 13 | 99 | W | assumed |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.9 | point | 0 | 99 | B | assumed |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 110 . P.IH.100.029 disinfectant-spray

### disinfecting liquids (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Disinfectant Fact Sheet | Disinfectants for use indoors | .51 min \* .75 g /s = 23 g | 365 /year | 3 min |  |
| SUPERB (Bennett et al. 2012) | Disinfectant spray |  |  |  | 57; 53 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 23 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 3 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.55 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.55 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.55 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 111 . P.IH.100.999 disinfectant-NOC

### disinfecting liquids (including wipes)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Disinfectant Fact Sheet | Disinfectants for use indoors | .51 min \* .75 g /s = 23 g | 365 /year | 3 min |  |
| SUPERB (Bennett et al. 2012) | Disinfectant spray |  |  |  | 57; 53 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 23 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 3 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.55 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.55 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.55 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 112 . P.IH.110.000 drain

### drain openers or digesters

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Drain openers | 500 g | 4/year | 20 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | estimated, assumed to have averting behavior |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 113 . P.IH.120.000 dry cleaner

### dry cleaning fluids or kits for home use

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 114 . P.IH.130.000 dryer sheets

### dryer fabric softener sheets

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Laundry products - Fabric conditioners | 68 g |  |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Fabric conditioners indirect: liquid regular | 50-140 (g/use; min-max ranges for North America) |  |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Fabric conditioners indirect: liquid concentrate | 11-90 (g/use; min-max ranges for North America) |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 115 . P.IH.140.029 electronics cleaner-spray

### miscellaneous products for cleaning home electronic equipment (including surface cleaners or cleaners for interior parts) (spray or aerosol formulation spec

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Specialized Electronic Cleaners | (ounces per year: mean; SD) 9.48; 55.26 | (per year: mean, SD) 13.41; 38.16 | (minutes: mean;sd) 9.47; 45.35 | 13% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | approx 10 oz /14 per year |
| Frequency (per year) | use.freq | 14 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.13 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.13 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.13 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 116 . P.IH.140.999 electronics cleaner-NOC

### miscellaneous products for cleaning home electronic equipment (including surface cleaners or cleaners for interior parts)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Specialized Electronic Cleaners | (ounces per year: mean; SD) 9.48; 55.26 | (per year: mean, SD) 13.41; 38.16 | (minutes: mean;sd) 9.47; 45.35 | 13% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | approx 10 oz /14 per year |
| Frequency (per year) | use.freq | 14 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.13 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.13 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.13 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 117 . P.IH.150.000 fabric deodorizer

### spray fabric deodorizers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 118 . P.IH.160.000 fabric protectant

### fabric protectants and wrinkle releasers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 119 . P.IH.170.000 fabric softener

### fabric softeners (excluding dryer sheets)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Laundry products - Fabric conditioners | 68 g |  |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Fabric conditioners indirect: liquid regular | 50-140 (g/use; min-max ranges for North America) |  |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Fabric conditioners indirect: liquid concentrate | 11-90 (g/use; min-max ranges for North America) |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 75 | Lognormal | 0 | 99 | B | ~ average of midranges |
| Frequency (per year) | use.freq | 182 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 120 . P.IH.180.000 fireplace

### miscellaneous fireplace and firepit products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 121 . P.IH.190.000 floor cleaner

### hard floor cleaners (including premoistened wipes and pads)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Floor and furniture products: Floor cleaning liquid | 880 g | 104/year | 30 min |  |
| RIVM Cleaning Product Fact Sheet | Floor products- Wet tissues | 245 g | 104/year | 3 min |  |
| SUPERB (Moran et al 2012) Frequencies are per month | Floor cleaner |  | 5.64; (8.48); 5.34; (7.8); 6.06; (7.72); 2.82; (2.76) Mean (SD) for W;M parents; W;M older adults |  | 69%; 63%; 62%; 44% (W;M parents W; M older adults) |
| EFH - 17-12 | Floor Cleaners |  |  | 52.00 hours per year |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 560 | Lognormal | 0 | 99 | B | average of reported |
| Frequency (per year) | use.freq | 60 | lognormal | 0 | 99 | B | Average of SUPERB values |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.53 | point | 13 | 99 | M | Average of SUPERB values |
| Direct use prevalence (fraction) | use.prev | 0.66 | point | 13 | 99 | W | Average of SUPERB values |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.66 | point | 0 | 99 | B | Average of SUPERB values |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 122 . P.IH.200.000 floor polish

### hard floor shining and waxing products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Floor products- Polishes | 550 g | 2 /year | 90 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 550 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 90 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.63 | point | 13 | 99 | M | Same as values for floor cleaner |
| Direct use prevalence (fraction) | use.prev | 0.69 | point | 13 | 99 | W | Same as values for floor cleaner |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.69 | point | 0 | 99 | B | Same as values for floor cleaner |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 123 . P.IH.210.029 glass cleaner-spray

### glass and window cleaners (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Glass cleaners | .7 min \* .78 g/s = 33 g | 365 /year | .7 min |  |
| SUPERB (Moran et al 2012) Frequencies are per month | Glass cleaner |  | 9.06; (20.8); 6.05; (14.23); 3.95; (5.27); 5.62; (8.24) Mean (SD) for W;M parents; W;M older adults |  | 89%; 84%; 87%; 88% (W;M parents W; M older adults) |
| SUPERB (Bennett et al. 2012) | Glass cleaner |  |  |  | 100; 100 pct hshlds parents;older adults |
| EFH - 17-12 | Glass Cleaners |  |  | 67.00 hours per year |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 33 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 74 | lognormal | 0 | 99 | B | Average of SUPERB values |
| Duration of Direct Use (min) | duration | 15 | Lognormal | 0 | 99 | B | assumed |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.86 | point | 13 | 99 | M | Average of SUPERB values |
| Direct use prevalence (fraction) | use.prev | 0.88 | point | 13 | 99 | W | Average of SUPERB values |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.88 | point | 0 | 99 | B | Average of SUPERB values |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 124 . P.IH.210.999 glass cleaner-NOC

### glass and window cleaners

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Glass cleaners | .7 min \* .78 g/s = 33 g | 365 /year | .7 min |  |
| SUPERB (Moran et al 2012) Frequencies are per month | Glass cleaner |  | 9.06; (20.8); 6.05; (14.23); 3.95; (5.27); 5.62; (8.24) Mean (SD) for W;M parents; W;M older adults |  | 89%; 84%; 87%; 88% (W;M parents W; M older adults) |
| SUPERB (Bennett et al. 2012) | Glass cleaner |  |  |  | 100; 100 pct hshlds parents;older adults |
| EFH - 17-12 | Glass Cleaners |  |  | 67.00 hours per year |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 33 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 74 | lognormal | 0 | 99 | B | average of SUPERB values |
| Duration of Direct Use (min) | duration | 15 | Lognormal | 0 | 99 | B | assumed |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.86 | point | 13 | 99 | M | average of SUPERB values |
| Direct use prevalence (fraction) | use.prev | 0.88 | point | 13 | 99 | W | average of SUPERB values |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.88 | point | 0 | 99 | B | average of SUPERB values |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 125 . P.IH.220.000 hand cleaner

### products marketed as hand cleaners (solvent-based)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | All assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 126 . P.IH.230.029 heavy duty cleaner-spray

### heavy duty or concentrated multipurpose cleaners (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | All-purpose cleaners - Sprays | .41 m \* .78 g /s = 19. 2 g | 365/year | 60 min |  |
| EFH 17-37 Weegels and Van Veen 2001 | All-Purpose Cleaner | 27 (30) g | 0.35 (0.70) /day | 20 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | value for sprays |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B | assumed heavy duty is lower than all purpose |
| Duration of Direct Use (min) | duration | 40 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 127 . P.IH.230.999 heavy duty cleaner-NOC

### heavy duty or concentrated multipurpose cleaners

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | All-purpose cleaners - Liquids | 500 g | 104/year | 20 min |  |
| RIVM Cleaning Product Fact Sheet | All-purpose cleaners - Sprays | .41 m \* .78 g /s = 19. 2 g | 365/year | 60 min |  |
| EFH 17-37 Weegels and Van Veen 2001 | All-Purpose Cleaner | 27 (30) g | 0.35 (0.70) /day | 20 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 200 | Lognormal | 0 | 99 | B | assumed higher than spray |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B | assumed heavy duty is lower than all purpose |
| Duration of Direct Use (min) | duration | 40 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 128 . P.IH.240.029 houseplant care-spray

### houseplant and cut flower foods, fertilizers, or pesticides (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 129 . P.IH.240.999 houseplant care-NOC

### houseplant and cut flower foods, fertilizers, or pesticides

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 130 . P.IH.250.000 lamp oil or lighter fluid

### lighters, lighter fluids, and other indoor fuels

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.017 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 131 . P.IH.260.013 laundry detergent-liquid

### laundry detergents and soaps (liquid formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Laundry products - Liquids | 500 g | 365/year | .75 min |  |
| EFH - 17-12 | Laundry Detergents |  |  | 66.00 hours per year |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Laundry detergents-indirect: liquid | 78-230 (g/use; min-max ranges for North America) |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 155 | Lognormal | 0 | 99 | B | midrange of ACI values |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B | Assumed |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 132 . P.IH.260.023 laundry detergent-powder

### laundry detergents and soaps (powder formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Laundry products - Powders |  | 365 /year | 10 min |  |
| EFH - 17-12 | Laundry Detergents |  |  | 66.00 hours per year |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Laundry detergents-indirect: powder | 55-290 (g/use; min-max ranges for North America) |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 175 | Lognormal | 0 | 99 | B | midrange of ACI values |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B | Assumed |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 133 . P.IH.260.999 laundry detergent-NOC

### laundry detergents and soaps

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Laundry products - Powders |  | 365 /year | 10 min |  |
| RIVM Cleaning Product Fact Sheet | Laundry products - Liquids | 500 g | 365/year | .75 min |  |
| EFH - 17-12 | Laundry Detergents |  |  | 66.00 hours per year |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Laundry detergents-indirect: powder | 55-290 (g/use; min-max ranges for North America) |  |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Laundry detergents-indirect: liquid | 78-230 (g/use; min-max ranges for North America) |  |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Laundry detergent-indirect: tablet | 45-135 (g/use; min-max ranges for North America) |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 175 | Lognormal | 0 | 99 | B | average of power and liquid values (see other subtypes) |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B | assumed |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 134 . P.IH.270.000 laundry fragrance

### scent products to be added to wash

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 128 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 135 . P.IH.280.029 laundry stain remover-spray

### stain removers or laundry pre-treatment products (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Laundry pre-treatment products - Sprays | .05 min \* 1.5 g/s = 4.5 g | 128/ year | 10 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 128 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.64 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 136 . P.IH.280.999 laundry stain remover-NOC

### stain removers or laundry pre-treatment products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Laundry pre-treatment products - Sprays | .05 min \* 1.5 g/s = 4.5 g | 128/ year | 10 min |  |
| RIVM Cleaning Product Fact Sheet | Laundry pre-treatment products - Liquids |  | 128 /year | 10 min |  |
| RIVM Cleaning Product Fact Sheet | Laundry pre-treatment products - Pastes |  | 128 /year | 10 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Pretreatment (powder paste) |  | 1/day |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Pretreatment (liquid neat) |  | 1/day |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 128 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.64 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 137 . P.IH.290.029 laundry starch-spray

### fabric starches (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 138 . P.IH.290.999 laundry starch-NOC

### fabric starches

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 139 . P.IH.300.000 lime remover

### products for removing lime or scale from surfaces

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 6 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 140 . P.IH.310.000 metal polish

### cleaning products for metal surfaces

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Metal polish |  |  |  | 47; 53 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 141 . P.IH.320.029 oven cleaner-spray

### oven and grill cleaners (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Oven cleaners | .5 min \*.78g /s = 23.4 g | 26 /year | .5 min |  |
| SUPERB (Moran et al 2012) Frequencies are per month | Oven cleaner |  | 0.92; (1.88); 0.75; (1.29); 0.35; (0.72); 0.23; (0.25) Mean (SD) for W;M parents; W;M older adults |  | 35%; 38%; 31%; 30% (W;M parents W; M older adults) |
| SUPERB (Bennett et al. 2012) | Oven cleaner |  |  |  | 60; 59 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 25 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 7 | lognormal | 0 | 99 | B | average of SUPERB values |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.33 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.34 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.34 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | Assume averting behavior |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 142 . P.IH.320.999 oven cleaner-NOC

### oven and grill cleaners

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Oven cleaners | .5 min \*.78g /s = 23.4 g | 26 /year | .5 min |  |
| SUPERB (Moran et al 2012) Frequencies are per month | Oven cleaner |  | 0.92; (1.88); 0.75; (1.29); 0.35; (0.72); 0.23; (0.25) Mean (SD) for W;M parents; W;M older adults |  | 35%; 38%; 31%; 30% (W;M parents W; M older adults) |
| SUPERB (Bennett et al. 2012) | Oven cleaner |  |  |  | 60; 59 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 25 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 7 | lognormal | 0 | 99 | B | average of SUPERB values |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.33 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.34 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.34 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | Assume averting behavior |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 143 . P.IH.330.000 shoe polish or protectant

### shoe polishes, cleaners, and protectants

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Spray Shoe Polish | (ounces per year: mean; SD) 9.9; 17.9 | (per year: mean, SD) 10.28; 20.1 | (minutes: mean;sd) 7.49; 9.6 | 12% |
| RIVM Cleaning Product Fact Sheet | Shoe polish products - Spray | 1.2 min \* .5 g /s = 36 g | 8/year | 5 min |  |
| RIVM Cleaning Product Fact Sheet | Shoe polish products - Cream | .1 g | 26/year | 20 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 15 | lognormal | 0 | 99 | B | ~average |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.12 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.12 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.12 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 144 . P.IH.340.029 surface cleaner-spray

### hard surface and kitchen surface cleaners (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | All-purpose cleaners - Sprays | .41 m \* .78 g /s = 19. 2 g | 365/year | 60 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | APC spray (neat/non-dilutable) |  | 0.14- 1/ day (per day; min-max ranges for North America) |  |  |
| EFH 17-37 Weegels and Van Veen 2001 | All-Purpose Cleaner | 27 (30) g | 0.35 (0.70) /day | 20 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 25 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 40 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 145 . P.IH.340.999 surface cleaner-NOC

### hard surface and kitchen surface cleaners

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | All-purpose cleaners - Liquids | 500 g | 104/year | 20 min |  |
| RIVM Cleaning Product Fact Sheet | All-purpose cleaners - Sprays | .41 m \* .78 g /s = 19. 2 g | 365/year | 60 min |  |
| RIVM Cleaning Product Fact Sheet | All-purpose cleaners - Wet tissues | 3.42 g | 365/year | 60 min |  |
| RIVM Cleaning Product Fact Sheet | Metal cleaners | 10 g | 6 /year | 10 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Hard surface cleaner-powder | 20-51 (per day; min-max ranges for North America) | 0.14- 1/ day (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | APC spray (neat/non-dilutable) |  | 0.14- 1/ day (per day; min-max ranges for North America) |  |  |
| EFH 17-37 Weegels and Van Veen 2001 | All-Purpose Cleaner | 27 (30) g | 0.35 (0.70) /day | 20 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 25 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 40 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 146 . P.IH.350.000 upholstery cleaner

### upholstery fabric cleaners

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 147 . P.IH.360.029 wood polish-spray

### wood or furniture dusting or polishing products (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Wood Floor and Paneling Cleaners | (ounces per year: mean; SD) 28.41; 57.23 | (per year: mean, SD) 8.48; 20.89 | (minutes: mean;sd) 74.04; 128.43 | 35% |
| RIVM Cleaning Product Fact Sheet | Furniture and leather products - Furniture polish | 550 g (cleaning cupboards) | 1 /year | 240 min |  |
| SUPERB (Moran et al 2012) Frequencies are per month | Polish |  | 2.25; (3.13); 2.02; (5.05); 2.66; (3.09); 2.44; (4.19) Mean (SD) for W;M parents; W;M older adults |  | 57%; 47%; 68%; 58% (W;M parents W; M older adults) |
| EFH - 17-12 | Furniture Polish |  |  | 32.00 hours per year |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | reduced to account for furnture polishing versus once a year use |
| Frequency (per year) | use.freq | 5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.53 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.63 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.63 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 148 . P.IH.360.999 wood polish-NOC

### wood or furniture dusting or polishing products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-4 -17-6 (Westat); Prevalence from original Westat Report | Wood Floor and Paneling Cleaners | (ounces per year: mean; SD) 28.41; 57.23 | (per year: mean, SD) 8.48; 20.89 | (minutes: mean;sd) 74.04; 128.43 | 35% |
| RIVM Cleaning Product Fact Sheet | Furniture and leather products - Furniture polish | 550 g (cleaning cupboards) | 1 /year | 240 min |  |
| SUPERB (Moran et al 2012) Frequencies are per month | Polish |  | 2.25; (3.13); 2.02; (5.05); 2.66; (3.09); 2.44; (4.19) Mean (SD) for W;M parents; W;M older adults |  | 57%; 47%; 68%; 58% (W;M parents W; M older adults) |
| EFH - 17-12 | Furniture Polish |  |  | 32.00 hours per year |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | reduced to account for furnture polishing versus once a year use |
| Frequency (per year) | use.freq | 5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.53 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.63 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.63 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 149 . P.LY.010.005 cleaner-exterior

### exterior surface (e.g. deck, house, driveway) cleaners

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cleaning Product Fact Sheet | Pressure washers |  | 12/year | 30 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1000 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 5e-04 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 150 . P.LY.020.000 garden care-other

### miscellaneous garden care products not otherwise characterized (e.g. rooting powders)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.005 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 151 . P.LY.030.000 garden fertilizer

### fertilizers for vegetable or flower gardens, including in combination with pest/weed controllers

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10000 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 5e-05 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 152 . P.LY.040.000 grill or camping fuel

### grill, lantern and camping stove fuels, including briquets

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.005 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.2 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 153 . P.LY.050.029 herbicide-spray

### herbicides, weed killers, and brush killers (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-6 | Herbicide |  |  |  | 2% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2800 | Lognormal | 0 | 99 | B | ~100 oz |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 154 . P.LY.050.999 herbicide-NOC

### herbicides, weed killers, and brush killers

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-6 | Herbicide |  |  |  | 2% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2800 | Lognormal | 0 | 99 | B | ~100 oz |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.00018 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 155 . P.LY.060.000 lawn fertilizer

### fertilizers for lawns, including in combination with pest/weed controllers

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5000 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1e-04 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 156 . P.LY.070.000 lawnmower fluids

### oils and other fluids for lawnmowers or other small yard care equipment

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 99 | M |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.005 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 157 . P.LY.080.000 mulch

### mulches, including those with weed controllers

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10000 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 120 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 5e-05 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 158 . P.LY.090.002 pool chemicals-algaecide

### algaecidal products for pools, hot tubs, and spas

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Disinfectant Fact Sheet | Swimming pool disinfectants -Control of algae - granules ot tablets | .5 g to skin (no total mass given) | 122/year | 5 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 16 | lognormal | 0 | 99 | B | 1/week for summer |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 159 . P.LY.090.003 pool chemicals-chlorinating

### chlorinating products for pools, hot tubs, and spas

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Disinfectant Fact Sheet | Swimming pool disinfectants -Control of bacteria, algae and other micro-organisms -liquiid | .5 g to skin - no total given | 28/year |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 16 | lognormal | 0 | 99 | B | 1/week for summer |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 160 . P.LY.090.022 pool chemicals-ph control

### ph control products for pools, hot tubs, and spas

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 16 | lognormal | 0 | 99 | B | 1/week for summer |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 161 . P.LY.090.025 pool chemicals-shock

### shock products for pools, hot tubs, and spas

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 16 | lognormal | 0 | 99 | B | 1/week for summer |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 162 . P.LY.090.999 pool chemicals-NOC

### products not otherwise characterized for pools, hot tubs, and spas

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Disinfectant Fact Sheet | Swimming pool disinfectants -Control of bacteria, algae and other micro-organisms -liquiid | .5 g to skin - no total given | 28/year |  |  |
| RIVM Disinfectant Fact Sheet | Swimming pool disinfectants -Control of algae - granules ot tablets | .5 g to skin (no total mass given) | 122/year | 5 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 16 | lognormal | 0 | 99 | B | 1/week for summer |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 163 . P.LY.100.000 potting soil

### potting soil and vermiculite

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 250 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B | 3 x month in growing season |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.002 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 164 . P.LY.110.000 surface deicer

### products for deicing surfaces

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1000 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 60 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 5e-04 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 165 . P.LY.120.000 trees

### miscellaneous tree care products including sealers

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.005 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 166 . P.PC.010.029 acne spot treatment-spray

### creams and wipes for spot-treating acne (spray or aerosol formulation specified

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 132 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 167 . P.PC.010.999 acne spot treatment-NOC

### creams and wipes for spot-treating acne

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 132 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 168 . P.PC.020.000 aftershave

### lotions, balms, liquids, and gels for post-shave applications (usually fragranced)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Men's cosmetics - Aftershave | 1.2 g | 365 /year | 1440 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-3) | Aftershave | 0.65-1 (g/use; min-max ranges for North America) | 0.66-1 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Aftershave (ADULT) |  | -(-); 11(10.4); -(-); 20(14) WM Par, WM Older |  | -; 38%; -; 48% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Aftershave (CHILD) |  | -(-); -(-); -(-); 21.8(24) F M <=5 F M >5 |  | -; -; -; 42% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Aftershave/mens fragranc | e |  |  | 6; 17 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B | ~consensus |
| Frequency (per year) | use.freq | 260 | lognormal | 0 | 12 | B | SUPERB for boys over 5 |
| Frequency (per year) | use.freq | 240 | lognormal | 13 | 99 | B | SUPERB average |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | F |  |
| Direct use prevalence (fraction) | use.prev | 0.25 | point | 0 | 12 | M | SUPERB adjusted |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 13 | 99 | M | SUPERB average |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.43 | point | 0 | 99 | B | SUPERB average |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 169 . P.PC.030.000 baby lotion

### baby cream or lotion (excluding diaper creams)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Baby Lotion - baby usec | 1.4 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.38; 1; X |  |  |
| EFH 17-3 | Baby Lotion - adult use | 1 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.22; 0.19; 0.24d |  |  |
| EFH 17-3 | Baby Cream - baby usec |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.43; 1.3; X |  |  |
| EFH 17-3 | Baby Cream - adult use |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.07; 0.1; X |  |  |
| RIVM Cosmetics Fact Sheet | Baby care Baby salve | .27 g | 720 / year | 720 min |  |
| RIVM Cosmetics Fact Sheet | Baby care baby oil | 1.3 g | 720 / year | 720 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Baby Lotions and creams | 1.4-2 (g/use; min-max ranges for North America) | 0.38-2 (per day; min-max ranges for North America) |  |  |
| SUPERB (Bennett et al. 2012) | Baby lotion |  |  |  | 40; 0 pct hshlds parents;older adults |
| EFH 17-54 Sathyanarayana et al. (2008) | Baby Lotion |  |  |  | 36% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1.4 | Lognormal | 0 | 12 | B | EFH baby use |
| Mass per Use (g) | mass | 1 | Lognormal | 13 | 99 | B | EFH adult use |
| Frequency (per year) | use.freq | 252 | lognormal | 0 | 12 | B | EFH baby use average |
| Frequency (per year) | use.freq | 91 | lognormal | 13 | 99 | B | EFH adult use |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.8 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 170 . P.PC.040.000 baby oil

### skin oils specifically marketed for babies

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Baby Oil - baby usec | 1.3 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.14; 1.2; X |  |  |
| EFH 17-3 | Baby Oil - adult use | 5 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.06; 0.13; X |  |  |
| RIVM Cosmetics Fact Sheet | Baby care baby oil | 1.3 g | 720 / year | 720 min |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Baby oil (CHILD) |  | 11.1(27.00); 9.00(14); 6.5(13); 16.3(13) F M <=5 F M >5 |  | 21%; 17%; 16%; 14% F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1.3 | Lognormal | 0 | 12 | B |  |
| Mass per Use (g) | mass | 5 | Lognormal | 13 | 99 | B |  |
| Frequency (per year) | use.freq | 120 | lognormal | 0 | 12 | B | ~rounded average for children |
| Frequency (per year) | use.freq | 35 | lognormal | 13 | 99 | B | average EFH |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 0 | 12 | M | average SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.19 | point | 0 | 12 | W | average SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.19 | point | 0 | 99 | B | average SUPERB |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.8 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 171 . P.PC.050.000 baby powder

### powders specifically marketed for babies

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Baby Powder - baby usec | 0.8 g | (per day: CTFA; cosmetics company; Simmons Market Research) 5.36; 1.5; 0.35d |  |  |
| EFH 17-3 | Baby Powder - adult use | 0.8 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.13; 0.22; X |  |  |
| RIVM Cosmetics Fact Sheet | Baby care baby powder | 0.8 g | 720 / year | 720 min |  |
| EFH 17-54 Sathyanarayana et al. (2008) | Baby Powder |  |  |  | 14% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.8 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 877 | lognormal | 0 | 12 | B | average efh |
| Frequency (per year) | use.freq | 64 | lognormal | 13 | 99 | B | average efh |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.14 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.14 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.3 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 172 . P.PC.060.000 baby shampoo

### shampoos specifically marketed for babies

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Baby Shampoo - baby usec | 0.5 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.14; X; 0.11f |  |  |
| EFH 17-3 | Baby Shampoo - adult use | 5 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.02; X; X |  |  |
| SUPERB (Bennett et al. 2012) | Baby shampoo |  |  |  | 70; 6 pct hshlds parents;older adults |
| EFH 17-54 Sathyanarayana et al. (2008) | Baby Shampoo |  |  |  | 54% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 12 | B |  |
| Mass per Use (g) | mass | 5 | Lognormal | 13 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 12 | B |  |
| Frequency (per year) | use.freq | 7 | lognormal | 13 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.06 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.06 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.7 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 173 . P.PC.070.000 baby wash

### body washes and cleaners specifically marketed for babies

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Baby/Bath liquid | 0.873 (g/use) | 1 per day |  |  |
| SUPERB (Bennett et al. 2012) | Baby bath |  |  |  | 73; 0 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.73 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.73 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.3 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 174 . P.PC.080.000 baby wipes

### diaper and other baby wipes

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 120 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 175 . P.PC.090.000 bar soap

### bar and other solid soaps

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Bath Soaps | 2.6 g | (per day: CTFA; cosmetics company; Simmons Market Research) 1.53; 0.95; X |  |  |
| RIVM Cosmetics Fact Sheet | Washing hands - soap | 1 g | 1825 /year | 1 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F&H Bar Soap -Hand | 0.36 (g/use) | 1.0-6.0 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F&H Bar Soap -Body | 2.6-8.6 (g/use; min-max ranges for North America) | 0.95-3 (per day; min-max ranges for North America) |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 301 | lognormal | 0 | 99 | B | Average of .82/day |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.9 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.9 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.9 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.9 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 176 . P.PC.100.000 bath oil

### bath oils or oil-filled beads

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Bath Oils | 14.7 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.08; 0.19; 0.22g |  |  |
| EFH 17-3 | Bath Capsules |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.018; 0.019; X |  |  |
| RIVM Cosmetics Fact Sheet | Bath oil | 25 g | 104 /year | 15 min |  |
| RIVM Cosmetics Fact Sheet | Essential oils -Bath | 9 g | 52 /year | 20 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | ~ 1 oz |
| Frequency (per year) | use.freq | 50 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 177 . P.PC.110.000 bath paints or crayons

### bath paints or bath crayons

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | ~ 1 oz |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 178 . P.PC.120.000 bath salts

### bath salts, soaks, and fizzes

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Bath Tablets |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.003; 0.008; X |  |  |
| EFH 17-3 | Bath Salts | 18.9 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.006; 0.013; X |  |  |
| RIVM Cosmetics Fact Sheet | Bath salts | 9 g | 104 /year | 15 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 19 | Lognormal | 0 | 99 | B | North American value |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B | North American value |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 179 . P.PC.130.000 bite relief

### soothing treatments for insect bites

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 180 . P.PC.140.000 blush or bronzer

### cheek blushes, bronzers, and rouges

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Blusher and Rouge | 0.011 g | (per day: CTFA; cosmetics company; Simmons Market Research) 1.18; 1.24; 0.55 |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.05 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 430 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.7 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 181 . P.PC.150.000 body adhesive

### adhesives for attaching decorations or clothing to skin

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 182 . P.PC.160.000 body care set

### multicomponent body care or bath set for which individual products are not designated

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 183 . P.PC.170.029 body oil-spray

### body oils (not including baby or bath oils, spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Baby Oil - adult use | 5 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.06; 0.13; X |  |  |
| RIVM Cosmetics Fact Sheet | Essential oils - Massage | 8 g | 24 /year | 30 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 8 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 184 . P.PC.170.999 body oil-NOC

### body oils (not including baby or bath oils)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Baby Oil - adult use | 5 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.06; 0.13; X |  |  |
| RIVM Cosmetics Fact Sheet | Essential oils - Massage | 8 g | 24 /year | 30 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 8 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 185 . P.PC.180.000 body powder

### talcum and dusting powders for the body

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Baby Powder - adult use | 0.8 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.13; 0.22; X |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 64 | lognormal | 0 | 99 | B | ~average |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 186 . P.PC.190.000 body scrub

### body cleaners containing abrasives or exfoliants

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Showering - soap | 7.0 g | 329 /year | 4 min |  |
| RIVM Cosmetics Fact Sheet | Showering - gel | 8.7 g | 329 /year | 4 min |  |
| RIVM Cosmetics Fact Sheet | Skin care - Body pack | 416 g | 4/ year | 20 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Liquid Soap-Body | 11.8 (g/use) | 0.088-0.57 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Body Wash | 8.0-12.0 (g/use; min-max ranges for North America) | 1 per day |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Bath gel (ADULT) |  | 15(14.3); 28(14.6); 17(12.90); 25(14.7) WM Par, WM Older |  | 41%; 15%; 34%; 10% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Bath gel (CHILD) |  | 13.3(13.00); 13.00(11); 7.6(11); 12.7(13) F M <=5 F M >5 |  | 74%; 65%; 45%; 37% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Body wash |  |  |  | 90; 71 pct hshlds parents;older adults |
| EFH 17-42 Loretz et al. 2006 | Body Wash | 11.3 (6.9) g |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 12 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B | consensus |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 0 | 12 | B | SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M | SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.13 | point | 13 | 99 | W | SUPERB |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.6 | point | 0 | 99 | B | SUPERB |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 187 . P.PC.200.000 body wash

### body cleaners, washes, shower gels

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Showering - soap | 7.0 g | 329 /year | 4 min |  |
| RIVM Cosmetics Fact Sheet | Showering - gel | 8.7 g | 329 /year | 4 min |  |
| RIVM Cosmetics Fact Sheet | Skin care - Body pack | 416 g | 4/ year | 20 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Liquid Soap-Body | 11.8 (g/use) | 0.088-0.57 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Body Wash | 8.0-12.0 (g/use; min-max ranges for North America) | 1 per day |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Bath gel (ADULT) |  | 15(14.3); 28(14.6); 17(12.90); 25(14.7) WM Par, WM Older |  | 41%; 15%; 34%; 10% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Bath gel (CHILD) |  | 13.3(13.00); 13.00(11); 7.6(11); 12.7(13) F M <=5 F M >5 |  | 74%; 65%; 45%; 37% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Body wash |  |  |  | 90; 71 pct hshlds parents;older adults |
| EFH 17-42 Loretz et al. 2006 | Body Wash | 11.3 (6.9) g |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 12 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 0 | 12 | B | SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M | SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.13 | point | 13 | 99 | W | SUPERB |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.6 | point | 0 | 99 | B | SUPERB |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 188 . P.PC.210.000 body wipes

### body wipes and towelettes (excluding diaper or baby wipes)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 189 . P.PC.220.000 bubble bath

### bubble baths

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Bubble Baths | 11.8 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.088; 0.13; X |  |  |
| EFH 17-3 | Bath Crystals |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.006; X; X |  |  |
| RIVM Cosmetics Fact Sheet | Bath foam | 17 g | 104 /year | 15 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Bath Foam/Bubble Bath | 14-17 (g/use; min-max ranges for North America) | 0.14-0.29 (per day; min-max ranges for North America) |  |  |
| SUPERB (Bennett et al. 2012) | Bubble bath |  |  |  | 43; 6 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | ~average |
| Frequency (per year) | use.freq | 53 | lognormal | 0 | 99 | B | average of EFH studies and ACI midrange |
| Duration of Direct Use (min) | duration | 15 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.43 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.06 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W | assumed |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.43 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 190 . P.PC.230.000 clipper lubricant or cleaner

### cleaning and lubricating products for hair clippers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.03 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.03 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 191 . P.PC.240.029 contact care-spray

### contact lens cleaners and solutions (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Wu et al 2012) Frequencies are per month | Contact lens solution (ADULT) |  | 31.00(21.70); 18(18.4); 14(13.90); 29(27.5) WM Par, WM Older |  | 20%; 16%; 6%; 6% (W;M parents W; M older adults) |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 3 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B | assumed |
| Direct use prevalence (fraction) | use.prev | 0.16 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 192 . P.PC.240.999 contact care-NOC

### contact lens cleaners and solutions

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Wu et al 2012) Frequencies are per month | Contact lens solution (ADULT) |  | 31.00(21.70); 18(18.4); 14(13.90); 29(27.5) WM Par, WM Older |  | 20%; 16%; 6%; 6% (W;M parents W; M older adults) |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 3 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B | assumed |
| Direct use prevalence (fraction) | use.prev | 0.16 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 193 . P.PC.250.000 cosmetic tool cleaner

### products for cleaning brushes and other cosmetic implements

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 194 . P.PC.260.000 denture adhesive

### denture adhesives

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.ingestion |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 60 | M |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 60 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 61 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 61 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of product mass ingested | f.ingested | 0.01 | Lognormal | 0 | 99 | B | Assumed |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 195 . P.PC.270.000 denture cleaner

### denture cleansers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.ingestion |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 60 | M |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 60 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 61 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 61 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of product mass ingested | f.ingested | 0.01 | Lognormal | 0 | 99 | B | Assumed |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 196 . P.PC.280.007 deodorant-gel

### deodorants and antiperspirants (gel formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Underarm Deodorants | 0.5 g | (per day: CTFA; cosmetics company; Simmons Market Research) 1.01; 0.8; 1.1 |  |  |
| RIVM Cosmetics Fact Sheet | Deodorant Stick / roller | .2 g | 365 /year | 1440 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirants-roll-ons | 0.52-1.22 (g/use; min-max ranges for North America) | 0.8-2.0 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirant solid/bar | 0.5-1.2 (g/use; min-max ranges for North America) | 0.8-2.0 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Deodorant (ADULT) |  | 31(10.9); 30(10.8); 30(7.00); 27(9.6) WM Par, WM Older |  | 92%; 81%; 93%; 92% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Deodorant (CHILD) |  | -(-); -(-); 27.90(17); 32.5(17) F M <=5 F M >5 |  | -; -; 42%; - F;M (5 and under) F;M 5+ |
| EFH 17-42 Loretz et al. 2006 | Solid Antiperspirant | 0.61 (0.56) g |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B | consensus |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B | consensus |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.42 | point | 6 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.95 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 197 . P.PC.280.028 deodorant-solid

### deodorants and antiperspirants (solid formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Underarm Deodorants | 0.5 g | (per day: CTFA; cosmetics company; Simmons Market Research) 1.01; 0.8; 1.1 |  |  |
| RIVM Cosmetics Fact Sheet | Deodorant Stick / roller | .2 g | 365 /year | 1440 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirants-roll-ons | 0.52-1.22 (g/use; min-max ranges for North America) | 0.8-2.0 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirant solid/bar | 0.5-1.2 (g/use; min-max ranges for North America) | 0.8-2.0 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Deodorant (ADULT) |  | 31(10.9); 30(10.8); 30(7.00); 27(9.6) WM Par, WM Older |  | 92%; 81%; 93%; 92% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Deodorant (CHILD) |  | -(-); -(-); 27.90(17); 32.5(17) F M <=5 F M >5 |  | -; -; 42%; - F;M (5 and under) F;M 5+ |
| EFH 17-42 Loretz et al. 2006 | Solid Antiperspirant | 0.61 (0.56) g |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B | consensus |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B | consensus |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.42 | point | 6 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.95 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 198 . P.PC.280.029 deodorant-spray

### deodorants and antiperspirants (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Underarm Deodorants | 0.5 g | (per day: CTFA; cosmetics company; Simmons Market Research) 1.01; 0.8; 1.1 |  |  |
| RIVM Cosmetics Fact Sheet | Deodorant Spray | 2.6 g | 730 /year | 720 min (dermal) |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirant aerosols | 0.52-2.2 (g/use; min-max ranges for North America) | 0.8-2.0 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Deodorant (ADULT) |  | 31(10.9); 30(10.8); 30(7.00); 27(9.6) WM Par, WM Older |  | 92%; 81%; 93%; 92% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Deodorant (CHILD) |  | -(-); -(-); 27.90(17); 32.5(17) F M <=5 F M >5 |  | -; -; 42%; - F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.42 | point | 6 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.95 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 199 . P.PC.280.999 deodorant-NOC

### deodorants and antiperspirants not otherwise characterized

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Underarm Deodorants | 0.5 g | (per day: CTFA; cosmetics company; Simmons Market Research) 1.01; 0.8; 1.1 |  |  |
| RIVM Cosmetics Fact Sheet | Deodorant Stick / roller | .2 g | 365 /year | 1440 min |  |
| RIVM Cosmetics Fact Sheet | Deodorant Spray | 2.6 g | 730 /year | 720 min (dermal) |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirants-roll-ons | 0.52-1.22 (g/use; min-max ranges for North America) | 0.8-2.0 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirant aerosols | 0.52-2.2 (g/use; min-max ranges for North America) | 0.8-2.0 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirant solid/bar | 0.5-1.2 (g/use; min-max ranges for North America) | 0.8-2.0 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Deodorant (ADULT) |  | 31(10.9); 30(10.8); 30(7.00); 27(9.6) WM Par, WM Older |  | 92%; 81%; 93%; 92% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Deodorant (CHILD) |  | -(-); -(-); 27.90(17); 32.5(17) F M <=5 F M >5 |  | -; -; 42%; - F;M (5 and under) F;M 5+ |
| EFH 17-42 Loretz et al. 2006 | Solid Antiperspirant | 0.61 (0.56) g |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.42 | point | 6 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.95 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 200 . P.PC.290.029 depilatory-spray

### chemical products for removal of body or facial hair (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Depilatories |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0061; 0.051; 0.009 |  |  |
| RIVM Cosmetics Fact Sheet | Depilatories | 5.5 g | 17 /year | 15 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 17 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 15 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.0005 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 201 . P.PC.290.999 depilatory-NOC

### chemical products for removal of body or facial hair

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Depilatories |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0061; 0.051; 0.009 |  |  |
| RIVM Cosmetics Fact Sheet | Depilatories | 5.5 g | 17 /year | 15 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 17 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 15 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.0005 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 202 . P.PC.300.000 diaper cream

### diaper creams and ointments

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Baby care Baby salve | .27 g | 720 / year | 720 min |  |
| EFH 17-54 Sathyanarayana et al. (2008) | Diaper Cream |  |  |  | 33% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 720 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.25 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.25 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 203 . P.PC.310.029 dry shampoo-spray

### dry shampoos for removing hair oils (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 204 . P.PC.310.999 dry shampoo-NOC

### dry shampoos for removing hair oils

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 205 . P.PC.320.000 ethnic hair care

### products for ethnic hair care, including wrap set lotions and pressing lotions (excluding relaxers)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 206 . P.PC.330.000 eye cream

### creams and moisturizers for specific treatment of eye area

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Eye Lotion |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.094; 0.34; X |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 79 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 207 . P.PC.340.000 eye drops

### products for lubricating eyes or treating redness

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 1 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 208 . P.PC.350.029 eye lid spray

### spray product for moisturizing the eyelid

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 209 . P.PC.360.013 eye liner-liquid

### eye liners or brow coloring products (liquid or gel formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Eyeliner | 0.42 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.68; 0.27; 1.43 |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 290 | lognormal | 0 | 99 | B | ~average |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 210 . P.PC.360.999 eye liner-NOC

### eye liners or brow coloring products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Eyeliner | 0.42 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.68; 0.27; 1.43 |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 290 | lognormal | 0 | 99 | B | ~average |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 211 . P.PC.370.000 eye makeup-other

### miscellaneous cosmetic eye products including lash adhesives and tints

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Under Eye Cover |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.79; X; X |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 290 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 212 . P.PC.380.000 eye products

### NA

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal | NA |
| product.direct.inhalationvapor | NA |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B | same as eye-makeup other |
| Frequency (per year) | use.freq | 290 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B | NA |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 213 . P.PC.390.000 eye shadow

### products for coloring eye lids

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Eye Shadow |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.69; 0.78; 0.4 |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 230 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.79 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.79 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 214 . P.PC.400.000 face cleansing wipes

### textile wipes or pads treated with cleansing solution

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 215 . P.PC.410.029 face cream or moisturizer-spray

### moisturizers, lotions, and creams for primarily treating the face (excluding eye-specific products) (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Skin care Cream - Face cream | .8 g | 730 / year | 720 min |  |
| RIVM Cosmetics Fact Sheet | Skin care - Skin whitening products | 5 g | 91 /year | 1440 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Other-Makeup remover | 2.5 (g/use) | 1.0-2.0 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial moisturizer (ADULT) |  | 33(15.9); 17(18.1); 34(14.30); 15(11.9) WM Par, WM Older |  | 81%; 29%; 74%; 19% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Anti-aging or overnight cream (ADULT) |  | 27(16.3); 18(24.5); 29(12.00); 22(12) WM Par, WM Older |  | 40%; 6%; 41%; 4% (W;M parents W; M older adults) |
| SUPERB (Bennett et al. 2012) | Facial moisturizer |  |  |  | 93; 59 pct hshlds parents;older adults |
| EFH 17-38 Loretz et al. 2005 | Face Cream |  |  | 1.77 (1.16) |  |
| EFH 17-39 Loretz et al. 2005 | Face Cream | 1.22 (1.76) |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 92 | lognormal | 0 | 99 | M |  |
| Frequency (per year) | use.freq | 400 | lognormal | 0 | 99 | W |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.29 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.81 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.81 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 216 . P.PC.410.999 face cream or moisturizer-NOC

### moisturizers, lotions, and creams for primarily treating the face (excluding eye-specific products)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Skin care Cream - Face cream | .8 g | 730 / year | 720 min |  |
| RIVM Cosmetics Fact Sheet | Skin care - Skin whitening products | 5 g | 91 /year | 1440 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Other-Makeup remover | 2.5 (g/use) | 1.0-2.0 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial moisturizer (ADULT) |  | 33(15.9); 17(18.1); 34(14.30); 15(11.9) WM Par, WM Older |  | 81%; 29%; 74%; 19% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Anti-aging or overnight cream (ADULT) |  | 27(16.3); 18(24.5); 29(12.00); 22(12) WM Par, WM Older |  | 40%; 6%; 41%; 4% (W;M parents W; M older adults) |
| SUPERB (Bennett et al. 2012) | Facial moisturizer |  |  |  | 93; 59 pct hshlds parents;older adults |
| EFH 17-38 Loretz et al. 2005 | Face Cream |  |  | 1.77 (1.16) |  |
| EFH 17-39 Loretz et al. 2005 | Face Cream | 1.22 (1.76) |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 92 | lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 400 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.29 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.81 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.81 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 217 . P.PC.420.000 face mask

### leave-on masks or peels for treatment of the face

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Paste Masks (mud packs) | 3.7 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.027; 0.2; X |  |  |
| RIVM Cosmetics Fact Sheet | Skin care - Peeling-gel | .8 g | 104 / year | 5 min |  |
| RIVM Cosmetics Fact Sheet | Skin care - Face pack | 20 g | 104/year | 20 min |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Mask / Deep cleanser (ADULT) |  | 2.8(6.3); 11(13.9); 2.4(3.60); 0.8(-) WM Par, WM Older |  | 51%; 22%; 47%; 17% (W;M parents W; M older adults) |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B | ~average |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 15 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 218 . P.PC.430.000 face powder

### pressed or loose powders for face

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Face Powders | 0.085 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.35; 0.67; 0.33 |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 164 | lognormal | 0 | 99 | B | ~average |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.6 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 219 . P.PC.440.001 face scrub-acne

### facial cleansing products containing exfoliating particles, for acne treatment

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Face Powders | 0.085 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.35; 0.67; 0.33 |  |  |
| EFH 17-3 | Cleansing Products (cold creams, cleansing lotions, liquids, and pads) | 1.7 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.63; 0.8; 0.54 |  |  |
| RIVM Cosmetics Fact Sheet | Facial cleanser | 2.5 g | 730 / year | 5 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Cleansing products | 1.7 (g/use) | 0.54-2 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F &H Bar Soap-Face | 0.27 (g/use) | 1 per day |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial cleanser (ADULT) |  | 35(18.8); 23(14.5); 30(15.60); 21(23.5) WM Par, WM Older |  | 73%; 23%; 59%; 12% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Mask / Deep cleanser (ADULT) |  | 2.8(6.3); 11(13.9); 2.4(3.60); 0.8(-) WM Par, WM Older |  | 51%; 22%; 47%; 17% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial cleanser (CHILD) |  | -(-); -(-); 21.2(20); 10.8(7.9) F M <=5 F M >5 |  | -; -; 42%; 11% F;M (5 and under) F;M 5+ |
| EFH 17-51/53 Loretz 2008 | Facial Cleanser | 2.57 (1.78) g | 1.6 (0.52) /day |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M | lower prevalence with repect to regular face scrub |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 220 . P.PC.440.999 face scrub-NOC

### facial cleansing products containing exfoliating particles (excluding products for acne)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Cleansing Products (cold creams, cleansing lotions, liquids, and pads) | 1.7 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.63; 0.8; 0.54 |  |  |
| RIVM Cosmetics Fact Sheet | Facial cleanser | 2.5 g | 730 / year | 5 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Cleansing products | 1.7 (g/use) | 0.54-2 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F &H Bar Soap-Face | 0.27 (g/use) | 1 per day |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial cleanser (ADULT) |  | 35(18.8); 23(14.5); 30(15.60); 21(23.5) WM Par, WM Older |  | 73%; 23%; 59%; 12% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Mask / Deep cleanser (ADULT) |  | 2.8(6.3); 11(13.9); 2.4(3.60); 0.8(-) WM Par, WM Older |  | 51%; 22%; 47%; 17% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial cleanser (CHILD) |  | -(-); -(-); 21.2(20); 10.8(7.9) F M <=5 F M >5 |  | -; -; 42%; 11% F;M (5 and under) F;M 5+ |
| EFH 17-51/53 Loretz 2008 | Facial Cleanser | 2.57 (1.78) g | 1.6 (0.52) /day |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.11 | point | 6 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.42 | point | 6 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 221 . P.PC.450.001 face wash-acne

### facial cleansing products (excluding scrubs), for acne treatment

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Cleansing Products (cold creams, cleansing lotions, liquids, and pads) | 1.7 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.63; 0.8; 0.54 |  |  |
| RIVM Cosmetics Fact Sheet | Facial cleanser | 2.5 g | 730 / year | 5 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Cleansing products | 1.7 (g/use) | 0.54-2 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F &H Bar Soap-Face | 0.27 (g/use) | 1 per day |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial cleanser (ADULT) |  | 35(18.8); 23(14.5); 30(15.60); 21(23.5) WM Par, WM Older |  | 73%; 23%; 59%; 12% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Mask / Deep cleanser (ADULT) |  | 2.8(6.3); 11(13.9); 2.4(3.60); 0.8(-) WM Par, WM Older |  | 51%; 22%; 47%; 17% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial cleanser (CHILD) |  | -(-); -(-); 21.2(20); 10.8(7.9) F M <=5 F M >5 |  | -; -; 42%; 11% F;M (5 and under) F;M 5+ |
| EFH 17-51/53 Loretz 2008 | Facial Cleanser | 2.57 (1.78) g | 1.6 (0.52) /day |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M | lower prevalence with repect to regular face was |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 222 . P.PC.450.029 face wash-spray

### facial cleansing products (excluding scrubs) (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Cleansing Products (cold creams, cleansing lotions, liquids, and pads) | 1.7 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.63; 0.8; 0.54 |  |  |
| RIVM Cosmetics Fact Sheet | Facial cleanser | 2.5 g | 730 / year | 5 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Cleansing products | 1.7 (g/use) | 0.54-2 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F &H Bar Soap-Face | 0.27 (g/use) | 1 per day |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial cleanser (ADULT) |  | 35(18.8); 23(14.5); 30(15.60); 21(23.5) WM Par, WM Older |  | 73%; 23%; 59%; 12% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Mask / Deep cleanser (ADULT) |  | 2.8(6.3); 11(13.9); 2.4(3.60); 0.8(-) WM Par, WM Older |  | 51%; 22%; 47%; 17% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial cleanser (CHILD) |  | -(-); -(-); 21.2(20); 10.8(7.9) F M <=5 F M >5 |  | -; -; 42%; 11% F;M (5 and under) F;M 5+ |
| EFH 17-51/53 Loretz 2008 | Facial Cleanser | 2.57 (1.78) g | 1.6 (0.52) /day |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.11 | point | 6 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.42 | point | 6 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 223 . P.PC.450.999 face wash-NOC

### facial cleansing products (excluding scrubs and products for acne)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Cleansing Products (cold creams, cleansing lotions, liquids, and pads) | 1.7 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.63; 0.8; 0.54 |  |  |
| RIVM Cosmetics Fact Sheet | Facial cleanser | 2.5 g | 730 / year | 5 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Cleansing products | 1.7 (g/use) | 0.54-2 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F &H Bar Soap-Face | 0.27 (g/use) | 1 per day |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial cleanser (ADULT) |  | 35(18.8); 23(14.5); 30(15.60); 21(23.5) WM Par, WM Older |  | 73%; 23%; 59%; 12% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Mask / Deep cleanser (ADULT) |  | 2.8(6.3); 11(13.9); 2.4(3.60); 0.8(-) WM Par, WM Older |  | 51%; 22%; 47%; 17% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Facial cleanser (CHILD) |  | -(-); -(-); 21.2(20); 10.8(7.9) F M <=5 F M >5 |  | -; -; 42%; 11% F;M (5 and under) F;M 5+ |
| EFH 17-51/53 Loretz 2008 | Facial Cleanser | 2.57 (1.78) g | 1.6 (0.52) /day |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.11 | point | 6 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.42 | point | 6 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 224 . P.PC.460.029 foot care-spray

### miscellaneous products for application to feet, including scrubs, lotions, and deodorants (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Foot Powder and Sprays |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.061; 0.079; X |  |  |
| RIVM Cosmetics Fact Sheet | Foot care - Antiperspirant | 1.2 g | 730 /year | 720 |  |
| RIVM Cosmetics Fact Sheet | Foot care - Anti-fungicides | .1 g | 90 /year | 720 |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 280 | lognormal | 0 | 99 | B | ~average |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.15 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 225 . P.PC.460.999 foot care-NOC

### miscellaneous products for application to feet, including scrubs, lotions, and deodorants

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Foot Powder and Sprays |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.061; 0.079; X |  |  |
| RIVM Cosmetics Fact Sheet | Foot care - Antiperspirant | 1.2 g | 730 /year | 720 |  |
| RIVM Cosmetics Fact Sheet | Foot care - Anti-fungicides | .1 g | 90 /year | 720 |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 280 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.15 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.15 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 226 . P.PC.470.000 foundation or concealer

### liquid or cream foundation make-ups and concealers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Foundations | 0.265 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.46; 0.78; 0.47 |  |  |
| EFH 17-3 | Makeup Bases | 0.13 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.24; 0.64; X |  |  |
| RIVM Cosmetics Fact Sheet | Make-up - Facial make-up | .8 g | 365/ year | 960 |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Face/eye cosmetics foundation liquid | 0-2.65 (g/use; min-max ranges for North America) | 1.0-2.0 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Foundation (ADULT) |  | 17.00(13); -(-); 21(12.70); -(-) WM Par, WM Older |  | 65%; -; 61%; - (W;M parents W; M older adults) |
| SUPERB (Bennett et al. 2012) | Foundation |  |  |  | 60; 41 pct hshlds parents;older adults |
| EFH 17-42 Loretz et al. 2006 | Liquid Foundation | 0.54 (0.52) g |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 270 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.63 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.63 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 227 . P.PC.480.029 fragrance-spray

### fragrances, colognes, and perfumes (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Colognes and Toilet Water | 0.65 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.68; 0.85; 0.56 |  |  |
| EFH 17-3 | Perfumes | 0.23 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.29; 0.26; 0.38 |  |  |
| EFH 17-3 | Sachets | 0.2 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0061; 0.034; X |  |  |
| RIVM Cosmetics Fact Sheet | Fragrances - Eau de toilette spray | .72 g | 1095 / year | 320 min |  |
| RIVM Cosmetics Fact Sheet | Fragrances - Perfume | .2 g | 237 /year | 320 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Fine fragrances | 0.1-5.08 (g/use; min-max ranges for North America) | 1.0-11.6 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Fragrance (ADULT) |  | 14.00(12.60); -(-); 15(12.80); -(-) WM Par, WM Older |  | 76%; -; 70%; - (W;M parents W; M older adults) |
| EFH 17-42 Loretz et al. 2006 | Spray Perfume | 0.33 (0.41) g |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 183 | lognormal | 0 | 99 | B | assume .5/day |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.73 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.73 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 228 . P.PC.480.999 fragrance-NOC

### fragrances, colognes, and perfumes

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Colognes and Toilet Water | 0.65 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.68; 0.85; 0.56 |  |  |
| EFH 17-3 | Perfumes | 0.23 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.29; 0.26; 0.38 |  |  |
| EFH 17-3 | Sachets | 0.2 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0061; 0.034; X |  |  |
| RIVM Cosmetics Fact Sheet | Fragrances - Perfume | .2 g | 237 /year | 320 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Fine fragrances | 0.1-5.08 (g/use; min-max ranges for North America) | 1.0-11.6 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Fragrance (ADULT) |  | 14.00(12.60); -(-); 15(12.80); -(-) WM Par, WM Older |  | 76%; -; 70%; - (W;M parents W; M older adults) |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 183 | lognormal | 0 | 99 | B | assume .5/day |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.73 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.73 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 229 . P.PC.490.000 glitter

### powder products containing reflective particles for face or body

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 230 . P.PC.500.000 hair bleach

### products for lightening or removing color from hair on the head

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Hair Lighteners |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0003; X; X |  |  |
| EFH 17-3 | Hair Bleaches |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0005; X; X |  |  |
| RIVM Cosmetics Fact Sheet | Hair care - Hair bleaching products | 200 g | 10 /year | 45 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 200 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 10 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 45 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 231 . P.PC.510.019 hair color-permanent

### hair colors and dyes characterized as permanent

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Hair Dye |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.001; X; 0.005 |  |  |
| EFH 17-3 | Hair Rinse (coloring) |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0004; X; X |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair dye (ADULT) |  | 0.4(0.4); 0.2(0); 0.7(0.50); 1(0) WM Par, WM Older |  | 63%; 3%; 51%; 4% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair dye (CHILD) |  | -(-); -(-); .(.); .(.) F M <=5 F M >5 |  | -; -; 0%; 0% F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 200 | Lognormal | 0 | 99 | B | same as hair bleach |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | M |  |
| Frequency (per year) | use.freq | 7 | lognormal | 0 | 99 | W |  |
| Duration of Direct Use (min) | duration | 45 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.04 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.6 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 232 . P.PC.510.024 hair color-professional

### hair colors and dyes characterized as for professional use

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Hair Dye |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.001; X; 0.005 |  |  |
| EFH 17-3 | Hair Rinse (coloring) |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0004; X; X |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair dye (ADULT) |  | 0.4(0.4); 0.2(0); 0.7(0.50); 1(0) WM Par, WM Older |  | 63%; 3%; 51%; 4% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair dye (CHILD) |  | -(-); -(-); .(.); .(.) F M <=5 F M >5 |  | -; -; 0%; 0% F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 200 | Lognormal | 0 | 99 | B | same as hair bleach |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | M |  |
| Frequency (per year) | use.freq | 7 | lognormal | 0 | 99 | W |  |
| Duration of Direct Use (min) | duration | 45 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.04 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.6 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 233 . P.PC.510.030 hair color-temporary

### hair colors and dyes characterized as temporary

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Hair Dye |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.001; X; 0.005 |  |  |
| EFH 17-3 | Hair Rinse (coloring) |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0004; X; X |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair dye (ADULT) |  | 0.4(0.4); 0.2(0); 0.7(0.50); 1(0) WM Par, WM Older |  | 63%; 3%; 51%; 4% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair dye (CHILD) |  | -(-); -(-); .(.); .(.) F M <=5 F M >5 |  | -; -; 0%; 0% F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 234 . P.PC.510.031 hair color-temporary spray

### hair colors and dyes characterized as temporary (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Hair Color Spray |  | (per day: CTFA; cosmetics company; Simmons Market Research) X; X; X |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 235 . P.PC.510.999 hair color-NOC

### hair coloring products not otherwise categorized

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Hair Dye |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.001; X; 0.005 |  |  |
| EFH 17-3 | Hair Rinse (coloring) |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0004; X; X |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair dye (ADULT) |  | 0.4(0.4); 0.2(0); 0.7(0.50); 1(0) WM Par, WM Older |  | 63%; 3%; 51%; 4% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair dye (CHILD) |  | -(-); -(-); .(.); .(.) F M <=5 F M >5 |  | -; -; 0%; 0% F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 200 | Lognormal | 0 | 99 | B | same as hair bleach |
| Frequency (per year) | use.freq | 3 | lognormal | 0 | 99 | M |  |
| Frequency (per year) | use.freq | 7 | lognormal | 0 | 99 | W |  |
| Duration of Direct Use (min) | duration | 45 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.04 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.6 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 236 . P.PC.520.000 hair color activator

### chemical activators for hair coloring products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 10 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 45 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 237 . P.PC.530.000 hair color developer

### chemical developers for hair coloring products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 10 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 45 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 238 . P.PC.540.000 hair color toner

### chemical toners for hair coloring products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 10 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 45 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 239 . P.PC.550.011 hair conditioner-leave-in

### leave-in everyday hair conditioners and detanglers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | ~ 1 oz; all assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.02 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 240 . P.PC.550.012 hair conditioner-leave-in-spray

### leave-in everyday hair conditioners (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B | ~ 1 oz; all assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.02 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 241 . P.PC.550.029 hair conditioner-spray

### rinse-out everyday hair conditioners (excluding combo shampoo/conditioner products) (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 180 | lognormal | 0 | 99 | B | consensus |
| Duration of Direct Use (min) | duration | 4 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.56 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.92 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.92 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.02 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 242 . P.PC.550.999 hair conditioner-NOC

### rinse-out everyday hair conditioners (excluding combo shampoo/conditioner products)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Hair Conditioners | 12.4 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.4; 0.4; 0.27 |  |  |
| EFH 17-3 | Hair Rinses | 12.7 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.064; 0.18; X |  |  |
| RIVM Cosmetics Fact Sheet | Hair care - Conditioner | 14 g | 104 / year | 4 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Hair rinses | 7-12.7 (g/use; min-max ranges for North America) | 0.064-1 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair conditioner (ADULT) |  | 21(10.1); 19(12.2); 13(9.90); 19(11.2) WM Par, WM Older |  | 92%; 56%; 72%; 40% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair conditioner (CHILD) |  | 13.5(9.8); 12.6(11.00); 14.1(10.00); 14.9(11) F M <=5 F M >5 |  | 65%; 27%; 90%; 43% F;M (5 and under) F;M 5+ |
| EFH 17-51/53 Loretz 2008 | Conditioner | 13.13 (11.22) g | 1.1 (.19) |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 255.5 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 4 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.56 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.92 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.92 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.02 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 243 . P.PC.560.024 hair conditioning treatment-professional

### hair conditioning and moisturizing treatments for occasional use characterized as for professional use

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Hair Rinses | 12.7 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.064; 0.18; X |  |  |
| RIVM Cosmetics Fact Sheet | Hair care - Conditioner | 14 g | 104 / year | 4 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Hair rinses | 7-12.7 (g/use; min-max ranges for North America) | 0.064-1 (per day; min-max ranges for North America) |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 244 . P.PC.560.029 hair conditioning treatment-spray

### hair conditioning and moisturizing treatments for occasional use (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 245 . P.PC.560.999 hair conditioning treatment-NOC

### hair conditioning and moisturizing treatments for occasional use

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Hair Rinses | 12.7 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.064; 0.18; X |  |  |
| RIVM Cosmetics Fact Sheet | Hair care - Conditioner | 14 g | 104 / year | 4 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Hair rinses | 7-12.7 (g/use; min-max ranges for North America) | 0.064-1 (per day; min-max ranges for North America) |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 246 . P.PC.570.000 hair relaxer

### chemical hair relaxers

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Wave Sets | 2.6 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.003h; 0.04; X |  |  |
| EFH 17-3 | Permanent Wave | 101 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.003; X; 0.001 |  |  |
| EFH 17-3 | Hair Straighteners | 0.2 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0007; X; X |  |  |
| RIVM Cosmetics Fact Sheet | Hair care - Permanent wave- Perm lotion | 80 g | 4 /year | 40 min |  |
| RIVM Cosmetics Fact Sheet | Hair care - Permanent wave- - Fixing lotion | 80 g | 4 /year | 15 min |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair perm (ADULT) |  | 0.3(0.3); 0.5(.); 0.5(0.90); 0.5(.) WM Par, WM Older |  | 6%; 1%; 18%; 2% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair perm (CHILD) |  | 0.4(0.10); .(.); 0.1(0); .(.) F M <=5 F M >5 |  | 1%; 0%; 10%; 0% F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 5 | lognormal | 0 | 12 | B | consensus |
| Frequency (per year) | use.freq | 6 | lognormal | 13 | 99 | B | consensus |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 5 | W |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 6 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 6 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.12 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.12 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 247 . P.PC.580.000 hair spray

### spray fixatives for hair

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Hair Sprays |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.25; 0.55; 0.32 |  |  |
| EFH 17-3 | Hair Color Spray |  | (per day: CTFA; cosmetics company; Simmons Market Research) X; X; X |  |  |
| RIVM Cosmetics Fact Sheet | Hair care - Hairspray, aerosol can |  | 438 /year | .24 min spray / Exposure 5 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Hair sprays-aerosol | 0.05 -14.08 (g/use; min-max ranges for North America) | 1-5.36 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Hair spray (pump) | 0-21.4 (g/use; min-max ranges for North America) | 1-4.22 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair spray (ADULT) |  | 17(13.9); 7.6(9.1); 18(13.90); 26(14.3) WM Par, WM Older |  | 55%; 10%; 70%; 29% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair spray (CHILD) |  | -(-); -(-); 5.5(9.5); 18.9(13) F M <=5 F M >5 |  | -; -; 56%; 33% F;M (5 and under) F;M 5+ |
| EFH 17-37 Weegels and Van Veen 2001 | Hair Spray | 1-11.6 g | .76 (0.68) | 23/60 s =.38 minutes |  |
| EFH 17-42 Loretz et al. 2006 | Hairspray (aerosol) | 2.58 (2.26) g |  |  |  |
| EFH 17-42 Loretz et al. 2006 | Hairspray (pump) | 3.64 (3.5) g |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 180 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | M |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.33 | point | 6 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.56 | point | 6 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M | ~ average of SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.65 | point | 13 | 99 | W | ~ average of SUPERB |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.65 | point | 0 | 99 | B | ~ average of SUPERB |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 248 . P.PC.590.007 hair styling-gel

### hair styling products for hold, shine, or texture (gel formulation indicated)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Hair care - Hair styling, gel | .3 g | 358 /year |  |  |
| SUPERB (Bennett et al. 2012) | Hair styling products |  |  |  | 100; 76 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 249 . P.PC.590.008 hair styling-gel-spray

### hair styling products for hold, shine, or texture (gel and spray formulation indicated)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Hair care - Hair styling, gel | .3 g | 358 /year |  |  |
| SUPERB (Bennett et al. 2012) | Hair styling products |  |  |  | 100; 76 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 365 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 250 . P.PC.590.014 hair styling-mousse

### foaming hair styling products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Hair care - Hair styling, mousse | 2.9 g | 274/ year |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair mousse (ADULT) |  | 17(12.1); 16(11.4); 11(9.70); 27(9.2) WM Par, WM Older |  | 63%; 49%; 61%; 19% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair mousse (CHILD) |  | 13(12.00); 7.20(9.7); 11.3(12); 17(14) F M <=5 F M >5 |  | 30%; 31%; 66%; 45% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Hair styling products |  |  |  | 100; 76 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 144 | lognormal | 0 | 12 | B | Average of SUPERB |
| Frequency (per year) | use.freq | 264 | lognormal | 13 | 99 | M | Average of SUPERB |
| Frequency (per year) | use.freq | 192 | lognormal | 13 | 99 | W | Average of SUPERB |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.31 | point | 0 | 5 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 0 | 5 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.45 | point | 6 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.66 | point | 6 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | M | Average of SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.62 | point | 13 | 99 | W | Average of SUPERB |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.66 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 251 . P.PC.590.015 hair styling-mousse-spray

### foaming hair styling products (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair mousse (ADULT) |  | 17(12.1); 16(11.4); 11(9.70); 27(9.2) WM Par, WM Older |  | 63%; 49%; 61%; 19% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Hair mousse (CHILD) |  | 13(12.00); 7.20(9.7); 11.3(12); 17(14) F M <=5 F M >5 |  | 30%; 31%; 66%; 45% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Hair styling products |  |  |  | 100; 76 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 144 | lognormal | 0 | 12 | B | Average of SUPERB |
| Frequency (per year) | use.freq | 264 | lognormal | 13 | 99 | M | Average of SUPERB |
| Frequency (per year) | use.freq | 192 | lognormal | 13 | 99 | W | Average of SUPERB |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.31 | point | 0 | 5 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 0 | 5 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.45 | point | 6 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.66 | point | 6 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | M | Average of SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.62 | point | 13 | 99 | W | Average of SUPERB |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.66 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 252 . P.PC.590.023 hair styling-powder

### powder products for styling or fixing hair

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hair styling products |  |  |  | 100; 76 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 253 . P.PC.590.029 hair styling-spray

### other hair styling products for shine or texture (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hair styling products |  |  |  | 100; 76 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 180 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 254 . P.PC.590.999 hair styling-NOC

### other hair styling products for shine or texture

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | Hair styling products |  |  |  | 100; 76 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 180 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 255 . P.PC.600.029 hand sanitizer-spray

### antibacterial products for hands (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Wu et al 2012) Frequencies are per month | Waterless hand sanitizer (ADULT) |  | 41(72.6); 52.2(4.3); 87(250); 25.9(1.5) WM Par, WM Older |  | 65%; 24; 87; 13 (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Waterless hand sanitizer (CHILD) |  | 25.00(34); 20.7(32); 23.6(30); 41.4(85) F M <=5 F M >5 |  | 81%; 78%; 68%; 58% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Hand sanitizer |  |  |  | 50; 41 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 480 | lognormal | 0 | 12 | M |  |
| Frequency (per year) | use.freq | 780 | lognormal | 0 | 12 | W |  |
| Frequency (per year) | use.freq | 360 | lognormal | 13 | 99 | M |  |
| Frequency (per year) | use.freq | 300 | lognormal | 13 | 99 | W |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.84 | point | 0 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.68 | point | 0 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.19 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.76 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.84 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 256 . P.PC.600.999 hand sanitizer-NOC

### antibacterial products for hands

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Wu et al 2012) Frequencies are per month | Waterless hand sanitizer (ADULT) |  | 41(72.6); 52.2(4.3); 87(250); 25.9(1.5) WM Par, WM Older |  | 65%; 24; 87; 13 (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Waterless hand sanitizer (CHILD) |  | 25.00(34); 20.7(32); 23.6(30); 41.4(85) F M <=5 F M >5 |  | 81%; 78%; 68%; 58% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Hand sanitizer |  |  |  | 50; 41 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 480 | lognormal | 0 | 12 | M |  |
| Frequency (per year) | use.freq | 780 | lognormal | 0 | 12 | W |  |
| Frequency (per year) | use.freq | 360 | lognormal | 13 | 99 | M |  |
| Frequency (per year) | use.freq | 300 | lognormal | 13 | 99 | W |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.84 | point | 0 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.68 | point | 0 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.19 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.76 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.84 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 257 . P.PC.610.000 hand soap

### liquid hand soaps

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Cosmetics Fact Sheet | Washing hands - gel | 0.8 g | 1825 /year | 1 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F&H liquid soap-hand | 1.6-1.7 (g/use; min-max ranges for North America) | 5.0-8.0 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Liquid soap (antibacterial) (ADULT) |  | 116(130); 122(163); 138(130.00); 98(120) WM Par, WM Older |  | 75%; 68%; 68%; 67% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Liquid soap (not antibacterial) (ADULT) |  | 101(86.3); 77(50.9); 96(121.00); 94(138) WM Par, WM Older |  | 58%; 51%; 54%; 54% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Liquid soap (antibacterial) (CHILD) |  | 71.20(70); 66.4(61); 103(89); 78.9(58) F M <=5 F M >5 |  | 83%; 82%; 83%; 79% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Liquid soap |  |  |  | 93; 88 pct hshlds parents;older adults |
| SUPERB (Bennett et al. 2012) | Antibacterial soap |  |  |  | 83; 53 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 1800 | lognormal | 0 | 99 | B | average approx 5/day |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 0 | 12 | B | Asssume to accoud for both antibacterial and non-antibac use |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | M | Asssume to accoud for both antibacterial and non-antibac use |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | W | Asssume to accoud for both antibacterial and non-antibac use |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.95 | point | 0 | 99 | B | Asssume to accoud for both antibacterial and non-antibac use |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 258 . P.PC.620.000 hand wipes

### wipes and solution primarily for hands

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 259 . P.PC.630.007 hand or body lotion-gel

### lotions and creams primarily for hands and body (gel formulations indicated)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 8 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 292 | lognormal | 0 | 12 | B |  |
| Frequency (per year) | use.freq | 292 | lognormal | 13 | 99 | M |  |
| Frequency (per year) | use.freq | 547 | lognormal | 13 | 99 | W |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.025 | point | 0 | 12 | M | assume 5% of non-gel formations |
| Direct use prevalence (fraction) | use.prev | 0.035 | point | 0 | 12 | W | assume 5% of non-gel formations |
| Direct use prevalence (fraction) | use.prev | 0.035 | point | 13 | 99 | M | assume 5% of non-gel formations |
| Direct use prevalence (fraction) | use.prev | 0.048 | point | 13 | 99 | W | assume 5% of non-gel formations |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.048 | point | 0 | 99 | B | assume 5% of non-gel formations |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 260 . P.PC.630.008 hand or body lotion-gel-spray

### lotions and creams primarily for hands and body (gel and spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 8 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 292 | lognormal | 0 | 12 | B |  |
| Frequency (per year) | use.freq | 292 | lognormal | 13 | 99 | M |  |
| Frequency (per year) | use.freq | 547 | lognormal | 13 | 99 | W |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.025 | point | 0 | 12 | M | assume 5% of non-gel formations |
| Direct use prevalence (fraction) | use.prev | 0.035 | point | 0 | 12 | W | assume 5% of non-gel formations |
| Direct use prevalence (fraction) | use.prev | 0.035 | point | 13 | 99 | M | assume 5% of non-gel formations |
| Direct use prevalence (fraction) | use.prev | 0.048 | point | 13 | 99 | W | assume 5% of non-gel formations |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.048 | point | 0 | 99 | B | assume 5% of non-gel formations |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 261 . P.PC.630.029 hand or body lotion-spray

### lotions and creams primarily for hands and body (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 8 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 292 | lognormal | 0 | 12 | B |  |
| Frequency (per year) | use.freq | 292 | lognormal | 13 | 99 | M |  |
| Frequency (per year) | use.freq | 547 | lognormal | 13 | 99 | W |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 0 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 0 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.95 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 262 . P.PC.630.999 hand or body lotion-NOC

### lotions and creams primarily for hands and body

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Fragrance Lotion |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0061; X; X |  |  |
| EFH 17-3 | Face, Body and Hand Preps | 3.5 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.65; X; 1.12 |  |  |
| RIVM Cosmetics Fact Sheet | Skin care Cream - Hand cream | 1.7 g | 730 / year | 720 min |  |
| RIVM Cosmetics Fact Sheet | Skin care Cream - Body lotion | 8 g | 730 / year | 720 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Body moisturizer | 0.05-36.3 ( g per day; min-max ranges for North America) |  |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Body lotion (ADULT) |  | 25(15.9); 16(12.6); 25(11.90); 14(12.5) WM Par, WM Older |  | 85%; 32%; 75%; 17% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Hand lotion (ADULT) |  | 56(54.7); 26(43.7); 57(85.60); 18(19.3) WM Par, WM Older |  | 95%; 66%; 96%; 79% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Body lotion (CHILD) |  | 16.5(17.00); 16.70(14); 20.9(19); 23.7(14) F M <=5 F M >5 |  | 71%; 62%; 70%; 38% F;M (5 and under) F;M 5+ |
| SUPERB (Wu et al 2012) Frequencies are per month | Hand lotion (CHILD) |  | 18.7(30.00); 16.10(19); 22.5(24); 23.7(14) F M <=5 F M >5 |  | 68%; 55%; 70%; 47% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Lotion hand and body |  |  |  | 100; 94 pct hshlds parents;older adults |
| EFH 17-38 Loretz et al. 2005 | Body Lotion, hands |  | 2.12 (1.59) |  |  |
| EFH 17-38 Loretz et al. 2005 | Body Lotion, arms |  | 1.52 (1.3) |  |  |
| EFH 17-38 Loretz et al. 2005 | Body Lotion, feet |  |  | .95 (1.01) |  |
| EFH 17-38 Loretz et al. 2005 | Body Lotion, legs |  |  | 1.11 (0.98) |  |
| EFH 17-39 Loretz et al. 2005 | Body Lotion | 4.42 (4.19) |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 8 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 292 | lognormal | 0 | 12 | B |  |
| Frequency (per year) | use.freq | 292 | lognormal | 13 | 99 | M |  |
| Frequency (per year) | use.freq | 547 | lognormal | 13 | 99 | W |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 0 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 0 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.7 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.95 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 263 . P.PC.640.000 lice shampoo

### shampoos for the treatment of head lice

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Wu et al 2012) Frequencies are per month | Shampoo for lice (ADULT) |  | 1.60(3.50); -(-); 0.1(-); -(-) WM Par, WM Older |  | 2%; 0%; 1%; 0% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Shampoo for lice (CHILD) |  | 0.30(0.3); 2(.); 0.8(.); 0.1(0) F M <=5 F M >5 |  | 0.01; 1%; 3%; 5% F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 10 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.03 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.03 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.02 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 264 . P.PC.650.000 liniment

### liniments and ointments for treatment of muscle or joint pain

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Tonics and Dressings | 2.9 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.073; 0.021; X |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 17 | lognormal | 0 | 99 | B | average |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 265 . P.PC.660.000 lip balm

### lip products primarily for protection

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.ingestion |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Fraction Ingested | Prevalence |
| RIVM Cosmetics Fact Sheet | Make-up - lip salve | 0.01 g | 1460 / year |  | 1 |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Lip Balm/Lipstick (ADULT) |  | 43(50.1); 8.5(15.3); 45(49.80); 17(28.8) WM Par, WM Older |  |  | 95%; 64%; 93%; 40% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Lip Balm/Lipstick (CHILD) |  | 17.4(60.00); 9.90(22); 26.7(57); 10.1(12) F M <=5 F M >5 |  |  | 65%; 49%; 90%; 55% F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.2 | Lognormal | 0 | 99 | B | same as lipstick |
| Frequency (per year) | use.freq | 120 | lognormal | 0 | 12 | M |  |
| Frequency (per year) | use.freq | 290 | lognormal | 0 | 12 | W |  |
| Frequency (per year) | use.freq | 168 | lognormal | 13 | 99 | M |  |
| Frequency (per year) | use.freq | 528 | lognormal | 13 | 99 | W |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.53 | point | 0 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.78 | point | 0 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.52 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.95 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass ingested | f.ingested | 1 | Lognormal | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 266 . P.PC.670.000 lip color

### colored lip products, excluding glosses

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.ingestion |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Fraction Ingested | Prevalence |
| EFH 17-3 | Lipstick and Lip Gloss |  | (per day: CTFA; cosmetics company; Simmons Market Research) 1.73; 1.23; 2.62 |  |  |  |
| RIVM Cosmetics Fact Sheet | Make-up - Lipstick | 0.01 g | 1460 / year |  | 1 |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Lipstick | 0-0.2 (g/use; min-max ranges for North America) | 1.0-4.0 (per day; min-max ranges for North America) |  |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Lip Balm/Lipstick (ADULT) |  | 43(50.1); 8.5(15.3); 45(49.80); 17(28.8) WM Par, WM Older |  |  | 95%; 64%; 93%; 40% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Lip Balm/Lipstick (CHILD) |  | 17.4(60.00); 9.90(22); 26.7(57); 10.1(12) F M <=5 F M >5 |  |  | 65%; 49%; 90%; 55% F;M (5 and under) F;M 5+ |
| EFH 17-38 Loretz et al. 2005 | Lipstick |  | 2.35 (1.8) /day |  |  |  |
| EFH 17-39 Loretz et al. 2005 | Lipstick | .214 g |  |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.2 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 0 | lognormal | 0 | 12 | M |  |
| Frequency (per year) | use.freq | 290 | lognormal | 0 | 12 | W |  |
| Frequency (per year) | use.freq | 0 | lognormal | 13 | 99 | M |  |
| Frequency (per year) | use.freq | 528 | lognormal | 13 | 99 | W |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | M | assumed no use |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | W | assumed limited use by girls under 13 |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M | assumed no use |
| Direct use prevalence (fraction) | use.prev | 0.95 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.95 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass ingested | f.ingested | 1 | Lognormal | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 267 . P.PC.680.000 lip gloss

### glossy lip products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.ingestion |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Fraction Ingested | Prevalence |
| EFH 17-3 | Lipstick and Lip Gloss |  | (per day: CTFA; cosmetics company; Simmons Market Research) 1.73; 1.23; 2.62 |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.2 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 678 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | M | assumed |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 0 | 12 | W | assumed |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M | assumed |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | W | assumed |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B | assumed |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass ingested | f.ingested | 1 | Lognormal | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 268 . P.PC.690.000 lip liner

### pencils for lining lips

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.ingestion |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.2 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 528 | lognormal | 0 | 99 | B | same as lip color |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass ingested | f.ingested | 1 | Lognormal | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 269 . P.PC.700.000 makeup primer

### products for priming face for make-up

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Makeup Fixatives |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.052; 0.12; X |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 63 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 270 . P.PC.710.000 makeup remover

### products for removing face make-ups

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Eye Makeup Remover |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.29; 0.45; X |  |  |
| RIVM Cosmetics Fact Sheet | Eye makeup remover | .5 g | 365 / year | 5 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 135 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 271 . P.PC.720.000 makeup set

### multicomponent make-up set set for which individual products are not designated

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 272 . P.PC.730.000 mascara

### eyelash mascaras

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Wu et al 2012) Frequencies are per month | Mascara (ADULT) |  | 16.00(12.10); -(-); 20(11.90); -(-) WM Par, WM Older |  | 79%; -; 51%; - (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Makeup Mascara (CHILD) |  | -(-); -(-); 16.2(16); -(-) F M <=5 F M >5 |  | -; -; 21%; - F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 216 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.21 | point | 0 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.79 | point | 13 | 65 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.51 | point | 66 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.79 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 273 . P.PC.740.029 mouthwash-spray

### antiseptic and dental mouthwashes and rinses (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.ingestion |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Fraction Ingested | Prevalence |
| EFH 17-3 | Breath Fresheners |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.052; 0.43; 0.46 |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 114 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 1 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B | assumed |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass ingested | f.ingested | 1 | Lognormal | 0 | 99 | B | Assumed |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 274 . P.PC.740.999 mouthwash-NOC

### antiseptic and dental mouthwashes and rinses

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.ingestion |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Fraction Ingested | Prevalence |
| EFH 17-3 | Mouthwashes |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.42; 0.62; 0.58 |  |  |  |
| RIVM Cosmetics Fact Sheet | Mouth wash |  | 1460 / year |  | 0.1 (1 g ingested per 10g use) |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Mouthwash adult | 30 (g/use) | 0.4-2 (per day; min-max ranges for North America) |  | 0.085 |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 30 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 197 | lognormal | 0 | 99 | B | average of ACI/EFH |
| Duration of Direct Use (min) | duration | 0.5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass ingested | f.ingested | 0 | Lognormal | 0 | 99 | B | Approx consensus |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 275 . P.PC.750.000 nail adhesive

### adhesives for reparing fingernails or attaching artificial nails

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.03 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.03 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.1 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.2 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 276 . P.PC.760.000 nail polish

### clear or colored nail enamels, polishes, basecoats, topcoats, and other acrylic coatings

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Nail Basecoats | 0.2 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.052; 0.13; X |  |  |
| EFH 17-3 | Nail Polish and Enamel | 0.3 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.16; 0.2; 0.07 |  |  |
| EFH 17-3 | Nail Undercoats |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.049; 0.12; X |  |  |
| RIVM Cosmetics Fact Sheet | Nail care - Nail polish | .25 g | 156 / year | 5 min (3360 for dermal) |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Nail polish (professional) (ADULT) |  | 0.60(0.70); -(-); 1.1(1.00); -(-) WM Par, WM Older |  | 81%; -; 77%; - (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Nail polish (self) (ADULT) |  | 1.10(1.40); -(-); 2.1(2.40); -(-) WM Par, WM Older |  | 53%; -; 39%; - (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Nail polish (self) (CHILD) |  | 1.40(2); -(-); 1.5(1.4); -(-) F M <=5 F M >5 |  | 45%; -; 79%; - F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Nail polish |  |  |  | 40; 41 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 0 | lognormal | 0 | 99 | M |  |
| Frequency (per year) | use.freq | 18 | lognormal | 0 | 12 | B |  |
| Frequency (per year) | use.freq | 19 | lognormal | 13 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 0 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W | assumed professional use is included |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B | assumed professional use is included |
| Fraction of product mass in contact with skin | f.contact | 0.1 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 277 . P.PC.770.000 nail polish remover

### products for removing nail polish or artificial nails

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Nail Polish and Enamel Remover | 3.1 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.088; 0.19; X |  |  |
| RIVM Cosmetics Fact Sheet | Nail care - Nail polish remover | .5 g | 156 / year | 5 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 19 | lognormal | 0 | 99 | B | assume same as polish |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | M | assume prevalence same as polish |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 0 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.1 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 278 . P.PC.780.018 nail products-other

### miscellaneous products for nail or cuticle treatment not covered by other categories

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.1 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 279 . P.PC.780.999 nail products-other-spray

### miscellaneous products for nail or cuticle treatment not covered by other categories (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Nail Creams and Lotions | 0.6 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.07; 0.14; X |  |  |
| EFH 17-3 | Nail Extenders |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.003; 0.013; X |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.1 | Point | 0 | 99 | B | assumed |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 280 . P.PC.790.029 scalp treatment-spray

### products for treating the scalp, including products dandruff or hair loss (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 281 . P.PC.790.999 scalp treatment-NOC

### products for treating the scalp, including products dandruff or hair loss

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 282 . P.PC.800.029 self-tanner-spray

### chemical products for tanning, staining, or coloring the skin (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 283 . P.PC.800.999 self-tanner-NOC

### chemical products for tanning, staining, or coloring the skin

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 284 . P.PC.810.000 sexual wellness

### sexual wellness products, including personal lubricants

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 285 . P.PC.820.004 shampoo-dandruff

### shampoos, including dual shampoo/conditioner products for treatment of dandruff

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 15 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 255 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 4 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B | assume reduced prevalence relative to non-dandruff shampoo |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 286 . P.PC.820.999 shampoo-NOC

### shampoos, including dual shampoo/conditioner products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Shampoos | 16.4 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.82; 0.59; 0.48 |  |  |
| EFH 17-3 | Shampoo (coloring) |  | (per day: CTFA; cosmetics company; Simmons Market Research) 0.0005; X; X |  |  |
| RIVM Cosmetics Fact Sheet | Hair care - Shampoo | 20 g | 260/year | 4 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Shampoos | 5-16.4 (g/use; min-max ranges for North America) | 0.48-1 (per day; min-max ranges for North America) |  |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Kids shampoos | 0.5-10 (g/use; min-max ranges for North America) | 0.11-0.43 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Shampoo (ADULT) |  | 22(9.7); 25(11.4); 16(9.90); 23(10.5) WM Par, WM Older |  | 100%; 94%; 98%; 85% (W;M parents W; M older adults) |
| SUPERB (Bennett et al. 2012) | Shampoo and conditioner |  |  |  | 100; 100 pct hshlds parents;older adults |
| EFH 17-42 Loretz et al. 2006 | Shampoo | 11.76 (8.77) g |  |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 0.5 | Lognormal | 0 | 12 | B | kid's shampoos |
| Mass per Use (g) | mass | 15 | Lognormal | 13 | 99 | B |  |
| Frequency (per year) | use.freq | 255 | lognormal | 0 | 12 | B | ~average .7/day |
| Frequency (per year) | use.freq | 119 | lognormal | 13 | 99 | B | midrange value for kid's shampoos |
| Duration of Direct Use (min) | duration | 4 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for hair products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 287 . P.PC.830.007 shaving cream-gel

### shaving creams, foams, balms and soaps (gel formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Shave Cream | 1.73 g | (per day: CTFA; cosmetics company; Simmons Market Research) X; 0.082; X |  |  |
| RIVM Cosmetics Fact Sheet | Men's cosmetics - Shaving cream | 2 g | 365 /year | 5 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Shave Cream | 1.0-9.0 (g/use; min-max ranges for North America) | 0.3-1 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Shaving or tanning cream (CHILD) |  | -(-); -(-); 19.7(14.00); 8.8(7) F M <=5 F M >5 |  | -; -; 26%; - F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B | ~average |
| Frequency (per year) | use.freq | 237 | lognormal | 0 | 99 | B | .65/day |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.26 | point | 6 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | M | assumed |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W | assumed |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B | assumed |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 288 . P.PC.830.999 shaving cream-NOC

### shaving creams, foams, balms and soaps

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Shave Cream | 1.73 g | (per day: CTFA; cosmetics company; Simmons Market Research) X; 0.082; X |  |  |
| RIVM Cosmetics Fact Sheet | Men's cosmetics - Shaving cream | 2 g | 365 /year | 5 min |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Shave Cream | 1.0-9.0 (g/use; min-max ranges for North America) | 0.3-1 (per day; min-max ranges for North America) |  |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Shaving or tanning cream (CHILD) |  | -(-); -(-); 19.7(14.00); 8.8(7) F M <=5 F M >5 |  | -; -; 26%; - F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 3 | Lognormal | 0 | 99 | B | ~average |
| Frequency (per year) | use.freq | 237 | lognormal | 0 | 99 | B | .65/day |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 5 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.26 | point | 6 | 12 | M |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | M | assumed |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W | assumed |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B | assumed |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 289 . P.PC.840.029 sunscreen-spray

### suncreens and blocks (spray or aerosol formulations specified

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Sunscreen | 3.18 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.003; X; 0.002 |  |  |
| RIVM Cosmetics Fact Sheet | Sun care cosmetics - Sunscreen lotion | 10 g | 75 / year | 150 min |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - hot season (ADULT) |  | 25(19); 15(16.7); 20(15.00); 8(10.1) WM Par, WM Older |  | 88%; 87%; 67%; 58% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - cool season (ADULT) |  | 20(14); 7(10.8); 23(14.00); 0.9(0.8) WM Par, WM Older |  | 53%; 39%; 33%; 22% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - hot season (CHILD) |  | 24(19); 22.9(17.00); 23.5(15.00); 17.1(14) F M <=5 F M >5 |  | 96%; 92%; 100%; 89% F;M (5 and under) F;M 5+ |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - cool season (CHILD) |  | 10.4(14); 10.3(12.00); 10(13.00); 5.3(8.5) F M <=5 F M >5 |  | 47%; 39%; 55%; 29% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Sun block |  |  |  | 80; 65 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 84 | lognormal | 0 | 12 | M | average over seasons |
| Frequency (per year) | use.freq | 264 | lognormal | 0 | 12 | W | average over seasons |
| Frequency (per year) | use.freq | 168 | lognormal | 13 | 99 | M | average over seasons |
| Frequency (per year) | use.freq | 204 | lognormal | 13 | 99 | W | average over seasons |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.62 | point | 0 | 12 | M | average over seasons |
| Direct use prevalence (fraction) | use.prev | 0.76 | point | 0 | 12 | W | average over seasons |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | M | average over seasons |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 13 | 99 | W | average over seasons |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.76 | point | 0 | 99 | B | average over seasons |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 290 . P.PC.840.100 sunscreen-children

### suncreens and blocks marketed to children or babies

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Sunscreen | 3.18 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.003; X; 0.002 |  |  |
| RIVM Cosmetics Fact Sheet | Sun care cosmetics - Sunscreen lotion | 10 g | 75 / year | 150 min |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - hot season (ADULT) |  | 25(19); 15(16.7); 20(15.00); 8(10.1) WM Par, WM Older |  | 88%; 87%; 67%; 58% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - cool season (ADULT) |  | 20(14); 7(10.8); 23(14.00); 0.9(0.8) WM Par, WM Older |  | 53%; 39%; 33%; 22% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - hot season (CHILD) |  | 24(19); 22.9(17.00); 23.5(15.00); 17.1(14) F M <=5 F M >5 |  | 96%; 92%; 100%; 89% F;M (5 and under) F;M 5+ |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - cool season (CHILD) |  | 10.4(14); 10.3(12.00); 10(13.00); 5.3(8.5) F M <=5 F M >5 |  | 47%; 39%; 55%; 29% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Sun block |  |  |  | 80; 65 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 84 | lognormal | 0 | 12 | M | average over seasons |
| Frequency (per year) | use.freq | 264 | lognormal | 0 | 12 | W | average over seasons |
| Frequency (per year) | use.freq | 168 | lognormal | 13 | 99 | M | average over seasons |
| Frequency (per year) | use.freq | 204 | lognormal | 13 | 99 | W | average over seasons |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | M | reduced prevalence relative to NOC |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | W | reduced prevalence relative to NOC |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | M | average over seasons |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 13 | 99 | W | average over seasons |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.6 | point | 0 | 99 | B | average over seasons |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 291 . P.PC.840.101 sunscreen-children-spray

### suncreens and blocks marketed to children or babies (spray or aerosol formulations specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Sunscreen | 3.18 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.003; X; 0.002 |  |  |
| RIVM Cosmetics Fact Sheet | Sun care cosmetics - Sunscreen lotion | 10 g | 75 / year | 150 min |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - hot season (ADULT) |  | 25(19); 15(16.7); 20(15.00); 8(10.1) WM Par, WM Older |  | 88%; 87%; 67%; 58% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - cool season (ADULT) |  | 20(14); 7(10.8); 23(14.00); 0.9(0.8) WM Par, WM Older |  | 53%; 39%; 33%; 22% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - hot season (CHILD) |  | 24(19); 22.9(17.00); 23.5(15.00); 17.1(14) F M <=5 F M >5 |  | 96%; 92%; 100%; 89% F;M (5 and under) F;M 5+ |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - cool season (CHILD) |  | 10.4(14); 10.3(12.00); 10(13.00); 5.3(8.5) F M <=5 F M >5 |  | 47%; 39%; 55%; 29% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Sun block |  |  |  | 80; 65 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 84 | lognormal | 0 | 12 | M | average over seasons |
| Frequency (per year) | use.freq | 264 | lognormal | 0 | 12 | W | average over seasons |
| Frequency (per year) | use.freq | 168 | lognormal | 13 | 99 | M | average over seasons |
| Frequency (per year) | use.freq | 204 | lognormal | 13 | 99 | W | average over seasons |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | M | reduced prevalence relative to NOC |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | W | reduced prevalence relative to NOC |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | M | average over seasons |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 13 | 99 | W | average over seasons |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.6 | point | 0 | 99 | B | average over seasons |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 292 . P.PC.840.999 sunscreen-NOC

### sunscreens and blocks

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Sunscreen | 3.18 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.003; X; 0.002 |  |  |
| RIVM Cosmetics Fact Sheet | Sun care cosmetics - Sunscreen lotion | 10 g | 75 / year | 150 min |  |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - hot season (ADULT) |  | 25(19); 15(16.7); 20(15.00); 8(10.1) WM Par, WM Older |  | 88%; 87%; 67%; 58% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - cool season (ADULT) |  | 20(14); 7(10.8); 23(14.00); 0.9(0.8) WM Par, WM Older |  | 53%; 39%; 33%; 22% (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - hot season (CHILD) |  | 24(19); 22.9(17.00); 23.5(15.00); 17.1(14) F M <=5 F M >5 |  | 96%; 92%; 100%; 89% F;M (5 and under) F;M 5+ |
| SUPERB (Wu et al 2012) Frequencies are per month | Sunscreen - cool season (CHILD) |  | 10.4(14); 10.3(12.00); 10(13.00); 5.3(8.5) F M <=5 F M >5 |  | 47%; 39%; 55%; 29% F;M (5 and under) F;M 5+ |
| SUPERB (Bennett et al. 2012) | Sun block |  |  |  | 80; 65 pct hshlds parents;older adults |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 84 | lognormal | 0 | 12 | M | average over seasons |
| Frequency (per year) | use.freq | 264 | lognormal | 0 | 12 | W | average over seasons |
| Frequency (per year) | use.freq | 168 | lognormal | 13 | 99 | M | average over seasons |
| Frequency (per year) | use.freq | 204 | lognormal | 13 | 99 | W | average over seasons |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.62 | point | 0 | 12 | M | average over seasons |
| Direct use prevalence (fraction) | use.prev | 0.76 | point | 0 | 12 | W | average over seasons |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 13 | 99 | M | average over seasons |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 13 | 99 | W | average over seasons |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.76 | point | 0 | 99 | B | average over seasons |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 293 . P.PC.850.000 teeth whitener

### teeth whitening products (excluding toothpastes)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.ingestion |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 6 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass ingested | f.ingested | 0.01 | Lognormal | 0 | 99 | B | Assumed |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 294 . P.PC.860.000 toner

### face and skin toners and astringents

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-3 | Skin Fresheners and Astringents | 2 g | (per day: CTFA; cosmetics company; Simmons Market Research) 0.33; 0.56; X |  |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 2 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 163 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.6 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.6 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 295 . P.PC.870.007 toothpaste-gel

### toothpastes and dentrifices (gel formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.ingestion |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Fraction Ingested | Prevalence |
| EFH 17-3 | Dentifrices |  | (per day: CTFA; cosmetics company; Simmons Market Research) 1.62; 0.67; 2.12 |  |  |  |
| RIVM Cosmetics Fact Sheet | Toothpaste: adults, children |  | 720 /year |  | ingested per amount used: children 2-4 (0.3g/0.86g); children 5-7 (0.13g/0.94g); children 11-13 (0.07g/1.10g); adults (0.04g/1.39g) |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-3) | Toothpaste | 0.05-2.4 (g/use; min-max ranges for North America) | 0.67-4 (per day; min-max ranges for North America) |  | 0.03-0.4 |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 720 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 3 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass ingested | f.ingested | 0.03 | Lognormal | 13 | 99 | B | Approx average for adults |
| Fraction of product mass ingested | f.ingested | 0.15 | Lognormal | 0 | 12 | B | Approx average for children |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 296 . P.PC.870.999 toothpaste-NOC

### toothpastes and dentrifices

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.ingestion |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Fraction Ingested | Prevalence |
| EFH 17-3 | Dentifrices |  | (per day: CTFA; cosmetics company; Simmons Market Research) 1.62; 0.67; 2.12 |  |  |  |
| RIVM Cosmetics Fact Sheet | Toothpaste: adults, children |  | 720 /year |  | ingested per amount used: children 2-4 (0.3g/0.86g); children 5-7 (0.13g/0.94g); children 11-13 (0.07g/1.10g); adults (0.04g/1.39g) |  |
| American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-3) | Toothpaste | 0.05-2.4 (g/use; min-max ranges for North America) | 0.67-4 (per day; min-max ranges for North America) |  | 0.03-0.4 |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 720 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 3 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass ingested | f.ingested | 0.03 | Lognormal | 13 | 99 | B | Approx average for adults |
| Fraction of product mass ingested | f.ingested | 0.15 | Lognormal | 0 | 12 | B | Approx average for children |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 297 . P.PC.880.000 waxing

### wax products for removing hair from face or body

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.2 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.2 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 298 . P.PE.010.029 animal repellent-spray

### chemical animal repellents (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 200 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 299 . P.PE.010.999 animal repellent-NOC

### chemical animal repellents

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 200 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 4 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.01 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.0025 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 300 . P.PE.020.029 fungicide-spray

### fungicides for garden or home use (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Disinfectant Fact Sheet | Black mould removers -spray | 11.1 min \* .75 g /s = 500 g | 1 / year | 11.1 -13 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 12 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 301 . P.PE.020.999 fungicide-NOC

### fungicides for garden or home use

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| RIVM Disinfectant Fact Sheet | Black mould removers -spray | 11.1 min \* .75 g /s = 500 g | 1 / year | 11.1 -13 min |  |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 1 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 12 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.05 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.001 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 302 . P.PE.030.005 insect repellent-exterior

### miscellaneous products for repelling insects, exterior use indicated

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 303 . P.PE.030.006 insect repellent-exterior-spray

### miscellaneous products for repelling insects, exterior use indicated (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 48 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 304 . P.PE.030.026 insect repellent-skin

### products for repelling insects from skin

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Wu et al 2012) Frequencies are per month | Insect Repellent (ADULT) |  | 2.40(5.30); 1.6(2.8); 3.9(12.30); 0.5(0.8) WM Par, WM Older |  | 47%; 46%; 28%; 0.4 (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Insect Repellent (CHILD) |  | 3.40(6.90); 1.90(3.2); 3.5(5); 1.3(1.6) F M <=5 F M >5 |  | 0.47; 46%; 55%; 45% F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 13 | lognormal | 0 | 12 | M |  |
| Frequency (per year) | use.freq | 38 | lognormal | 0 | 12 | W |  |
| Frequency (per year) | use.freq | 41 | lognormal | 0 | 99 | M |  |
| Frequency (per year) | use.freq | 19 | lognormal | 0 | 99 | W |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.28 | point | 0 | 12 | M | SUPERB average |
| Direct use prevalence (fraction) | use.prev | 0.37 | point | 0 | 12 | W | SUPERB average |
| Direct use prevalence (fraction) | use.prev | 0.46 | point | 13 | 99 | M | SUPERB average |
| Direct use prevalence (fraction) | use.prev | 0.51 | point | 13 | 99 | W | SUPERB average |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.51 | point | 0 | 99 | B | SUPERB average |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.75 | Uniform | 0 | 99 | B | assume aerosol spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 305 . P.PE.030.027 insect repellent-skin-spray

### products for repelling insects from skin (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Wu et al 2012) Frequencies are per month | Insect Repellent (ADULT) |  | 2.40(5.30); 1.6(2.8); 3.9(12.30); 0.5(0.8) WM Par, WM Older |  | 47%; 46%; 28%; 0.4 (W;M parents W; M older adults) |
| SUPERB (Wu et al 2012) Frequencies are per month | Insect Repellent (CHILD) |  | 3.40(6.90); 1.90(3.2); 3.5(5); 1.3(1.6) F M <=5 F M >5 |  | 0.47; 46%; 55%; 45% F;M (5 and under) F;M 5+ |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 13 | lognormal | 0 | 12 | M |  |
| Frequency (per year) | use.freq | 38 | lognormal | 0 | 12 | W |  |
| Frequency (per year) | use.freq | 41 | lognormal | 0 | 99 | M |  |
| Frequency (per year) | use.freq | 19 | lognormal | 0 | 99 | W |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.28 | point | 0 | 12 | M | SUPERB average |
| Direct use prevalence (fraction) | use.prev | 0.37 | point | 0 | 12 | W | SUPERB average |
| Direct use prevalence (fraction) | use.prev | 0.46 | point | 13 | 99 | M | SUPERB average |
| Direct use prevalence (fraction) | use.prev | 0.51 | point | 13 | 99 | W | SUPERB average |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.51 | point | 0 | 99 | B | SUPERB average |
| Fraction of product mass in contact with skin | f.contact | 1 | Point | 0 | 99 | B | See general rules for products applied to skin |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 306 . P.PE.030.029 insect repellent-spray

### miscellaneous products for repelling insects (excluding products to be applied to skin) (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 48 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 307 . P.PE.030.999 insect repellent-NOC

### miscellaneous products for repelling insects (excluding products to be applied to skin)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 1 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 48 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.5 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.5 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.5 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 1 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 308 . P.PE.040.005 insecticide-exterior

### insecticides, exterior use indicated - including lawn and gardens

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| Parkinsons Environment and Gene (PEG) study - lifetime prevalenc | e Outdoor pesticide spr | ay |  |  | 83.6 |
| Parkinsons Environment and Gene (PEG) study - lifetime prevalenc | e Outdoor pesticide bai | t |  |  | 20.3 |
| Parkinsons Environment and Gene (PEG) study - lifetime prevalenc | e Outdoor pesticide gra | nule |  |  | 21.5 |
| SUPERB -Central CAL (Armes et al. 2011) - prevalence in the last year | Outdoor pesticide spray |  |  |  | 81 |
| SUPERB -Central CAL (Armes et al. 2011) - prevalence in the last year | Outdoor pesticide bait |  |  |  | 32.6 |
| SUPERB -Central CAL (Armes et al. 2011) - prevalence in the last year | Outdoor pesticide granule |  |  |  | 17.9 |
| SUPERB (Bennett et al. 2012) | All pesticides |  |  |  | 73; 82 pct hshlds parents;older adults |
| SUPERB (Bennett et al. 2012) | Outdoor Spray |  |  |  | 42.40% |
| SUPERB -NoCal (Bennett et al. 2012) | Outdoor Baits |  |  |  | 12.40% |
| SUPERB -NoCal (Bennett et al. 2012) | Outdoor Trap |  |  |  | 9.60% |
| SUPERB -NoCal (Bennett et al. 2012) | Outdoor Granules |  |  |  | 7.10% |
| SUPERB -NoCal (Bennett et al. 2012) | Outdoor Candle |  |  |  | 5.30% |
| SUPERB -NoCal (Bennett et al. 2012) | Outdoor Strips |  |  |  | 3.70% |
| SUPERB -NoCal (Bennett et al. 2012) | Outdoor Foam |  |  |  | 0.70% |
| SUPERB -NoCal (Bennett et al. 2012) | Outdoor Other |  |  |  | 2.70% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 100 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | M | approx 30% average for everything except spray |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W | approx 30% average for everything except spray |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B | approx 30% average for everything except spray |
| Fraction of product mass in contact with skin | f.contact | 0.005 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 309 . P.PE.040.006 insecticide-exterior-spray

### insecticides, exterior use indicated (spray or aerosol formulation specified)

#### Microenvironment of Release:

Outdoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| Parkinsons Environment and Gene (PEG) study - lifetime prevalenc | e Outdoor pesticide s | pray |  |  | 83.6 |
| SUPERB -Central CAL (Armes et al. 2011) - prevalence in the last year | Outdoor pesticide spray |  |  |  | 81 |
| SUPERB (Bennett et al. 2012) | Outdoor Spray |  |  |  | 42.40% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 500 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 10 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | M | consensus |
| Direct use prevalence (fraction) | use.prev | 0.8 | point | 13 | 99 | W | consensus |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.8 | point | 0 | 99 | B | consensus |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Volume of aerosol cloud for spray products (m^3) | volume | 480 | Point | 0 | 99 | B | value for outdoor product |

## 310 . P.PE.040.009 insecticide-interior

### insecticides, interior use indicated

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| Parkinsons Environment and Gene (PEG) study - lifetime prevalenc | e Indoor pesticide spr | ay |  |  | 86.6 |
| Parkinsons Environment and Gene (PEG) study - lifetime prevalenc | e Indoor pesticide bai | t |  |  | 7.4 |
| Parkinsons Environment and Gene (PEG) study - lifetime prevalenc | e Indoor pesticide gra | nule |  |  | 3.7 |
| SUPERB -Central CAL (Armes et al. 2011) - prevalence in the last year | Indoor pesticide spray |  |  |  | 64.8 |
| SUPERB -Central CAL (Armes et al. 2011) - prevalence in the last year | Indoor pesticide bait |  |  |  | 31.5 |
| SUPERB -Central CAL (Armes et al. 2011) - prevalence in the last year | Indoor pesticide granule |  |  |  | 20.4 |
| SUPERB -Central CAL (Armes et al. 2011) - prevalence in the last year | Indoor Fogger |  |  |  | 5.2 |
| SUPERB -NoCal (Bennett et al. 2012) | Indoor Spray |  |  |  | 23.90% |
| SUPERB -NoCal (Bennett et al. 2012) | Indoor Fogger |  |  |  | 4.40% |
| SUPERB -NoCal (Bennett et al. 2012) | Indoor Baits |  |  |  | 7.60% |
| SUPERB -NoCal (Bennett et al. 2012) | Indoor Granules |  |  |  | 3.50% |
| SUPERB -NoCal (Bennett et al. 2012) | Indoor Candle |  |  |  | 0.20% |
| SUPERB -NoCal (Bennett et al. 2012) | Indoor Strips |  |  |  | 4.80% |
| SUPERB -NoCal (Bennett et al. 2012) | Indoor Foam |  |  |  | 1.50% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 27 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.25 | point | 13 | 99 | M | approx 25% average for everything except spray |
| Direct use prevalence (fraction) | use.prev | 0.25 | point | 13 | 99 | W | approx 25% average for everything except spray |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.25 | point | 0 | 99 | B | approx 25% average for everything except spray |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 311 . P.PE.040.010 insecticide-interior-spray

### insecticides, interior use indicated (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| Parkinsons Environment and Gene (PEG) study - lifetime prevalenc | e Indoor pesticide s | pray |  |  | 86.6 |
| SUPERB -Central CAL (Armes et al. 2011) - prevalence in the last year | Indoor pesticide spray |  |  |  | 64.8 |
| SUPERB -NoCal (Bennett et al. 2012) | Indoor Spray |  |  |  | 23.90% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.57 | point | 13 | 99 | M | ~average |
| Direct use prevalence (fraction) | use.prev | 0.57 | point | 13 | 99 | W | ~average |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.57 | point | 0 | 99 | B | ~average |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 312 . P.PE.040.029 insecticide-spray

### insecticides not otherwise characterized (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| Parkinsons Environment and Gene (PEG) study - lifetime prevalenc | e Outdoor pesticide s | pray |  |  | 83.6 |
| Parkinsons Environment and Gene (PEG) study - lifetime prevalenc | e Indoor pesticide sp | ray |  |  | 86.6 |
| SUPERB -Central CAL (Armes et al. 2011) - prevalence in the last year | Outdoor pesticide spray |  |  |  | 81 |
| SUPERB -Central CAL (Armes et al. 2011) - prevalence in the last year | Indoor pesticide spray |  |  |  | 64.8 |
| SUPERB (Bennett et al. 2012) | Outdoor Spray |  |  |  | 42.40% |
| SUPERB -NoCal (Bennett et al. 2012) | Indoor Spray |  |  |  | 23.90% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | assume interior |
| Frequency (per year) | use.freq | 24 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.57 | point | 13 | 99 | M | ~average |
| Direct use prevalence (fraction) | use.prev | 0.57 | point | 13 | 99 | W | ~average |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.57 | point | 0 | 99 | B | ~average |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 313 . P.PE.040.999 insecticide-NOC

### insecticides not otherwise characterized

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB (Bennett et al. 2012) | All pesticides |  |  |  | 73; 82 pct hshlds parents;older adults |
| EFH 17-36 | Insecticide |  | 27/year |  | 91.20% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | assume interior |
| Frequency (per year) | use.freq | 27 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 30 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.77 | point | 13 | 99 | M | ~average of SUPERB |
| Direct use prevalence (fraction) | use.prev | 0.77 | point | 13 | 99 | W | ~average of SUPERB |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.77 | point | 0 | 99 | B | ~average of SUPERB |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 314 . P.PE.050.000 rodenticide

### rodenticides for interior or exterior use

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to surfaces (no washoff); some f.drain to account for clean-up of materials |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| EFH 17-36 | Rodenticide |  |  |  | 6.80% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 20 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 2 | lognormal | 0 | 99 | B | all assumed |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.07 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.07 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.07 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.025 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.05 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 315 . P.PT.010.000 aquarium

### miscellaneous aquarium treatment products

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 20 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.02 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.02 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 316 . P.PT.020.000 cat litter

### cat litters

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 8000 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 104 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 5 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.05 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.3 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.3 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 6.2e-05 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 317 . P.PT.030.029 other pet treatments-spray

### miscellaneous pet treatments (excluding pesticides) (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B | all assumed |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 318 . P.PT.030.999 other pet treatments-NOC

### miscellaneous pet treatments (excluding pesticides)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.05 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 319 . P.PT.040.020 pesticide-pet

### pesticides for application to pets

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB -NoCal (Bennett et al. 2012) | Pet |  |  |  | 27.10% |
| EFH 17-36 | Pet |  |  |  | 40.00% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.33 | point | 13 | 99 | M | ~average |
| Direct use prevalence (fraction) | use.prev | 0.33 | point | 13 | 99 | W | ~average |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.33 | point | 0 | 99 | B | ~average |
| Fraction of product mass in contact with skin | f.contact | 0.1 | Point | 0 | 99 | B | See general rules for DIY and other products applied to surfaces |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 320 . P.PT.040.021 pesticide-pet-spray

### pesticides for application to pets (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied with uncertainty as to wash-off; or higher potential for disposal via drain |
| product.indirect |  |

#### Relevant Data Records:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | Type of Product | Mass | Frequency | Duration of Use | Prevalence |
| SUPERB -NoCal (Bennett et al. 2012) | Pet |  |  |  | 27.10% |
| EFH 17-36 | Pet |  |  |  | 40.00% |

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 5 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 12 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 2 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.33 | point | 13 | 99 | M | ~average |
| Direct use prevalence (fraction) | use.prev | 0.33 | point | 13 | 99 | W | ~average |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.33 | point | 0 | 99 | B | ~average |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.55 | Uniform | 0 | 99 | B | assume mix of trigger and aerosol sprays, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 0.15 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 321 . P.PT.050.000 pet shampoo

### pet shampoos (inclduing those contain pesticides)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 50 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 6 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Direct use prevalence (fraction) | use.prev | 0.01 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.1 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.1 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 322 . P.PT.060.029 pet stain cleaner-spray

### carpet and upholstery cleaners for pet stains (spray or aerosol formulation specified)

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationaerosol |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for spray products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used aerosolized | f.aerosol | 0.15 | Uniform | 0 | 99 | B | assume trigger spray, uniform distribution based on RIVM cleaning product fact sheet Table 9 |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## 323 . P.PT.060.999 pet stain cleaner-NOC

### carpet and upholstery cleaners for pet stains

#### Microenvironment of Release:

Indoor

#### Scenarios:

|  |  |
| --- | --- |
| Active Scenarios | Notes |
| product.direct.dermal |  |
| product.direct.inhalationvapor |  |
| product.downthedrain | applied to body, clothing, directly to drain, or to surfaces with wash-off |
| product.indirect |  |

#### Relevant Data Records:

none

##### SHEDS Inputs:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Description | Name | mean | form | min.age | max.age | gender | notes |
| Mass per Use (g) | mass | 10 | Lognormal | 0 | 99 | B |  |
| Frequency (per year) | use.freq | 52 | lognormal | 0 | 99 | B |  |
| Duration of Direct Use (min) | duration | 10 | Lognormal | 0 | 99 | B |  |
| Direct use prevalence (fraction) | use.prev | 0 | point | 0 | 12 | B |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | M |  |
| Direct use prevalence (fraction) | use.prev | 0.4 | point | 13 | 99 | W |  |
| Household prevalence for indirect exposure (fraction) | house.prev | 0.4 | point | 0 | 99 | B |  |
| Fraction of product mass in contact with skin | f.contact | 0.01 | Point | 0 | 99 | B | See general rules for cleaning products |
| Fraction of product mass on skin retained after direct use | f.residual | 0.01 | point | 0 | 99 | B |  |
| Fraction of mass used disposed of via the residential drain | f.drain | 1 | Uniform | 0 | 99 | B | see General Rules |
| Volume of aerosol cloud for spray products (m^3) | volume | 24 | Point | 0 | 99 | B | value for indoor product |

## Skin Release Data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | puc | Data.source | Type.of.Product | Portion.of.Mass.to.Skin |
| 113 | P.AC.010.029 | RIVM DIY Fact Sheet | Glue - Tube glue (hobby, small tube) | 0.08 g/ 9 g =0.0088 |
| 117 | P.AC.010.029 | RIVM DIY Fact Sheet | Glue - Two-component glue | .1 g / 20 g = 0.005 |
| 123 | P.AC.010.029 | RIVM DIY Fact Sheet; vapor only | Glue - Hot melt adhesive | .1 g / 65 g = 0.0015 |
| 124 | P.AC.010.029 | RIVM DIY Fact Sheet | Glue - Spray glue | 100 mg/min |
| 1131 | P.AC.010.029 | RIVM DIY Fact Sheet | Glue - Tube glue (hobby, small tube) | 0.08 g/ 9 g =0.0088 |
| 1171 | P.AC.010.029 | RIVM DIY Fact Sheet | Glue - Two-component glue | .1 g / 20 g = 0.005 |
| 1231 | P.AC.010.029 | RIVM DIY Fact Sheet; vapor only | Glue - Hot melt adhesive | .1 g / 65 g = 0.0015 |
| 1241 | P.AC.010.029 | RIVM DIY Fact Sheet | Glue - Spray glue | 100 mg/min |
| 1132 | P.AC.010.999 | RIVM DIY Fact Sheet | Glue - Tube glue (hobby, small tube) | 0.08 g/ 9 g =0.0088 |
| 1172 | P.AC.010.999 | RIVM DIY Fact Sheet | Glue - Two-component glue | .1 g / 20 g = 0.005 |
| 1232 | P.AC.010.999 | RIVM DIY Fact Sheet; vapor only | Glue - Hot melt adhesive | .1 g / 65 g = 0.0015 |
| 1242 | P.AC.010.999 | RIVM DIY Fact Sheet | Glue - Spray glue | 100 mg/min |
| 125 | P.HM.020.000 | RIVM DIY Fact Sheet | Caulk ( called "Sealant cartridge" in European terminology) | 50 mg/min |
| 126 | P.HM.020.000 | RIVM DIY Fact Sheet | Caulk for Gluing/Construction adhesive (Called "Sealant / joints / assembly (glue)" in European Terminology) | .5 g / 390 g = .0013 |
| 134 | P.HM.060.029 | RIVM DIY Fact Sheet | Coating - Coating large surfaces | .25 g /3 kg = .000083 |
| 1341 | P.HM.060.999 | RIVM DIY Fact Sheet | Coating - Coating large surfaces | .25 g /3 kg = .000083 |
| 121 | P.HM.100.000 | RIVM DIY Fact Sheet | Thinset mortar (called "Tile Glue" in European terminology) | 30 mg/min |
| 114 | P.HM.110.029 | RIVM DIY Fact Sheet | Glue - Bottled glue - universal/wood | .08 g/ 10 g =0.008 |
| 1243 | P.HM.110.029 | RIVM DIY Fact Sheet | Glue - Spray glue | 100 mg/min |
| 1141 | P.HM.110.999 | RIVM DIY Fact Sheet | Glue - Bottled glue - universal/wood | .08 g/ 10 g =0.008 |
| 1244 | P.HM.110.999 | RIVM DIY Fact Sheet | Glue - Spray glue | 100 mg/min |
| 129 | P.HM.190.000 | RIVM DIY Fact Sheet | Fillers and putty-Filler/putty from tube | .05/40 = 0.00125 |
| 130 | P.HM.190.000 | RIVM DIY Fact Sheet | Fillers and putty-Two-component filler | 20 mg/200 g = .001 |
| 140 | P.HM.230.000 | RIVM DIY Fact Sheet | Insulation foam | .25g /825 =.0003 |
| 136 | P.HM.250.029 | RIVM DIY Fact Sheet | Removers - Paint remover | .5 / 1 kg =0.0005 |
| 139 | P.HM.250.029 | RIVM DIY Fact Sheet | Removers - Sealant / foam remover | 0.001 |
| 1361 | P.HM.250.999 | RIVM DIY Fact Sheet | Removers - Paint remover | .5 / 1 kg =0.0005 |
| 1391 | P.HM.250.999 | RIVM DIY Fact Sheet | Removers - Sealant / foam remover | 0.001 |
| 1142 | P.HM.280.000 | RIVM DIY Fact Sheet | Glue - Bottled glue - universal/wood | .08 g/ 10 g =0.008 |
| 158 | P.IH.040.029 | RIVM Cleaning Product Fact Sheet | Sanitary products - Toilet cleaners | 2.2 /55 =.045 |
| 1581 | P.IH.040.999 | RIVM Cleaning Product Fact Sheet | Sanitary products - Toilet cleaners | 2.2 /55 =.045 |
| 165 | P.IH.070.029 | RIVM Cleaning Product Fact Sheet | Carpet products - Liquids | 27g /500 =.054 |
| 166 | P.IH.070.029 | RIVM Cleaning Product Fact Sheet | Carpet products - Spray extraction machine | 0 no dermal |
| 1651 | P.IH.070.999 | RIVM Cleaning Product Fact Sheet | Carpet products - Liquids | 27g /500 =.054 |
| 1661 | P.IH.070.999 | RIVM Cleaning Product Fact Sheet | Carpet products - Spray extraction machine | 0 no dermal |
| 167 | P.IH.080.000 | RIVM Cleaning Product Fact Sheet | Carpet products - Powders | 5.0 mg/min \* 22 min / 2244 g = .00005 |
| 148 | P.IH.090.000 | RIVM Cleaning Product Fact Sheet | Dishwashing products - Hand dishwashing liquids | .01 /500 =.00002 |
| 174 | P.IH.110.000 | RIVM Cleaning Product Fact Sheet | Drain openers | 19 g / 500 g = .038 |
| 160 | P.IH.190.000 | RIVM Cleaning Product Fact Sheet | Floor and furniture products: Floor cleaning liquid | 19/880 =.021 |
| 161 | P.IH.190.000 | RIVM Cleaning Product Fact Sheet | Floor products- Wet tissues | .25/245=.001 |
| 162 | P.IH.200.000 | RIVM Cleaning Product Fact Sheet | Floor products- Polishes | 5.5/550 = .01 |
| 171 | P.IH.210.029 | RIVM Cleaning Product Fact Sheet | Glass cleaners | .29 g /33 g = .0087 |
| 1711 | P.IH.210.999 | RIVM Cleaning Product Fact Sheet | Glass cleaners | .29 g /33 g = .0087 |
| 151 | P.IH.230.999 | RIVM Cleaning Product Fact Sheet | All-purpose cleaners - Liquids | 19 g / 500 g = .038 |
| 143 | P.IH.260.013 | RIVM Cleaning Product Fact Sheet | Laundry products - Liquids | .01 g /500 =.00002 |
| 1431 | P.IH.260.999 | RIVM Cleaning Product Fact Sheet | Laundry products - Liquids | .01 g /500 =.00002 |
| 172 | P.IH.320.029 | RIVM Cleaning Product Fact Sheet | Oven cleaners | .2 g/ 23.4 g =.0085 |
| 1721 | P.IH.320.999 | RIVM Cleaning Product Fact Sheet | Oven cleaners | .2 g/ 23.4 g =.0085 |
| 175 | P.IH.330.000 | RIVM Cleaning Product Fact Sheet | Shoe polish products - Spray | 100 mg/min \*1.2 min =120 mg /36 g =.0033 |
| 1511 | P.IH.340.999 | RIVM Cleaning Product Fact Sheet | All-purpose cleaners - Liquids | 19 g / 500 g = .038 |
| 173 | P.IH.340.999 | RIVM Cleaning Product Fact Sheet | Metal cleaners | .1g/10 g =.01 |
| 169 | P.IH.360.029 | RIVM Cleaning Product Fact Sheet | Furniture and leather products - Furniture polish | 5.5 g/ 550 g = .01 |
| 1691 | P.IH.360.999 | RIVM Cleaning Product Fact Sheet | Furniture and leather products - Furniture polish | 5.5 g/ 550 g = .01 |
| 265 | P.PC.020.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-3) | Aftershave | 100% |
| 262 | P.PC.030.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Baby Lotions and creams | 100% |
| 261 | P.PC.070.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Baby/Bath liquid | 100% |
| 246 | P.PC.090.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F&H Bar Soap -Hand | 0.5-1% |
| 248 | P.PC.090.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F&H Bar Soap -Body | 0.5-1% |
| 247 | P.PC.190.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Liquid Soap-Body | 0.5-1% |
| 250 | P.PC.190.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Body Wash | 0.5-1% |
| 2471 | P.PC.200.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Liquid Soap-Body | 0.5-1% |
| 2501 | P.PC.200.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Body Wash | 0.5-1% |
| 251 | P.PC.220.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Bath Foam/Bubble Bath | 0.5-1% |
| 255 | P.PC.280.007 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirants-roll-ons | 75% |
| 257 | P.PC.280.007 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirant solid/bar | 100% |
| 2551 | P.PC.280.028 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirants-roll-ons | 75% |
| 2571 | P.PC.280.028 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirant solid/bar | 100% |
| 256 | P.PC.280.029 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirant aerosols | 100% |
| 2552 | P.PC.280.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirants-roll-ons | 75% |
| 2561 | P.PC.280.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirant aerosols | 100% |
| 2572 | P.PC.280.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Antiperspirant solid/bar | 100% |
| 260 | P.PC.410.029 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Other-Makeup remover | 5% |
| 2601 | P.PC.410.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Other-Makeup remover | 5% |
| 249 | P.PC.440.001 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Cleansing products | 0.5-1% |
| 252 | P.PC.440.001 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F &H Bar Soap-Face | 0.5-1% |
| 2491 | P.PC.440.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Cleansing products | 0.5-1% |
| 2521 | P.PC.440.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F &H Bar Soap-Face | 0.5-1% |
| 2492 | P.PC.450.001 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Cleansing products | 0.5-1% |
| 2522 | P.PC.450.001 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F &H Bar Soap-Face | 0.5-1% |
| 2493 | P.PC.450.029 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Cleansing products | 0.5-1% |
| 2523 | P.PC.450.029 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F &H Bar Soap-Face | 0.5-1% |
| 2494 | P.PC.450.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Cleansing products | 0.5-1% |
| 2524 | P.PC.450.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F &H Bar Soap-Face | 0.5-1% |
| 259 | P.PC.470.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Face/eye cosmetics foundation liquid | 100% |
| 264 | P.PC.480.029 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Fine fragrances | 100% |
| 2641 | P.PC.480.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Fine fragrances | 100% |
| 241 | P.PC.550.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Hair rinses | 0.5-1% |
| 2411 | P.PC.560.024 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Hair rinses | 0.5-1% |
| 2412 | P.PC.560.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Hair rinses | 0.5-1% |
| 243 | P.PC.580.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Hair sprays-aerosol | 0.5-5% |
| 244 | P.PC.580.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Hair spray (pump) | 0.5-5% |
| 187 | P.PC.590.014 | RIVM Cosmetics Fact Sheet | Hair care - Hair styling, mousse | .3/2.9 |
| 245 | P.PC.610.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | F&H liquid soap-hand | 0.5-1% |
| 254 | P.PC.630.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Body moisturizer | 100% |
| 258 | P.PC.670.000 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Lipstick | 100% |
| 214 | P.PC.760.000 | RIVM Cosmetics Fact Sheet | Nail care - Nail polish | 5-Jan |
| 215 | P.PC.770.000 | RIVM Cosmetics Fact Sheet | Nail care - Nail polish remover | 5-Feb |
| 240 | P.PC.820.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Shampoos | 0.5-1% |
| 263 | P.PC.820.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Kids shampoos | 0.5-1% |
| 253 | P.PC.830.007 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Shave Cream | 1% |
| 2531 | P.PC.830.999 | American Cleaning Institute: Consumer Product Ingredient Safety Exposure and Risk Screening Methods for Consumer Product Ingredients (Table A II-B-1) | Shave Cream | 1% |