

# Safety data sheet

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BASF Safety data sheet according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended from

time to time.

Date / Revised: 20.04.2023 Version: 10.0 Date previous version: 01.02.2022 Previous version: 9.0

Date / First version: 22.08.2001
Product: Adipic Acid - G

(ID no. 30042497/SDS\_GEN\_GB/EN)

Date of print 16.10.2025

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

# 1.1. Product identifier

# Adipic Acid - G

Chemical name: Adipic acid CAS Number: 124-04-9

REACH registration number: 01-2119457561-38-0043, 01-2119457561-38-0006, 01-2119457561-38-0005, 01-2119457561-38-0111, 01-2119457561-38-0008, 01-2119457561-38-0009

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use: for the production of homopolymerisates and copolymerisates, initial product for chemical syntheses

Not recommended use: food additive(s)

For the detailed identified uses of the product see appendix of the safety data sheet.

#### 1.3. Details of the supplier of the safety data sheet

Company: BASF SE 67056 Ludwigshafen GERMANY

Contact address:
BASF plc
4th and 5th Floors, 2 Stockport Exchange
Railway Road, Stockport, SK1 3GG

UNITED KINGDOM

Telephone: +44 161 475 3000

E-mail address: product-safety-uk-and-ireland@basf.com

# 1.4. Emergency telephone number

International emergency number: Telephone: +49 180 2273-112

time to time.

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#### **SECTION 2: Hazards Identification**

#### 2.1. Classification of the substance or mixture

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Eye Dam./Irrit. 2 H319 Causes serious eye irritation.

According to BASF current knowledge and application of the criteria given in Annex I of Regulation (EC) No. 1272/2008, the following classification exceeding the classification given in Regulation (EC) No 1272/2008, Annex VI, Table 3.1 is required.

Eye Dam./Irrit. 1

For the classifications not written out in full in this section the full text can be found in section 16.

#### 2.2. Label elements

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Pictogram:



Signal Word:

Warning

Hazard Statement:

H319 Causes serious eye irritation.

Precautionary Statements (Prevention):
P280 Wear eye protection.

P264 Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes, Remove

contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical attention.

Hazard determining component(s) for labelling: adipic acid

#### 2.3. Other hazards

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

No specific dangers known, if the regulations/notes for storage and handling are considered.

time to time.

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The product does not contain a substance above legal limits fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

# **SECTION 3: Composition/Information on Ingredients**

# 3.1. Substances

#### Chemical nature

adipic acid

CAS Number: 124-04-9 EC-Number: 204-673-3 INDEX-Number: 607-144-00-9

#### Hazardous ingredients (GHS)

adipic acid

Content (W/W): >= 75 % - <= 100 Eye Dam./Irrit. 2

H319

CAS Number: 124-04-9

EC-Number: 204-673-3 <u>Differing classification according to current</u> NDEX-Number: 607-144-00-9 knowledge and the criteria given in Annex I of

Regulation (EC) No. 1272/2008

Eye Dam./Irrit. 1

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

#### 3.2. Mixtures

Not applicable

# **SECTION 4: First-Aid Measures**

# 4.1. Description of first aid measures

Remove contaminated clothing. Avoid contact with the skin, eyes and clothing.

#### If inhaled:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

time to time.

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Wash thoroughly with soap and water

#### On contact with eves:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

#### On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

# 4.2. Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

# **SECTION 5: Fire-Fighting Measures**

# 5.1. Extinguishing media

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

# 5.2. Special hazards arising from the substance or mixture

Advice: No particular hazards known.

# 5.3. Advice for fire-fighters

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

## **SECTION 6: Accidental Release Measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Sources of ignition should be kept well clear. Use breathing apparatus if exposed to vapours/dust/aerosol. Information regarding personal protective measures, see section 8.

#### 6.2. Environmental precautions

Discharge into the environment must be avoided. Do not empty into drains. Retain and dispose of contaminated wash water.

#### 6.3. Methods and material for containment and cleaning up

For large amounts: Sweep/shovel up. Dispose of contaminated material as prescribed. For residues: Rinse away with water.

#### 6.4. Reference to other sections

time to time.

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Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

# **SECTION 7: Handling and Storage**

# 7.1. Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Avoid contact with skin and eyes. Wear suitable protective clothing and eye/face protection. Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

Avoid dust formation. The product is capable of dust explosion. Sources of ignition should be kept well clear. Take precautionary measures against static discharges.

Dust explosion class: Dust explosion class 2 (Kst-value 200 up to 300 bar m s-1).

# 7.2. Conditions for safe storage, including any incompatibilities

Segregate from alkalies and alkalizing substances.

Suitable materials for containers: Stainless steel 1.4401, Stainless steel 1.4301 (V2), Aluminium, Polyester resin, glass reinforced (Palatal A410), Paper/Fibreboard, High density polyethylene (HDPE), glass, Low density polyethylene (LDPE)

Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

Storage stability:

Tends to cake.

# 7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

# **SECTION 8: Exposure Controls/Personal Protection**

#### 8.1. Control parameters

Components with occupational exposure limits

No occupational exposure limits known.

PNEC

freshwater: 0.126 mg/l

marine water: 0.0126 mg/l

intermittent release: 0.46 mg/l

sediment (freshwater): 0.484 mg/kg

time to time.

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sediment (marine water): 0.0484 mg/kg

soil: 0.0228 mg/kg

STP: 59.1 mg/l

#### **DNEL**

worker:

Long-term exposure- systemic effects, Inhalation: 74.1 mg/m3

consumer:

Long-term exposure- systemic effects, dermal: 7.5 mg/kg

worker:

Long-term exposure- systemic effects, dermal: 21 mg/kg

consumer:

Long-term exposure- systemic effects, Inhalation: 13 mg/m3

consumer:

Long-term exposure- systemic effects, oral: 7.5 mg/kg

#### 8.2. Exposure controls

#### Personal protective equipment

# Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1or FFP1)

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1)

butyl rubber (butyl) - 0.7 mm coating thickness

Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

#### General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Take off immediately all contaminated clothing. At the end of the shift the skin should be cleaned and skin-care agents applied.

# **SECTION 9: Physical and Chemical Properties**

# 9.1. Information on basic physical and chemical properties

time to time.

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Form: crystalline Colour: white Odour: odourless

Odour threshold:

No data available.

pH value: 2.7 (pH Meter)

(23 g/l, 25 °C)

3.2

(10 g/l)

Melting point: 150.85 °C (Directive 92/69/EEC, A.1)

Boiling point: 337.5 °C (1,013 hPa)

Literature data.

Sublimation point:

No applicable information available.

Flash point: 196 °C (closed cup)

Literature data.

Evaporation rate:

The product is a non-volatile solid.

Flammability: not highly flammable (Directive 92/69/EEC, A.10)

Lower explosion limit:

No data available.

Upper explosion limit:

No data available.

Ignition temperature: 405 °C

Vapour pressure: 0.097 hPa (18.5 °C)

Literature data.

Density: 1.36 g/cm3

(25 °C)

Literature data.

Relative density: 1.36

(25 °C)

Literature data.

Relative vapour density (air):

No data available.

Solubility in water: Literature data.

23 g/l (25 °C)

Solubility (qualitative) solvent(s): organic solvents

soluble

Partitioning coefficient n-octanol/water (log Kow): 0.093

(25 °C; pH value: 3.3)

Self ignition: not self-igniting Test type: Spontaneous self-

ignition at room-temperature.

(DIN 51794)

(measured)

time to time.

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Temperature: > 400 °C Test type: Self-ignition at high

temperatures.

(Method: Directive 92/69/EEC,

A.16)

Thermal decomposition: No data available.

Viscosity, dynamic:

No data available.

Viscosity, kinematic:

No data available.

Explosion hazard: Product is not explosive, however a (Directive 92/69/EEC, A.14)

dust explosion could result from an

air / dust mixture.

Fire promoting properties: Based on its structural properties

the product is not classified as

oxidizing.

#### 9.2. Other information

Self heating ability: It is not a substance capable of

spontaneous heating.

Minimum ignition energy: 10 - 30 mJ (DIN EN 13821)

Bulk density: approx. 700 kg/m3 (other)

pKA: 4.43

(20 °C)

Adsorption/water - soil: KOC: 1.61; log KOC: 0.21 (calculated)

Surface tension:

Based on chemical structure, surface

activity is not to be expected.

Grain size distribution approx. 60 µm (D50, Volumetric Distribution, other

(measured))

particles <= 4.19 μm 2.76 % particles <= 10.48 μm 8.79 % particles <= 103.58 78.08 %

μm

Molar mass: 146.14 g/mol

# **SECTION 10: Stability and Reactivity**

# 10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: No corrosive effect on metal.

Formation of Remarks: Forms no flammable gases in the

flammable gases: presence of water.

#### 10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

time to time.

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# 10.3. Possibility of hazardous reactions

Reacts with basic components to generate heat. Dust explosion hazard.

#### 10.4. Conditions to avoid

Avoid dust formation. Avoid deposition of dust. See SDS section 7 - Handling and storage.

#### 10.5. Incompatible materials

Substances to avoid: alkaline reactive substances

# 10.6. Hazardous decomposition products

Thermal decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated., Incomplete combustion results in formation of toxic gases, containing mainly carbon monoxide and carbon dioxide.

# **SECTION 11: Toxicological Information**

#### 11.1. Information on toxicological effects

#### Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Experimental/calculated data:

LD50 rat (oral): approx. 5,560 mg/kg (BASF-Test)

LC50 rat (by inhalation): > 7.7 mg/l 4 h (BASF-Test)

An aerosol was tested.

LD50 rabbit (dermal): > 7,940 mg/kg (other)

#### Irritation

Assessment of irritating effects:

Not irritating to the skin. May cause severe damage to the eyes.

Experimental/calculated data:

Skin corrosion/irritation

rabbit: non-irritant (BASF-Test)

Serious eye damage/irritation

rabbit: irreversible damage (OECD Guideline 405)

#### Respiratory/Skin sensitization

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#### Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies. A sensitizing effect on particularly sensitive individuals cannot be excluded.

# Experimental/calculated data:

guinea pig: Non-sensitizing. (other)

#### Germ cell mutagenicity

#### Assessment of mutagenicity:

The substance was not mutagenic in mammalian cell culture. No mutagenic effect was found in various tests with microorganisms and mammals.

#### Carcinogenicity

# Assessment of carcinogenicity:

In long-term animal studies in which the substance was given in high concentrations by feed, a carcinogenic effect was not observed.

#### Reproductive toxicity

#### Assessment of reproduction toxicity:

No effects have been reported in reproductive organs in long term animal studies.

#### **Developmental toxicity**

#### Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

# Specific target organ toxicity (single exposure)

#### Assessment of STOT single:

Based on available data, the classification criteria are not met.

#### Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

#### Assessment of repeated dose toxicity:

Repeated oral uptake of the substance did not cause substance-related effects.

# **Aspiration hazard**

No aspiration hazard expected.

# **SECTION 12: Ecological Information**

#### 12.1. Toxicity

time to time.

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#### Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

#### Toxicity to fish:

LC0 (96 h) >= 1,000 mg/l, Brachydanio rerio (other, static) Nominal values (confirmed by concentration control analytics)

#### Aquatic invertebrates:

LC50 (48 h) 46 mg/l, Daphnia magna (OECD Guideline 202, part 1) Nominal concentration.

#### Aquatic plants:

EC50 (72 h) 64.5 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static) Nominal concentration.

No observed effect concentration (72 h) 40.6 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

Nominal concentration.

# Microorganisms/Effect on activated sludge:

EC50 (3 h) > 100 mg/l, activated sludge (OECD Guideline 209, aerobic)

#### Chronic toxicity to fish:

Study scientifically not justified.

#### Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d) 6.3 mg/l, Daphnia magna (OECD Guideline 211) Nominal concentration.

#### Assessment of terrestrial toxicity:

No data available.

Study scientifically not justified.

# 12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O):

Readily biodegradable (according to OECD criteria).

# Elimination information:

83 % BOD of the ThOD (30 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, domestic sewage) Literature data.

#### Assessment of stability in water:

According to structural properties, hydrolysis is not expected/probable.

# 12.3. Bioaccumulative potential

Assessment bioaccumulation potential:

time to time.

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Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Bioaccumulation potential:

Bioconcentration factor (BCF): 3.16 (calculated) Accumulation in organisms is not to be expected.

### 12.4. Mobility in soil

Assessment transport between environmental compartments:

Volatility: The substance will not evaporate into the atmosphere from the water surface.

Adsorption in soil: Adsorption to solid soil phase is not expected.

#### 12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

#### 12.6. Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

#### 12.7. Additional information

Other ecotoxicological advice:

Do not release untreated into natural waters.

# **SECTION 13: Disposal Considerations**

#### 13.1. Waste treatment methods

Incinerate in suitable incineration plant, observing local authority regulations.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)

Contaminated packaging:

Uncleaned empties should be disposed of in the same manner as the contents.

time to time.

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# **SECTION 14: Transport Information**

#### Land transport

**ADR** 

Not classified as a dangerous good under transport regulations

UN number or ID number: Not applicable UN proper shipping name: Not applicable Transport hazard class(es): Not applicable Packing group: Not applicable Environmental hazards: Not applicable None known

Special precautions for

user

RID

Not classified as a dangerous good under transport regulations

Not applicable UN number or ID number: Not applicable UN proper shipping name: Transport hazard class(es): Not applicable Packing group: Not applicable Environmental hazards:

Special precautions for

user

Not applicable None known

#### **Inland waterway transport**

ADN

Not classified as a dangerous good under transport regulations

UN number or ID number: Not applicable Not applicable UN proper shipping name: Transport hazard class(es): Not applicable Packing group: Not applicable Environmental hazards: Not applicable

user:

Special precautions for None known

# Transport in inland waterway vessel

Not evaluated

# Sea transport

**IMDG** 

Not classified as a dangerous good under transport regulations

UN number or ID number: Not applicable UN proper shipping name: Not applicable

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Transport hazard class(es): Not applicable Packing group: Not applicable Not applicable Environmental hazards: Not applicable Special precautions for None known

user

# Air transport

#### IATA/ICAO

Not classified as a dangerous good under transport regulations

UN number or ID number:
UN proper shipping name:
Transport hazard class(es):
Packing group:
Environmental hazards:
Special precautions for

Not applicable
Not applicable
Not applicable
Not applicable
Not applicable
Not applicable

user

# 14.1. UN number or ID number

See corresponding entries for "UN number or ID number" for the respective regulations in the tables above.

#### 14.2. UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

# 14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

#### 14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

#### 14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

#### 14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

#### 14.7. Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

time to time.

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# **SECTION 15: Regulatory Information**

# 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU): Listed in above regulation: no

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

# 15.2. Chemical Safety Assessment

Chemical Safety Assessment performed

# **SECTION 16: Other Information**

Assessment of the hazard classes according to UN GHS criteria (most recent version)

Eye Dam./Irrit. 1 Aquatic Acute 3

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned

in section 2 or 3:

Eye Dam./Irrit. Serious eye damage/eye irritation H319 Causes serious eye irritation.

#### **Abbreviations**

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

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The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.

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# **Annex: Exposure Scenarios**

#### Index

1. Formulation

ERC2; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13

2. Use in/as Formulation

ERC6b; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13

- **3.** Use as an intermediate, Use as Monomer ERC6a, ERC6c, ERC6d; PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9
- **4.** Production of Machine dish washing products (tablets) ERC5; PROC2, PROC5, PROC8a, PROC13, PROC14
- **5.** Use in Flue Gas Desulphurization ERC6b; PROC16
- **6.** Use as laboratory reagent/agent ERC8a, ERC8b; PROC15
- **7.** Use in/as Laundry agents, (use in professional settings) ERC8a; PROC8b, PROC9
- **8.** Use of Machine dish washing products ERC8a, ERC11a; PC35

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#### 1. Short title of exposure scenario

Formulation

ERC2; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC2: Formulation into mixture
Operational conditions	
Annual amount per site	251,000 kg
Minimum emission days per year	100
Emission factor air	0.05 %

time to time.

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Emission factor water	0.08 %	
Emission factor soil	0.01 %	
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2,000 m3/d
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.2, ECETOC	TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.031516	
	Risk from environmental e	xposure is driven by soil.
	79,643.3	
Maximum amount of safe use	kg/d	
Risk from environmental exposure is driven by soil.		

Contributing exposure scenario	
Use descriptors covered	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.  Use domain: industrial
Operational conditions	•
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic

time to time.

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Exposure estimate	0.0069 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.000327
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.0085 mg/m³
Risk Characterization Ratio (RCR)	0.000115
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
•	adipic acid
Concentration of the substance	Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
Evenesias estimate	Worker - dermal, long-term - systemic
Exposure estimate Risk Characterization Ratio (RCR)	0.0549 mg/kg bw/day 0.002612
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
ASSESSITE III THE HIDU	Worker - inhalation, long-term - systemic
Exposure estimate	0.0852 mg/m <sup>3</sup>
Risk Characterization Ratio (RCR)	0.00115
Guidance to Downstream Users	1 0.00 0

time to time.

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For scaling see: http://www.ecetoc.org/tra

Contributing exposure scenario		
Use descriptors covered	PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Use domain: industrial	
Operational conditions	•	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use suitable eye protection.		
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0.0274 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.001306	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
Fun cours action at	Worker - inhalation, long-term - systemic	
Exposure estimate	0.2557 mg/m³	
Risk Characterization Ratio (RCR)  Guidance to Downstream Users	0.003451	
	/tra	
For scaling see: http://www.ecetoc.org/	แล	

Contributing exposure scenario	
Use descriptors covered	PROC4: Chemical production where opportunity for
Ose descriptors covered	exposure arises Use domain: industrial

time to time.

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Operational conditions		
	adipic acid	
Concentration of the substance	Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated	
	temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0.2743 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.013061	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0.0852 mg/m³	
Risk Characterization Ratio (RCR)	0.00115	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org	/tra	

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C

time to time.

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Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated
	temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	its source
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.5486 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.026122
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.4262 mg/m <sup>3</sup>
Risk Characterization Ratio (RCR)	0.005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/	'tra

Contributing exposure scenario	
	PROC7: Industrial spraying
Use descriptors covered	Use domain: industrial
Operational conditions	
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 50 %
Physical state	liquid
Vapour pressure of the substance	39.959549 Pa
during use	
Process temperature	40 °C
1 rocess temperature	
Duration and Frequency of activity	60 min 5 days per week
, , ,	
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated
	temperatures
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 95 %
Wear suitable respiratory protection.	Effectiveness: 90 %

time to time.

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Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	its source
	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified
Assessment method	version, The concentration of the substance has been
	considered using a linear approach.
	Worker - dermal, long-term - systemic
Exposure estimate	4.2857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.204082
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - inhalation, long-term - systemic
Exposure estimate	0.2131 mg/m <sup>3</sup>
Risk Characterization Ratio (RCR)	0.002876
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/texposure estimates)	ra Please note that a modified version has been used (see

Contributing exposure scenario		
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	

time to time.

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Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to it	its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0.5486 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.026122	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0.1705 mg/m <sup>3</sup>	
Risk Characterization Ratio (RCR)	0.002301	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

Contributing exposure scenario		
Use descriptors covered	PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	

time to time.

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Exposure estimate	0.5486 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.026122
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.4262 mg/m³
Risk Characterization Ratio (RCR)	0.005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/	'tra

Contributing exposure scenario		
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use suitable eye protection.		
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0.2743 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.013061	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
For a comparation of a	Worker - inhalation, long-term - systemic	
Exposure estimate	0.0852 mg/m³	
Risk Characterization Ratio (RCR)	0.00115	
Guidance to Downstream Users For scaling see: http://www.ecetoc.org/	11	

time to time.

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Contributing exposure scenario		
	PROC10: Roller application or brushing	
Use descriptors covered	Use domain: industrial	
Operational conditions	1	
	adipic acid	
Concentration of the substance	Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	1.0971 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.052245	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0.1705 mg/m³	
Risk Characterization Ratio (RCR)	0.002301	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/	tra	

Contributing exposure scenario	
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %

time to time.

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Physical state	liquid	
Vapour pressure of the substance	39.959549 Pa	
during use		
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant	Effectiveness: 80 %	
gloves.	Effectiveness. 60 70	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to it		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0.5486 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.026122	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0.1705 mg/m³	
Risk Characterization Ratio (RCR)	0.002301	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/t	ra	

# 2. Short title of exposure scenario

Use in/as Formulation

ERC6b; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13

Control of exposure and risk management measures

Control of Oxpodure and more in	
Contributing exposure scenario	
Use descriptors covered	ERC6b: Use of reactive processing aid at industrial site (no inclusion into or onto article)
Operational conditions	
Annual amount per site	251,000 kg
Minimum emission days per year	20

time to time.

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Emission factor air	0.002 %	
Emission factor water	0.2 %	
Emission factor soil	0.025 %	
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2,000 m3/d
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.078449	
	Risk from environmental exposure is driven by soil.	
	159,977	
Maximum amount of safe use	kg/d	
Risk from environmental exposure is driven by soil.		

Contributing exposure scenario		
Use descriptors covered	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.  Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	

time to time.

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Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0.0069 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.000327	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0.0085 mg/m <sup>3</sup>	
Risk Characterization Ratio (RCR)	0.000115	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/	tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
Francisco estimante	Worker - dermal, long-term - systemic
Exposure estimate	0.0549 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.002612
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic

time to time.

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Exposure estimate	0.0852 mg/m³
Risk Characterization Ratio (RCR)	0.00115
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.0274 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.001306
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.2557 mg/m <sup>3</sup>
Risk Characterization Ratio (RCR)	0.003451
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/	tra

# Contributing exposure scenario

time to time.

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Use descriptors covered	PROC4: Chemical production where opportunity for exposure arises Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker  Worker - dermal, long-term - systemic
Exposure estimate	0.2743 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.013061
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.0852 mg/m <sup>3</sup>
Risk Characterization Ratio (RCR)  Guidance to Downstream Users	0.00115
For scaling see: http://www.ecetoc.org.	/tro
i or scaling see. http://www.eceloc.org	ua

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes Use domain: industrial
Operational conditions	
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 5 %
Physical state	liquid

time to time.

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Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	its source
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.5486 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.026122
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.0085 mg/m³
Risk Characterization Ratio (RCR)	0.000115
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org	/tra

Contributing exposure scenario	
	PROC7: Industrial spraying
Use descriptors covered	Use domain: industrial
Operational conditions	1
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 50 %
Physical state	liquid
Vapour pressure of the substance	39.959549 Pa
during use	39.939349 Fa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated

time to time.

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	temperatures
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 95 %
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general	
ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	Effectiveness. 60 70
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	its source
	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified
Assessment method	version, The concentration of the substance has been
	considered using a linear approach.
	Worker - dermal, long-term - systemic
Exposure estimate	4.2857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.204082
	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified
Assessment method	version, The concentration of the substance has been
	considered using a linear approach.
	Worker - inhalation, long-term - systemic
Exposure estimate	0.2131 mg/m³
Risk Characterization Ratio (RCR)	0.002876
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see	
exposure estimates)	

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	

time to time.

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Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant	Effectiveness: 80 %	
gloves.	Effectiveness. 60 %	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0.5486 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.026122	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0.1705 mg/m <sup>3</sup>	
Risk Characterization Ratio (RCR)	0.002301	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use	

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suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.5486 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.026122
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.0852 mg/m <sup>3</sup>
Risk Characterization Ratio (RCR)	0.00115
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/t	ra

Contributing exposure scenario		
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.	<u> </u>	
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
Fire a sure a stire at a	Worker - dermal, long-term - systemic	
Exposure estimate	0.2743 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.013061	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	

time to time.

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Exposure estimate	0.0852 mg/m³	
Risk Characterization Ratio (RCR)	0.00115	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

Contributing exposure scenario		
·	PROC10: Roller application or brushing	
Use descriptors covered	Use domain: industrial	
Operational conditions		
	adipic acid	
Concentration of the substance	Content: >= 0 % - <= 5 %	
Dhariaal state	Parit d	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
- 100000 tomporaturo		
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated	
	temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant	Effectiveness: 80 %	
gloves.	Elicotiverioss. 60 70	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	1.0971 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.052245	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0.1705 mg/m³	
Risk Characterization Ratio (RCR)	0.002301	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

Contributing exposure scenario	
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. Use domain: industrial

time to time.

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Operational conditions		
•	adipic acid	
Concentration of the substance	Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant	Effectiveness: 80 %	
gloves.		
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0.5486 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.026122	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0.1705 mg/m³	
Risk Characterization Ratio (RCR)	0.002301	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/	tra	

### 3. Short title of exposure scenario

Use as an intermediate, Use as Monomer ERC6a, ERC6c, ERC6d; PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC6a: Use of intermediate
Operational conditions	
Annual amount per site	75,330,000 kg

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time to time.

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Minimum emission days per year	300	
Emission factor air	0.4 ppm	
Emission factor water	8 ppm	
Emission factor soil	0.1 %	
	Values provided in per mill	
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Type of STP		Municipal STP
Assumed sewage treatment plant flow	(m3/d)	2,000 m3/d
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.094447	
	Risk from environmental exposure is driven by soil.	
	2,658.6	
Maximum amount of safe use	t/d	
Risk from environmental exposure is driven by soil.		

Contributing exposure scenario		
Use descriptors covered	ERC6c: Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)	
Operational conditions		
Annual amount per site	75,330,000 kg	
Minimum emission days per year	300	
Emission factor air	0.4 ppm	
Emission factor water	8 ppm	
Emission factor soil	0 %	
	Values provided in per mill	
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	

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Risk Management Measures		
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2,000 m3/d
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.094447	
	Risk from environmental e	xposure is driven by soil.
	2,658.6	
Maximum amount of safe use	t/d	
Risk from environmental exposure is driven by soil.		

Contributing exposure scenario		
g experimental and a second control of the s	ERC6d: Use of reactive pro	
Use descriptors covered	into/onto article)	at industrial site (inclusion or not
Operational conditions	1	
Annual amount used in the EU	75,330,000 kg	
Minimum emission days per year	300	
Emission factor air	0.4 ppm	
Emission factor water	2 ppm	
Emission factor soil	0.025 %	
	Values provided in per mill	
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Type of STP		Municipal STP
Assumed sewage treatment plant flow		2,000 m3/d
Exposure estimate and reference to	its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.023682	
	Risk from environmental ex	xposure is driven by soil.
	10,602.9	
Maximum amount of safe use	t/d	
Risk from environmental exposure is dr	iven by soil.	

## Contributing exposure scenario

time to time.

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Use descriptors covered	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.  Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Exposure estimate and reference to	its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0.0343 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.001633	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0.0426 mg/m³	
Risk Characterization Ratio (RCR)	0.000575	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/	tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	•
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C

time to time.

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Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated
	temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general	
ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	Elifodivolicoo. Go 70
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	its source
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.2743 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.013061
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.4262 mg/m³
Risk Characterization Ratio (RCR)	0.005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/	/tra

Contributing exposure scenario		
Use descriptors covered	PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	

time to time.

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Risk Management Measures			
Wear suitable respiratory protection.	Effectiveness: 90 %		
Provide a good standard of general			
ventilation (not less than 3 - 5 air	Effectiveness: 30 %		
changes per hour)			
Use suitable chemically resistant	Effectiveness: 80 %		
gloves.	Effectiveness. 60 76		
Avoid contact with eyes.			
In case of potential exposure:, Use			
suitable eye protection.			
Exposure estimate and reference to	Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker		
	Worker - dermal, long-term - systemic		
Exposure estimate	0.1371 mg/kg bw/day		
Risk Characterization Ratio (RCR)	0.006531		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker		
	Worker - inhalation, long-term - systemic		
Exposure estimate	1.2787 mg/m <sup>3</sup>		
Risk Characterization Ratio (RCR)	0.017257		
Guidance to Downstream Users			
For scaling see: http://www.ecetoc.org/tra			

Contributing exposure scenario	
Contributing exposure scenario	DDOC4: Chemical production where enperturity for
Use descriptors covered	PROC4: Chemical production where opportunity for exposure arises Use domain: industrial
Operational conditions	
•	adipic acid
Concentration of the substance	Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	

time to time.

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In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	its source
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1.3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.065306
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.4262 mg/m <sup>3</sup>
Risk Characterization Ratio (RCR)	0.005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario		
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	Solid, low dustiness	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use suitable eye protection.		
	Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	2.7429 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.130612	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	

time to time.

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	Worker - inhalation, long-term - systemic
Exposure estimate	0.035 mg/m <sup>3</sup>
Risk Characterization Ratio (RCR)	0.000472
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario		
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	15 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
E	Worker - dermal, long-term - systemic	
Exposure estimate	2.7429 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.130612	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
Evneaure estimate	Worker - inhalation, long-term - systemic	
Exposure estimate	0.4262 mg/m³	
Risk Characterization Ratio (RCR) 0.005752		
Guidance to Downstream Users	/tro	
For scaling see: http://www.ecetoc.org/tra		

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or mixture (charging and

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	discharging) at dedicated facilities Use domain: industrial
Operational conditions	
Operational conditions	adipic acid
Concentration of the substance	Content: >= 0 % - <= 100 %
Physical state	Solid, low dustiness
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	its source
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker  Worker - dermal, long-term - systemic
Exposure estimate	2.7429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.130612
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker Worker - inhalation, long-term - systemic
Exposure estimate	0.007 mg/m³
Risk Characterization Ratio (RCR)	0.000094
Guidance to Downstream Users	•
For scaling see: http://www.ecetoc.org/	tra

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: industrial
Operational conditions	·
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %
Physical state	liquid

time to time.

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Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	its source
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	2.7429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.130612
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.4262 mg/m³
Risk Characterization Ratio (RCR)	0.005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %
Physical state	Solid, low dustiness
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated

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	temperatures		
Risk Management Measures			
Wear suitable respiratory protection.	Effectiveness: 90 %		
Provide a good standard of general			
ventilation (not less than 3 - 5 air	Effectiveness: 30 %		
changes per hour)			
Use suitable chemically resistant	Effectiveness: 80 %		
gloves.	Effectiveness. 60 70		
Avoid contact with eyes.			
In case of potential exposure:, Use			
suitable eye protection.			
Exposure estimate and reference to it	Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker		
	Worker - dermal, long-term - systemic		
Exposure estimate	1.3714 mg/kg bw/day		
Risk Characterization Ratio (RCR)	0.065306		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker		
	Worker - inhalation, long-term - systemic		
Exposure estimate	0.007 mg/m <sup>3</sup>		
Risk Characterization Ratio (RCR)	0.000094		
Guidance to Downstream Users			
For scaling see: http://www.ecetoc.org/t	ra		

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %

time to time.

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Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1.3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.065306
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.4262 mg/m <sup>3</sup>
Risk Characterization Ratio (RCR)	0.005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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## 4. Short title of exposure scenario

Production of Machine dish washing products (tablets) ERC5; PROC2, PROC5, PROC8a, PROC13, PROC14

Control of exposure and risk management measures

Contributing exposure scenario		
Use descriptors covered	ERC5: Use at ind article	ustrial site leading to inclusion into/onto
Operational conditions		
Annual amount per site	2,430,000 kg	
Minimum emission days per year	100	
Emission factor air	2 ppm	
Emission factor water	0.004 %	
Emission factor soil	1 %	
	Values provided i	n per mill
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures	•	
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2,000 m3/d
Exposure estimate and reference to	to its source	

time to time.

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Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.015216
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	1,597 t/d
Risk from environmental exposure is driven by soil.	

O and the discussion of the second of the se	
Contributing exposure scenario	Tpp000 01 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	1
•	adipic acid
Concentration of the substance	Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.2743 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.013061
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.2557 mg/m³
Risk Characterization Ratio (RCR)	0.003451
Guidance to Downstream Users	I.
For scaling see: http://www.ecetoc.org/	'tra

time to time.

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Contributing exposure scenario		
	PROC5: Mixing or blending in batch processes	
Use descriptors covered	Use domain: industrial	
Operational conditions		
	adipic acid	
Concentration of the substance	Content: >= 0 % - <= 100 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated	
	temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant	Effectiveness: 80 %	
gloves.		
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.	##	
Exposure estimate and reference to Assessment method		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
Exposure estimate	Worker - dermal, long-term - systemic 2.7429 mg/kg bw/day	
Exposure estimate Risk Characterization Ratio (RCR)	0.130612	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
Assessment method	Worker - inhalation, long-term - systemic	
Exposure estimate	0.4262 mg/m <sup>3</sup>	
Risk Characterization Ratio (RCR)	0.4262 mg/m²	
Guidance to Downstream Users	0.000102	
For scaling see: http://www.ecetoc.org/	/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %

time to time.

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Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	15 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general	
ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	tta a a suma a
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
Function at the state of the st	Worker - dermal, long-term - systemic
Exposure estimate	2.7429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.130612
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
Funciona estimate	Worker - inhalation, long-term - systemic
Exposure estimate	0.4262 mg/m³
Risk Characterization Ratio (RCR)	0.005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/	tra

Contributing exposure scenario		
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	15 min 5 days per week	
Indoor/Outdoor	Indoor	

time to time.

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	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	its source
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	2.7429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.130612
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.4262 mg/m³
Risk Characterization Ratio (RCR)	0.005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org	ı/tra

Contributing exposure scenario		
Use descriptors covered	PROC14: Tabletting, compression, extrusion, pelletisation, granulation Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	Solid, low dustiness	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant	Effectiveness: 80 %	

time to time.

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gloves.	
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	its source
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.032653
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.007 mg/m <sup>3</sup>
Risk Characterization Ratio (RCR)	0.000094
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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## 5. Short title of exposure scenario

Use in Flue Gas Desulphurization

ERC6b; PROC16

Control of exposure and risk management measures

Contributing exposure scenario		
Use descriptors covered	ERC6b: Use of reacti inclusion into or onto	ve processing aid at industrial site (no article)
Operational conditions		
Annual amount per site	540,000 kg	
Minimum emission days per year	20	
Emission factor air	0.002 %	
Emission factor water	0.2 %	
Emission factor soil	0.025 %	
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures	1	
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d) 2,000 m3/d		2,000 m3/d
Exposure estimate and reference to its source		

time to time.

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Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.168903
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	159,855.5 kg/d
Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
	PROC16: Use of fuels
Use descriptors covered	Use domain: industrial
Operational conditions	L
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general	
ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.0686 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.003265
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
Fire a company and the company	Worker - inhalation, long-term - systemic
Exposure estimate	0.0852 mg/m³
Risk Characterization Ratio (RCR)	0.00115
Guidance to Downstream Users	lhuo
For scaling see: http://www.ecetoc.org/	rtra

time to time.

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# 6. Short title of exposure scenario

Use as laboratory reagent/agent ERC8a, ERC8b; PROC15

Control of exposure and risk management measures

Contributing exposure scenario			
Use descriptors covered	ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)		
Operational conditions			
Annual amount used in the EU	1,000 kg		
Minimum emission days per year	365		
Emission factor air	1 %		
Emission factor water	4 %		
Emission factor soil	0 %		
Receive Surf. Water (Flow Rate).	18,000 m3/d		
Dilution factor river	10		
Dilution factor coast	100		
Risk Management Measures	•		
Type of STP		Municipal STP	
Assumed sewage treatment plant flow	/ (m3/d)	2,000 m3/d	
Exposure estimate and reference to			
Assessment method	EASY TRA v4.2, ECETO	EASY TRA v4.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.006264		
		exposure is driven by soil.	
	0.874819		
Maximum amount of safe use	kg/d		
Risk from environmental exposure is o	driven by soil.		

Contributing exposure scenario	
Use descriptors covered	ERC8b: Widespread use of reactive processing aid (no inclusion into or onto article, indoor)
Operational conditions	
Annual amount used in the EU	1,000 kg
Minimum emission days per year	365

time to time.

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Emission factor air	0.001 %	
Emission factor water	0.08 %	
Emission factor soil	0 %	
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Type of STP		Municipal STP
Assumed sewage treatment plant flow	(m3/d)	2,000 m3/d
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.000428	
	Risk from environmental exposure is driven by freshwater sediment.	
Maximum amount of safe use	12.8 kg/d	
Risk from environmental exposure is driven by freshwater sediment.		

Contributing exposure scenario		
Use descriptors covered	PROC15: Use a laboratory reagent. Use domain: professional	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	Solid, low dustiness	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Local exhaust ventilation	Effectiveness: 80 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Provide a good standard of general ventilation (not less than 3 - 5 air	Effectiveness: 30 %	

time to time.

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changes per hour)		
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to	its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0.0686 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.003265	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0.014 mg/m <sup>3</sup>	
Risk Characterization Ratio (RCR)	0.000189	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

Contributing exposure scenario		
	PROC15: Use a laboratory reagent.	
Use descriptors covered	Use domain: professional	
Operational conditions		
	adipic acid	
Concentration of the substance	Content: >= 0 % - <= 100 %	
Physical state	liquid	
Vapour pressure of the substance during use	39.959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated	
	temperatures	
Risk Management Measures		
Local exhaust ventilation	Effectiveness: 80 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0.0686 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0.003265	

time to time.

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Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	4.2625 mg/m <sup>3</sup>	
Risk Characterization Ratio (RCR)	0.057523	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

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## 7. Short title of exposure scenario

Use in/as Laundry agents, (use in professional settings) ERC8a; PROC8b, PROC9

Control of exposure and risk management measures

Contributing exposure scenario			
Use descriptors covered	ERC8a: Widespread use of the control	of non-reactive processing aid article, indoor)	
Operational conditions			
Annual amount used in the EU	100 kg		
Minimum emission days per year	365		
Emission factor air	100 %		
Emission factor water	100 %		
Emission factor soil	0 %		
Receive Surf. Water (Flow Rate).	18,000 m3/d		
Dilution factor river	10		
Dilution factor coast	100		
Risk Management Measures			
Type of STP		Municipal STP	
Assumed sewage treatment plant flow	Assumed sewage treatment plant flow (m3/d) 2,000 m3/d		
Exposure estimate and reference to			
Assessment method	EASY TRA v4.2, ECETOC	EASY TRA v4.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.015651		
	Risk from environmental e	xposure is driven by soil.	
	0.035011		
Maximum amount of safe use	kg/d		
Risk from environmental exposure is o	Iriven by soil.		

### Contributing exposure scenario

time to time.

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Use descriptors covered	PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: professional
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 13 %
Physical state	Solid, low dustiness
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	its source
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
Europeuro potimento	Worker - dermal, long-term - systemic
Exposure estimate Risk Characterization Ratio (RCR)	0.3566 mg/kg bw/day 0.01698
NISK CHARACIERZALION RALIO (RCR)	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified
Assessment method	version, The concentration of the substance has been considered using a linear approach.
	Worker - inhalation, long-term - systemic
Exposure estimate	0.0045 mg/m³
Risk Characterization Ratio (RCR)	0.000061
Guidance to Downstream Users  For scaling see: http://www.ecetoc.org exposure estimates)	/tra Please note that a modified version has been used (see

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: professional

time to time.

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Operational conditions	
operational containents	adipic acid
Concentration of the substance	Content: >= 0 % - <= 13 %
Physical state	Solid, low dustiness
Vapour pressure of the substance during use	39.959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	its source
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
Evposure estimate	Worker - dermal, long-term - systemic
Exposure estimate Risk Characterization Ratio (RCR)	0.1783 mg/kg bw/day 0.00849
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - inhalation, long-term - systemic
Exposure estimate	0.0045 mg/m³
Risk Characterization Ratio (RCR)	0.000061
Guidance to Downstream Users	
	/tra Please note that a modified version has been used (see

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## 8. Short title of exposure scenario

Use of Machine dish washing products ERC8a, ERC11a; PC35

time to time.

Date / Revised: 20.04.2023 Version: 10.0
Date previous version: 01.02.2022 Previous version: 9.0

Date / First version: 22.08.2001 Product: **Adipic Acid - G** 

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Control of exposure and risk management measures

Contributing exposure scenario			
Use descriptors covered	ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)		
Operational conditions			
Annual amount used in the EU	450 kg		
Minimum emission days per year	365		
Emission factor air	100 %		
Emission factor water	100 %		
Emission factor soil	0 %		
Receive Surf. Water (Flow Rate).	18,000 m3/d		
Dilution factor river	10		
Dilution factor coast	100		
Risk Management Measures			
Type of STP		Municipal STP	
Assumed sewage treatment plant flow	(m3/d)	2,000 m3/d	
Exposure estimate and reference to			
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Environment		
Risk Characterization Ratio (RCR)	0.057794		
	Risk from environmental ex	xposure is driven by soil.	
	0.042665		
Maximum amount of safe use	kg/d		
Risk from environmental exposure is d	riven by soil.		

Contributing exposure scenario		
Use descriptors covered	ERC11a: Widespread use of articles with low release (indoor)	
Operational conditions		
Annual amount used in the EU	450 kg	
Minimum emission days per year	365	
Emission factor air	0.05 %	
Emission factor water	0.05 %	
Emission factor soil	0 %	

time to time.

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Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2,000 m3/d
Exposure estimate and reference to	its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.000359	
	Risk from environmental exposure is driven by freshwater sediment.	
Maximum amount of safe use	6.9 kg/d	
Risk from environmental exposure is dr	iven by freshwater sediment.	

Contributing exposure scenario	
Use descriptors covered	PC35: Washing and Cleaning Products (including solvent based products).
Operational conditions	1
Concentration of the substance	adipic acid Content: >= 0 % - <= 13 %
Vapour pressure of the substance during use	9.7 Pa
Duration and Frequency of activity	Exposure duration: 6 min 365 uses per year
Indoor/Outdoor	Indoor
Exposed skin area	Two fingertips (2 cm²)
Uptake fraction dermal	100 %
	Amount per use 20 g Relevant for inhalative exposure estimates
Exposure estimate and reference to	its source
Assessment method	EASY TRA v4.2, Other consideration (non-standard tool)
	Consumer - dermal, long-term - systemic
Exposure estimate	2.76 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.368
Assessment method	EASY TRA v4.2, Other consideration (non-standard tool)
	Consumer - inhalation, long-term - systemic
Exposure estimate	0.0001 mg/m³
Risk Characterization Ratio (RCR)	0.000001
Assessment method	EASY TRA v4.2, Other consideration (non-standard tool)
	Consumer - oral, long-term - systemic
Exposure estimate	0.0001 mg/kg bw/day

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BASF Safety data sheet according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended from

time to time.

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Risk Characterization Ratio (RCR)	0.000001
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org	g/tra

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