We create chemistry

Safety data sheet

BASF safety data sheet. This is a translation of the country-specific safety data sheet into a language other than that required by law. This document does not replace the safety data sheet provided according to Regulation (EC) No 1907/2006.
Date / Revised: 23.09.2025 Version: 5.0
Date / Previous version: 22.05.2025 Previous version: 4.0
Product: **METHYL METHACRYLATE**
(ID no. 30041969/SDS_GEN_DE/EN)
Date of print 12.10.2025

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

1.1. Product identifier

METHYL METHACRYLATE

Chemical name: Methyl methacrylate
INDEX-Number: 607-035-00-6
CAS Number: 80-62-6

REACH registration number: 01-2119452498-28-0002, 01-2119452498-28-0034, 01-2119452498-28-0031, 01-2119452498-28-0198, 01-2119452498-28-0129

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

Relevant identified uses: Monomer.
Recommended use: Chemical

Uses advised against: Applications where liquid monomer is intended to come into contact with skin or nails.

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
Operating Division Petrochemicals

Telephone: +49 621 60-42151
E-mail address: sds-petrochemicals@basf.com

1.4. Emergency telephone number

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

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Flam. Liq. 2	H225 Highly flammable liquid and vapour.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Skin Irrit. 2	H315 Causes skin irritation.
STOT SE 3	H335 May cause respiratory 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.

Flam. Liq. 2
Skin Irrit. 2
Skin Sens. 1B
STOT SE 3 (irritating to respiratory system)

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 Regulation (EC) No 1272/2008 [CLP]

Pictogram:

Signal Word:

Danger

Hazard Statement:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye protection or face protection.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing mist or vapour or spray.

Precautionary Statements (Response):

P312	Call a POISON CENTER or physician if you feel unwell.

Precautionary Statements (Storage):

P233	Keep container tightly closed.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Hazard determining component(s) for labelling: methyl methacrylate

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.
See section 12 - Results of PBT and vPvB assessment.
Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.
The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

methyl methacrylate

CAS Number: 80-62-6
EC-Number: 201-297-1
INDEX-Number: 607-035-00-6

Substance with EU occupational exposure limit

Flam. Liq. 2
Skin Sens. 1
Skin Irrit. 2
STOT SE 3 (irr. to respiratory syst.)
H225, H315, H317, H335

Differing classification according to current knowledge and the criteria given in Annex I of Regulation (EC) No. 1272/2008

Flam. Liq. 2
Skin Irrit. 2
Skin Sens. 1B
STOT SE 3 (irr. to respiratory syst.)

Regulatory relevant ingredients

methyl methacrylate

Content (W/W): >= 99,8 % - <= 100 %	Flam. Liq. 2 Skin Sens. 1 Skin Irrit. 2
CAS Number: 80-62-6	STOT SE 3 (irr. to respiratory syst.)
EC-Number: 201-297-1	H225, H315, H317, H335
INDEX-Number: 607-035-00-6	Differing classification according to current knowledge and the criteria given in Annex I of Regulation (EC) No. 1272/2008
Substance with EU occupational exposure limit	Flam. Liq. 2 Skin Irrit. 2 Skin Sens. 1B STOT SE 3 (irr. to respiratory syst.)

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

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:
Wash thoroughly with soap and water

On contact with eyes:
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.

Hazards: 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:
dry powder, water spray, carbon dioxide, foam

Unsuitable extinguishing media for safety reasons:
water jet

Additional information:
Use extinguishing measures to suit surroundings.

5.2. Special hazards arising from the substance or mixture

Advice: Risk of violent self-polymerization if overheated in a container. Cool endangered containers with water-spray.

Advice: The product is combustible. See SDS section 7 - Handling and storage.

5.3. Advice for fire-fighters

Special protective equipment:
Wear a self-contained breathing apparatus. Special protective equipment for firefighters

Further information:
Extend fire extinguishing measures to the surroundings. Fight fire from maximum distance. Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

In case of a fire in the vicinity a restabilization system should be used if the temperature in the bulk storage-tank reaches 45°C. Evacuate area of all unnecessary personnel. In case of a fire in the vicinity evacuate all personnel in a greater area if the temperature in the bulk storage-tank reaches 60°C.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: Accidental Release Measures

High risk of slipping due to leakage/spillage of product.

Release of substance/product can cause fire or explosion. Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

Pack in tightly closed containers for disposal.

6.1. Personal precautions, protective equipment and emergency procedures

Handle in accordance with good industrial hygiene and safety practice.

Avoid all sources of ignition: heat, sparks, open flame. Use antistatic tools.

6.2. Environmental precautions

Discharge into the environment must be avoided. Collect contaminated washing water for appropriate disposal.

6.3. Methods and material for containment and cleaning up

For large amounts: Pump off product.
Spills should be contained, solidified, and placed in suitable containers for disposal. Dispose of absorbed material in accordance with regulations. Ensure adequate ventilation. Suppress gases/vapours/mists with water spray jet. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Cleaning operations should be carried out only while wearing breathing apparatus. Pick up with suitable appliance and dispose of.

6.4. Reference to other sections

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

The substance/ product may be handled only by appropriately trained personnel. Facility parts must be checked for polymer residues and cleaned on regular basis in order to avoid hazardous reactions.

Ensure thorough ventilation of stores and work areas. Encapsulation or exhaust ventilation required. When filling, transferring, or emptying of containers, adequate local exhaust ventilation is necessary. Vent waste air to atmosphere only through suitable separators. Check the condition of seals and connector screw threads.

The temperatures which must be avoided are to be considered. Protect against heat. Protect from direct sunlight. Protect contents from the effects of light. Do not open warm or swollen product containers. Remove persons to safety and alert fire brigade.

Ensure adequate inhibitor and dissolved oxygen level.

Avoid inhalation of dusts/mists/vapours. Avoid aerosol formation. Avoid all direct contact with the substance/product.

Protection against fire and explosion:
Avoid all sources of ignition: heat, sparks, open flame. Substance/product can form explosive mixture with air. Ground all transfer equipment properly to prevent electrostatic discharge. It is recommended that all conductive parts of the machinery are grounded. Explosion-proof equipment is not necessary when loading and processing of the product takes place at a minimum of 5 °C below the flash point.

Heated containers should be cooled to prevent polymerization. If exposed to fire, keep containers cool by spraying with water. Emergency cooling must be provided for the eventuality of a fire in the vicinity.

Temperature class: T2 (Autoignition temperature >300 °C).

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Prior to storage ensure that the transfer equipment used and the intended storage containers do not contain other substances/products. Before transfer to stock the identity of the product must be proved to be without doubt. The entrance to storage rooms is to be granted only to appropriately trained personnel.
The stabilizer is only effective in the presence of oxygen. Maintain contact with atmosphere containing 5 - 21% oxygen. Never use tanks with inert-gas installation for storage.
Risk of polymerization. Protect against heat. Protect from direct sunlight. Avoid UV-light and other radiation with high energy. Protect against contamination.
In case of bulk storage, the storage-tanks should at least be equipped with two high temperature alert devices.
Even if the product is stored and handled as prescribed/indicated it should be used up within the indicated duration of storage.

Storage class according to TRGS 510 (originally VCI, Germany): (3) Flammable liquids

Storage stability:
Storage temperature: < 35 °C
Storage duration: 12 Months
The stated storage temperature should be noted.
Avoid prolonged storage.
This product should be processed as soon as possible.
Ensure adequate inhibitor and dissolved oxygen level.
Do not store with less than 10 % headspace above liquid.
Storage stability is based upon ambient temperatures and conditions described.
It is recommended to keep a safe distance of +2 degrees above the crystallization range.
The product is stabilized, the shelf life should be noted.
Storage temperature: 45 °C
A restabilization system should be used if the temperature in the bulk storage-tank reaches the indicated value.
Storage temperature: 60 °C
All personnel in a greater area should be evacuated if the temperature in the bulk storage-tank reaches the indicated value.

7.3. Specific end use(s)

See exposure scenario(s) in the attachment to this safety data sheet.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

The surveillance of the workplace by exposure measurements may be necessary, in order to prove the efficiency of safety measures, for example ventilation or the need of respiratory protection. Since this requires a specific competency, only accredited laboratories should be contracted. Regarding suitable methods to assess inhalation exposure, the European Standards EN 482, 689 and 14042 are to be considered. In addition, the TRGS 402 has to be observed in Germany.

80-62-6: methyl methacrylate

Short Term Exposure Classification: (TRGS 900 (DE))
Category I: Substances for which the localized effect has an assigned exposure limit or for substances with a sensitizing effect in respiratory passages
OEL 210 mg/m3 ; 50 ppm (TRGS 900 (DE))
Ceiling limit value/factor: 2
If the occupational exposure limit value (AGW) and the biological limit value (BGW) are complied with, there should be no risk of damage for the unborn child (see TRGS 900, Number 2.7)
TWA value 50 ppm (EU SCOEL)
Ceiling limit value/factor: 8HR
STEL value 100 ppm (EU SCOEL)
Ceiling limit value/factor: 15 min

PNEC

freshwater: 0,94 mg/l

marine water: 0,094 mg/l

intermittent release: 0,94 mg/l

sediment (freshwater): 10,2 mg/kg

sediment (marine water): 1,02 mg/kg

soil: 1,48 mg/kg

STP: 10 mg/l

DNEL

worker:

Long-term exposure- systemic effects, Inhalation: 348,8 mg/m3

worker:
Long-term exposure - local effects, Inhalation: 208 mg/m3

worker:
Short-term exposure - local effects, Inhalation: 416 mg/m3

worker:
Long-term exposure- systemic effects, dermal: 13,67 mg/kg

worker:
Long-term exposure - local effects, dermal: 1,5 mg/cm2

worker:
Short-term exposure - local effects, dermal: 1,5 mg/cm2

consumer:
Long-term exposure- systemic effects, Inhalation: 74,3 mg/m3

consumer:
Long-term exposure - local effects, Inhalation: 104 mg/m3

consumer:
Short-term exposure - local effects, Inhalation: 208 mg/m3

consumer:
Long-term exposure- systemic effects, dermal: 8,2 mg/kg

consumer:
Long-term exposure - local effects, dermal: 1,5 mg/cm2

consumer:
Short-term exposure - local effects, dermal: 1,5 mg/cm2

consumer:
Long-term exposure- systemic effects, oral: 8,2 mg/kg

8.2. Exposure controls

Appropriate engineering controls
Ensure adequate ventilation.

Personal protective equipment

Respiratory protection:
Suitable respiratory protection for lower concentrations or short-term effect: Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:
fluoroelastomer (FKM) - 0.7 mm coating thickness
Suitable materials for short-term contact (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to 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.
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

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

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Avoid contact with the skin, eyes and clothing. Avoid inhalation of vapour. Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment.

Environmental exposure controls

All appropriate measures must be taken to prevent the release of this product to the environment and to limit the dispersion of any release when it occurs. Suitable risk management measures should be in place.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

State of matter:	liquid
Form:	liquid
Colour:	colourless
Odour:	vinegar-like

Odour threshold:	0,049 ppm	
Melting point:	-48 °C Literature data.	
Boiling point:	100,36 °C (1.013,25 hPa)	
Boiling range:	No data available.	
Flammability:	Highly flammable.	(derived from flash - and boiling point)
Lower explosion limit:	For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Flash point:	10 °C	(DIN 51755, closed cup)
Auto-ignition temperature:	435 °C Literature data.	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
SADT:	Not a substance/mixture liable to self-decomposition according to GHS.	
pH value:	neutral	
Viscosity, kinematic:	not determined	
Viscosity, dynamic:	0,53 mPa.s (20 °C) Literature data.	
Thixotropy:	not thixotropic	
Solubility in water:	15,3 g/l (20 °C)	
Solubility (qualitative) solvent(s):	organic solvents soluble	
Solubility (quantitative) solvent(s):	Water approx. 16,5 g/kg (20 °C)	
Partitioning coefficient n-octanol/water (log Kow):	1,38 (20 °C)	
Vapour pressure:	30 hPa (16,67 °C) dynamic	(measured)
	37 hPa (20 °C) dynamic	(measured)
	100 hPa (39,4 °C) dynamic	(measured)

Relative density:	0,94 (20 °C) Literature data.	
Density:	0,94 g/cm3 (20 °C) Literature data.	
	0,9085 g/cm3 (50 °C)	(OECD Guideline 109)
Relative vapour density (air):	3,45 (20 °C) Heavier than air.	(calculated)

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form. -

9.2. Other information

Information with regard to physical hazard classes

Explosives

Explosion hazard: Based on the chemical structure there is no indication of explosive properties.

Impact sensitivity:
Based on the chemical structure there is no shock-sensitivity.

Oxidizing properties

Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

Pyrophoric properties

Self-ignition temperature: Test type: Spontaneous self-ignition at room-temperature.

Based on its structural properties the product is not classified as self-igniting.

Self-heating substances and mixtures

Self heating ability: not applicable, the product is a liquid

Substances and mixtures, which emit flammable gases in contact with water

Formation of flammable gases:
Forms no flammable gases in the presence of water.

Corrosion to metals

Corrosive effects to metal are not anticipated.

Other safety characteristics

pKA:		
	The substance does not dissociate.	
Adsorption/water - soil:	KOC: 72; log KOC: 1,86	(other)
Surface tension:		
	Based on chemical structure, surface activity is not to be expected.	
Molar mass:	100,12 g/mol	
SAPT-Temperature:		
	According to SP386 it is ensured that the level of chemical stabilization is sufficient to prevent dangerous polymerization during total duration of carriage. - This information is valid for the recently stabilized product.	
Evaporation rate:		
	Value can be approximated from Henry's Law Constant or vapor pressure.	

SECTION 10: Stability and Reactivity

10.1. Reactivity

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

Corrosion to metals:	Corrosive effects to metal are not anticipated.	
Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Explosion and fire hazard exists under confined conditions. Ignitable air mixtures can form when the product is heated above the flash point and/or when sprayed or atomized. Formation of explosive gas/air mixtures.

Polymerization coupled with heat formation.

Risk of spontaneous polymerization by oxygen depletion of the liquid phase. Risk of spontaneous polymerization when heated or in the presence of UV radiation. Risk of spontaneous and violent self-polymerization if inhibitor is lost or product is exposed to excessive heat. Polymerization produces gases which may burst closed or confined containers. Reactions may cause ignition.

Risk of spontaneous polymerization in the presence of starters for radical chain reactions (e.g. peroxides). Reacts with nitric acid. Risk of spontaneous polymerization in the presence of oxidizing agents.

Hazardous reactions in presence of mentioned substances to avoid.

The product is stabilized against spontaneous polymerization prior to despatch. The product is stable if stored and handled as prescribed/indicated.

10.4. Conditions to avoid

Avoid heat. Avoid oxygen content above the product of less than 5 %. Avoid UV-light and other radiation with high energy. Avoid direct sunlight. Avoid prolonged storage. Avoid inhibitor loss. Avoid excessive temperatures. Avoid all sources of ignition: heat, sparks, open flame. Avoid freezing. Avoid moisture.

10.5. Incompatible materials

Substances to avoid:
radical formers, free radical initiators, peroxides, mercaptans, nitro-compounds, perborates, azides, ether, ketones, aldehydes, amines, nitrates, nitrites, oxidizing agents, reducing agents, strong bases, alkaline reactive substances, acid anhydrides, acid chlorides, concentrated mineral acids, metal salts
Inert gas

10.6. Hazardous decomposition products

Hazardous decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: Toxicological Information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Assessment of acute toxicity:

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

Experimental/calculated data:

LD50 rat (oral): approx. 7.900 mg/kg
Literature data.
LC50 rat (by inhalation): 29,8 mg/l 4 h
The vapour was tested.
LD50 rabbit (dermal): > 5.000 mg/kg (similar to OECD guideline 402)
No mortality was observed.

Irritation

Assessment of irritating effects:

Irritating to skin. Not irritating to the eyes.

Experimental/calculated data:

Skin corrosion/irritation

rabbit: Irritant. (similar to OECD guideline 404)

Serious eye damage/irritation

rabbit: non-irritant (Draize test)

Respiratory/Skin sensitization

Assessment of sensitization:

Caused skin sensitization in animal studies.

Experimental/calculated data:

Mouse Local Lymph Node Assay (LLNA) mouse: skin sensitizing (OECD Guideline 429)
Literature data.

Germ cell mutagenicity

Assessment of mutagenicity:

Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic.

Carcinogenicity

Assessment of carcinogenicity:
In long-term studies in rats and mice in which the substance was given by drinking-water, a carcinogenic effect was not observed. In long-term studies in rats and mice in which the substance was given by inhalation, a carcinogenic effect was not observed. IARC Group 3 (not classifiable as to human carcinogenicity).

Reproductive toxicity

Assessment of reproduction toxicity:
The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:

Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Causes temporary irritation of the respiratory tract.

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

Assessment of repeated dose toxicity:

After repeated exposure the prominent effect is local irritation.

Aspiration hazard

No aspiration hazard expected.

Interactive effects

No data available.

11.2. Information on other hazards

Endocrine disrupting properties

The substance is not identified to have endocrine disrupting properties according to Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 nor is included in the Candidate List of substances of very high concern according to EU REACh Article 59 for having endocrine disrupting properties.

SECTION 12: Ecological Information

12.1. Toxicity

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:
LC50 (96 h) > 79 mg/l, Oncorhynchus mykiss (Fish test acute, Flow through.)

Aquatic invertebrates:
EC50 (48 h) 69 mg/l, Daphnia magna (Daphnia test acute, Flow through.)

Aquatic plants:
EC50 (72 h) > 110 mg/l (growth rate), Selenastrum capricornutum (OECD Guideline 201, static)

Microorganisms/Effect on activated sludge:
EC0 (14 d) 100 mg/l, activated sludge, domestic (Screening test, aerobic)

Chronic toxicity to fish:
No observed effect concentration (35 d) 9,4 mg/l, Brachydanio rerio (OECD Guideline 236, Flow through.)

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d) 37 mg/l, Daphnia magna (OECD Guideline 211, Flow through.)

Assessment of terrestrial toxicity:
No effects at the highest test concentration.

Soil living organisms:
LC50 (28 d) > 1000 ppm, soil dwelling microorganisms (other, artificial soil)

Terrestrial plants:
No data available.

Other terrestrial non-mammals:
No data available.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O):
Readily biodegradable (according to OECD criteria).

Elimination information:
94 % BOD of the ThOD (14 d) (OECD 301C; ISO 9408; 92/69/EWG, C.4-F) (aerobic, activated sludge) Readily biodegradable.

Assessment of stability in water:
In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis):
$t_{1/2}$ 4,4 a, (28 d) (pH value7), (other, pH 7)

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
Accumulation in organisms is not to be expected.

Bioaccumulation potential:
No data available.

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. Endocrine disrupting properties

The substance is not identified to have endocrine disrupting properties according to Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 nor is included in the Candidate List of substances of very high concern according to EU REACh Article 59 for having endocrine disrupting properties.

12.7. Other adverse effects

The substance is not listed in Regulation (EU) 2024/590 on substances that deplete the ozone layer.

Results of PMT and vPvM assessment

Substance is not included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having PMT/vPvM properties.

Additional information

Other ecotoxicological advice:
Do not release untreated into natural waters. Acutely harmful for aquatic organisms.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Dispose of in accordance with national, state and local regulations.

Contaminated packaging:
Disposal must be made according to official regulations.

SECTION 14: Transport Information

Land transport

ADR

UN number or ID number:	UN1247
UN proper shipping name:	METHYL METHACRYLATE MONOMER, STABILIZED
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	no

Special precautions for user:	Tunnel code: D/E

RID

UN number or ID number:	UN1247
UN proper shipping name:	METHYL METHACRYLATE MONOMER, STABILIZED
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	no
Special precautions for user:	None known

Inland waterway transport

ADN

UN number or ID number:	UN1247
UN proper shipping name:	METHYL METHACRYLATE MONOMER, STABILIZED
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	no
Special precautions for user:	None known

Transport in inland waterway vessel
Not evaluated

Sea transport

IMDG

UN number or ID number:	UN 1247
UN proper shipping name:	METHYL METHACRYLATE MONOMER, STABILIZED
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	no Marine pollutant: NO
Special precautions for user:	EmS: F-E; S-D

Air transport

IATA/ICAO

UN number or ID number:	UN 1247
UN proper shipping name:	METHYL METHACRYLATE MONOMER, STABILIZED
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	None known

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

Regulation:	IBC-Code
Product name:	Methyl methacrylate
Pollution category:	Y
Ship Type:	3

SECTION 15: Regulatory Information

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

Prohibitions, Restrictions and Authorizations

Annex XVII of Regulation (EC) No 1907/2006: Number on List: 40, 3, 75

Hazardous Incident Ordinance (Germany):
List entry in regulation: 1.2.5.2
Classification applies for standard conditions of temperature and pressure.

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):
List entry in regulation: P5b
Classification applies for standard conditions of temperature and pressure.

Classification according to 'TA-Luft' (Germany):

5.2.5: Organic gases, general guidance

Water hazard class (§6 AwSV para.4 (Legal binding announcement of the substance in the Federal Gazette)): (1) Weakly water polluting. ID-No.: 154

The specifications of the Technical Rule for Hazardous Substances (TRGS) 401 must be observed (TRGS 401: Risks resulting from skin contact - identification, assessment, measures).
German Regulation TA Luft (Technical Instruction on Air Quality Control, i.e. first Directive to the Federal Immission Control Ordinance)
Law on the Protection of Working Youth

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)

Flam. Liq. 2
Acute Tox. 5 (Inhalation - vapour)
Skin Irrit. 2
Skin Sens. 1B
STOT SE 3 (irritating to respiratory system)
Aquatic Acute 3

Acrylic esters: Safe Handling and Storage aspects are covered in a brochure which is available on request.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Flam. Liq.	Flammable liquids
Skin Sens.	Skin sensitization
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity — single exposure
H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory 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.

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.

Annex: Exposure Scenarios

Index

****

1. Short title of exposure scenario

Formulation & (re)packing of substances and mixtures, (use in industrial settings)
IS; SU10; ERC2, ERC3; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC14, PROC15, PROC19

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC2: Formulation into mixture
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
	Closed system, reduced emission to waste water
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10

Dilution factor coast	100
Other Factors: Environment	Indoor and outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario	
Use descriptors covered	ERC3: Formulation into solid matrix
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
	Closed system, reduced emission to waste water
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10
Dilution factor coast	100
Other Factors: Environment	Indoor and outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario	
Use descriptors covered	ERC2: Formulation into mixture

Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10
Dilution factor coast	100
Other Factors: Environment	Indoor and outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario	
Use descriptors covered	ERC3: Formulation into solid matrix
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10
Dilution factor coast	100
Other Factors: Environment	Indoor and outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d

Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario		
Use descriptors covered	ERC2: Formulation into mixture	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC3: Formulation into solid matrix
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10

Dilution factor coast	100	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC2: Formulation into mixture	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC3: Formulation into solid matrix
Operational conditions	

Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of one hand (240 cm^2)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic

Exposure estimate	1,37 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,1
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
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 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 and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of one hand (240 cm²)
	Relevant for PROC 3
Exposed skin area	Palm of both hands (480 cm²)
	Relevant for PROC 2
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,37 mg/kg bw/day

Risk Characterization Ratio (RCR)	0,1
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC4: Chemical production where opportunity for exposure arises PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC12: Use of blowing agents in manufacture of foam PROC14: Tabletting, compression, extrusion, pelletisation, granulation PROC15: Use a laboratory reagent. Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of one hand (240 cm²)
	Relevant for PROC 12 Relevant for PROC 15
Exposed skin area	Palm of both hands (480 cm²)
	Relevant for PROC 4 Relevant for PROC 8b Relevant for PROC 9 Relevant for PROC 14
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 90 %
Relevant for industrial use	

Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 80 %
Relevant for professional use	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	20 ppm
Risk Characterization Ratio (RCR)	0,4
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
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 PROC6: Calendering operations PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring. PROC17: Lubrication at high energy conditions in metal working operations PROC18: General greasing /lubrication at high kinetic energy conditions PROC19: Manual activities involving hand contact Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of both hands (480 cm^2)
	Relevant for PROC 5 Relevant for PROC 13
Exposed skin area	Both hands (960 cm^2)

	Relevant for PROC 6 Relevant for PROC 8a Relevant for PROC 10 Relevant for PROC 17 Relevant for PROC 18
Exposed skin area	More than hands and forearms (1980 cm²)
	Relevant for PROC 19
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Use suitable chemically resistant gloves.	
Change gloves, if duration of activity exceeds break through time	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 90 %
Relevant for industrial use	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 80 %
Relevant for professional use	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker, Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	14,1 mg/kg bw/day
Risk Characterization Ratio (RCR)	1,03
	Given values represent the highest calculated exposure as a worst case assumption, The use is assessed to be safe.
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC19: Manual activities involving hand contact Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor

Indoor/Outdoor	Outdoor
Exposed skin area	More than hands and forearms (1980 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Use suitable chemically resistant gloves.	
Change gloves, if duration of activity exceeds break through time	
At concentrations above 5%:, Reduce duration of activity to less than 60 min	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 90 %
Relevant for industrial use	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 80 %
Relevant for professional use	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker, Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	14,1 mg/kg bw/day
Risk Characterization Ratio (RCR)	1,03
	The use is assessed to be safe., Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
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 Activities with open liquid surfaces or open reservoirs - activity with agitated surfaces Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa

Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of both hands (480 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
At concentrations above 25%:, Reduce duration of activity to less than 240 min	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
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). PROC14: Tabletting, compression, extrusion, pelletisation, granulation Use domain: industrial
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of both hands (480 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	

At concentrations above 25%:, Reduce duration of activity to less than 240 min	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

****

2. Short title of exposure scenario

Use as Monomer, Use as an intermediate, Use in/as Formulation, (use in industrial settings)
IS; SU2a, SU2b, SU6a, SU8, SU9, SU12, SU13, SU14, SU15, SU16, SU17, SU19, SU20, SU23, SU6b; ERC1, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14, PROC15, PROC17, PROC18, PROC19, PROC21, PROC22, PROC23, PROC24

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC1: Manufacture of the substance
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
	Closed system, reduced emission to waste water
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10
Dilution factor coast	100

Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC5: Use at industrial site leading to inclusion into/onto article
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year	300

Continuous		
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC6a: Use of intermediate	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	

	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario		
Use descriptors covered	ERC6d: Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC7: Use of functional fluid at industrial site	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d

Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario		
Use descriptors covered	ERC1: Manufacture of the substance	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Indoor and outdoor use.

Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC5: Use at industrial site leading to inclusion into/onto article	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC6a: Use of intermediate
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d

Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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	260.000.000 kg
Minimum emission days per year	300

Continuous		
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC6d: Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC7: Use of functional fluid at industrial site
Operational conditions	

Annual amount per site	300 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC1: Manufacture of the substance	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC5: Use at industrial site leading to inclusion into/onto article	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		

Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario		
Use descriptors covered	ERC6a: Use of intermediate	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		

Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

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	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC6d: Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	

Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario	
Use descriptors covered	ERC7: Use of functional fluid at industrial site
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario	
Use descriptors covered	ERC1: Manufacture of the substance
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10
Dilution factor coast	100

Other Factors: Environment	Indoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario	
Use descriptors covered	ERC4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Indoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092

Contributing exposure scenario	
Use descriptors covered	ERC5: Use at industrial site leading to inclusion into/onto article
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300

Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC6a: Use of intermediate	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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	260.000.000 kg

Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC6d: Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)

Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC7: Use of functional fluid at industrial site	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of one hand (240 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,37 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,1
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
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 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 and professional
Operational conditions	

Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of one hand (240 cm²)
	Relevant for PROC 3
Exposed skin area	Palm of both hands (480 cm²)
	Relevant for PROC 2
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,37 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,1
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC4: Chemical production where opportunity for exposure arises PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC12: Use of blowing agents in manufacture of foam PROC14: Tabletting, compression, extrusion, pelletisation, granulation PROC15: Use a laboratory reagent. Use domain: industrial and professional
Operational conditions	

Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of one hand (240 cm²)
	Relevant for PROC 12 Relevant for PROC 15
Exposed skin area	Palm of both hands (480 cm²)
	Relevant for PROC 4 Relevant for PROC 8b Relevant for PROC 9 Relevant for PROC 14
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 90 %
Relevant for industrial use	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 80 %
Relevant for professional use	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	20 ppm
Risk Characterization Ratio (RCR)	0,4
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
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 PROC6: Calendering operations PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC10: Roller application or brushing PROC13:

	Treatment of articles by dipping and pouring. PROC17: Lubrication at high energy conditions in metal working operations PROC18: General greasing /lubrication at high kinetic energy conditions PROC19: Manual activities involving hand contact Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of both hands (480 cm²)
	Relevant for PROC 5 Relevant for PROC 13
Exposed skin area	Both hands (960 cm²)
	Relevant for PROC 6 Relevant for PROC 8a Relevant for PROC 10 Relevant for PROC 17 Relevant for PROC 18
Exposed skin area	More than hands and forearms (1980 cm²)
	Relevant for PROC 19
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Use suitable chemically resistant gloves.	
Change gloves, if duration of activity exceeds break through time	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 90 %
Relevant for industrial use	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 80 %
Relevant for professional use	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker, Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	14,1 mg/kg bw/day
Risk Characterization Ratio (RCR)	1,03
	Given values represent the highest calculated exposure as a worst case assumption, The use is assessed to be safe.

Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC7: Industrial spraying Use domain: industrial
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Hands and forearms (1500 cm^2)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Use suitable chemically resistant gloves.	
Change gloves, if duration of activity exceeds break through time	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 90 %
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker, Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	14,1 mg/kg bw/day
Risk Characterization Ratio (RCR)	1,03
	The use is assessed to be safe., Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption

Guidance to Downstream Users
For scaling see: http://www.ecetoc.org/tra

Contributing exposure scenario	
Use descriptors covered	PROC19: Manual activities involving hand contact Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	More than hands and forearms (1980 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Use suitable chemically resistant gloves.	
Change gloves, if duration of activity exceeds break through time	
At concentrations above 5%:, Reduce duration of activity to less than 60 min	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 90 %
Relevant for industrial use	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 80 %
Relevant for professional use	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker, Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	14,1 mg/kg bw/day
Risk Characterization Ratio (RCR)	1,03
	The use is assessed to be safe., Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption

Guidance to Downstream Users
For scaling see: http://www.ecetoc.org/tra

Contributing exposure scenario	
Use descriptors covered	PROC4: Chemical production where opportunity for exposure arises PROC12: Use of blowing agents in manufacture of foam Use domain: industrial
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of one hand (240 cm²)
	Relevant for PROC 12
Exposed skin area	Palm of both hands (480 cm²)
	Relevant for PROC 4
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
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 Activities with open

	liquid surfaces or open reservoirs - activity with agitated surfaces Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of both hands (480 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
At concentrations above 25%:, Reduce duration of activity to less than 240 min	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
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). PROC14: Tabletting, compression, extrusion, pelletisation, granulation Use domain: industrial
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 25 %

Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of both hands (480 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
At concentrations above 25%:, Reduce duration of activity to less than 240 min	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC21: Low energy manipulation and handling of substances bound in/on materials or articles PROC23: Open processing and transfer operations at substantially elevated temperature PROC24: High (mechanical) energy work-up of substances bound in /on materials and/or articles Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 5 %
Physical state	Solid
Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor

Exposed skin area	More than hands and forearms (1980 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC22: Manufacturing and processing of minerals and/or metals at substantially elevated temperature Use domain: industrial
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 5 %
Physical state	Solid
Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor
Exposed skin area	More than hands and forearms (1980 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm

Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

* * * * * * * * * * * * * * * * *

3. Short title of exposure scenario

Use in/as Formulation, (use in professional settings)
PW; SU19; ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f; PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC12, PROC13, PROC14, PROC15, PROC17, PROC18, PROC19, PROC21, PROC23, PROC24

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 per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC8b: Widespread use of reactive processing aid (no inclusion into or onto article, indoor)

Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
	Closed system, reduced emission to waste water
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Indoor and outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario	
Use descriptors covered	ERC8c: Widespread use leading to inclusion into/onto article (indoor)
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
	Closed system, reduced emission to waste water
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Indoor and outdoor use.
Release to waste water from process	26000 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092

	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario		
Use descriptors covered	ERC8d: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC8e: Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d

Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario		
Use descriptors covered	ERC8f: Widespread use leading to inclusion into/onto article (outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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 per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Indoor and outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d

Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC8b: Widespread use of reactive processing aid (no inclusion into or onto article, indoor)
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Indoor and outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d

Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC8c: Widespread use leading to inclusion into/onto article (indoor)
Operational conditions	
Annual amount per site	300 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d

Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC8d: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC8e: Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300

Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC8f: Widespread use leading to inclusion into/onto article (outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC8c: Widespread use leading to inclusion into/onto article (indoor)
Operational conditions	
Annual amount per site	2.200.000 kg

Minimum emission days per year Continuous	300	
Release to air from process	0,9 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	0 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,0	
	Risk from environmental exposure is driven by soil.	

Contributing exposure scenario		
Use descriptors covered	ERC8f: Widespread use leading to inclusion into/onto article (outdoor)	
Operational conditions		
Annual amount per site	2.200.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	0,9 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	0 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0	
	Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
Use descriptors covered	ERC8d: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario	
Use descriptors covered	ERC8e: Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario		
Use descriptors covered	ERC8f: Widespread use leading to inclusion into/onto article (outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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 per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	

Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario		
Use descriptors covered	ERC8b: Widespread use of reactive processing aid (no inclusion into or onto article, indoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC8c: Widespread use leading to inclusion into/onto article (indoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		

Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

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 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 and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of one hand (240 cm²)
	Relevant for PROC 3
Exposed skin area	Palm of both hands (480 cm²)
	Relevant for PROC 2
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,37 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,1
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption

Additional good practice advice
Use suitable chemically resistant gloves.
Guidance to Downstream Users
For scaling see: http://www.ecetoc.org/tra

Contributing exposure scenario	
Use descriptors covered	PROC4: Chemical production where opportunity for exposure arises PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC12: Use of blowing agents in manufacture of foam PROC14: Tabletting, compression, extrusion, pelletisation, granulation PROC15: Use a laboratory reagent. Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of one hand (240 cm²)
	Relevant for PROC 12 Relevant for PROC 15
Exposed skin area	Palm of both hands (480 cm²)
	Relevant for PROC 4 Relevant for PROC 8b Relevant for PROC 9 Relevant for PROC 14
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 90 %
Relevant for industrial use	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 80 %
Relevant for professional use	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as

	a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	20 ppm
Risk Characterization Ratio (RCR)	0,4
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
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 PROC6: Calendering operations PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring. PROC17: Lubrication at high energy conditions in metal working operations PROC18: General greasing /lubrication at high kinetic energy conditions PROC19: Manual activities involving hand contact Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of both hands (480 cm²)
	Relevant for PROC 5 Relevant for PROC 13
Exposed skin area	Both hands (960 cm²)
	Relevant for PROC 6 Relevant for PROC 8a Relevant for PROC 10 Relevant for PROC 17 Relevant for PROC 18
Exposed skin area	More than hands and forearms (1980 cm²)
	Relevant for PROC 19
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Use suitable chemically resistant	

gloves.	
Change gloves, if duration of activity exceeds break through time	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 90 %
Relevant for industrial use	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 80 %
Relevant for professional use	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker, Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	14,1 mg/kg bw/day
Risk Characterization Ratio (RCR)	1,03
	Given values represent the highest calculated exposure as a worst case assumption, The use is assessed to be safe.
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC11: Non industrial spraying Use domain: professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Hands and forearms (1500 cm^2)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Use suitable chemically resistant gloves.	
Change gloves, if duration of activity exceeds break through time	

At concentrations above 5%:, Reduce duration of activity to less than 60 min	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 80 %
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker, Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	14,1 mg/kg bw/day
Risk Characterization Ratio (RCR)	1,03
	Given values represent the highest calculated exposure as a worst case assumption, The use is assessed to be safe.
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC19: Manual activities involving hand contact Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	More than hands and forearms (1980 cm^2)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Use suitable chemically resistant gloves.	
Change gloves, if duration of activity exceeds break through time	
At concentrations above 5%:, Reduce duration of activity to less than 60 min	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 90 %
Relevant for industrial use	

Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 80 %
Relevant for professional use	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker, Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	14,1 mg/kg bw/day
Risk Characterization Ratio (RCR)	1,03
	The use is assessed to be safe., Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC11: Non industrial spraying Use domain: professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
Exposed skin area	Hands and forearms (1500 cm^2)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Provide extract ventilation to points where emissions occur (LEV).	Effectiveness: >= 80 %
Use suitable chemically resistant gloves.	
Change gloves, if duration of activity exceeds break through time	
Wear suitable respiratory protection.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker, Use of gloves has been

	considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	10,7 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,78
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	10 ppm
Risk Characterization Ratio (RCR)	0,2
	Given values represent the highest calculated exposure as a worst case assumption
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC4: Chemical production where opportunity for exposure arises Use domain: professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of both hands (480 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
At concentrations above 25%:, Reduce duration of activity to less than 240 min	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6.086 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as

	a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
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 Activities with open liquid surfaces or open reservoirs - activity with agitated surfaces Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of both hands (480 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
At concentrations above 25%:, Reduce duration of activity to less than 240 min	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
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: professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of both hands (480 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
At concentrations above 5%:, Reduce duration of activity to less than 60 min	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC12: Use of blowing agents in manufacture of foam PROC14: Tabletting, compression, extrusion, pelletisation, granulation Use domain: professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 5 %
Physical state	liquid

Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor
Exposed skin area	Palm of one hand (240 cm²)
	Relevant for PROC 12
Exposed skin area	Palm of both hands (480 cm²)
	Relevant for PROC 14
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
At concentrations above 5%:, Reduce duration of activity to less than 240 min	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC21: Low energy manipulation and handling of substances bound in/on materials or articles PROC23: Open processing and transfer operations at substantially elevated temperature PROC24: High (mechanical) energy work-up of substances bound in /on materials and/or articles Use domain: industrial and professional
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 5 %
Physical state	Solid

Duration and Frequency of activity	480 min < 240 days per year
Indoor/Outdoor	Outdoor
Exposed skin area	More than hands and forearms (1980 cm²)
Risk Management Measures	
Provide basic employee training to prevent/minimize exposures.	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6,86 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Assessment method	ECETOC TRA v2.0 Worker
	Worker - inhalation
Exposure estimate	25 ppm
Risk Characterization Ratio (RCR)	0,5
	Given values represent the highest calculated exposure as a worst case assumption
Additional good practice advice	
Use suitable chemically resistant gloves.	
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

****

4. Short title of exposure scenario

Use in/as Formulation, (consumer use)
C; ERC8b, ERC8c, ERC8e, ERC8f; PC1, PC2, PC3, PC7, PC8, PC9a, PC9b, PC9c, PC14, PC15, PC18, PC19, PC20, PC21, PC23, PC24, PC26, PC31, PC32, PC33, PC34, PC35, PC37, PC39

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 per site	260.000.000 kg
Minimum emission days per year Continuous	300
	Closed system, reduced emission to waste water
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Indoor and outdoor use.

Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC8b: Widespread use of reactive processing aid (no inclusion into or onto article, indoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC8c: Widespread use leading to inclusion into/onto article (indoor)
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300

	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	26000 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC8d: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC8e: Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)

Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC8f: Widespread use leading to inclusion into/onto article (outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
	Closed system, reduced emission to waste water	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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 per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC8b: Widespread use of reactive processing aid (no inclusion into or onto article, indoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		

Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario		
Use descriptors covered	ERC8c: Widespread use leading to inclusion into/onto article (indoor)	
Operational conditions		
Annual amount per site	300 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC8d: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d

Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario		
Use descriptors covered	ERC8e: Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor and outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC8f: Widespread use leading to inclusion into/onto article (outdoor)
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Indoor and outdoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	

Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario	
Use descriptors covered	ERC8c: Widespread use leading to inclusion into/onto article (indoor)
Operational conditions	
Annual amount per site	2.200.000 kg
Minimum emission days per year Continuous	300
Release to air from process	0,9 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Indoor and outdoor use.
Release to waste water from process	0 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,0
	Risk from environmental exposure is driven by soil.

Contributing exposure scenario	
Use descriptors covered	ERC8f: Widespread use leading to inclusion into/onto article (outdoor)
Operational conditions	
Annual amount per site	2.200.000 kg
Minimum emission days per year Continuous	300
Release to air from process	0,9 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Indoor and outdoor use.

Release to waste water from process	0 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0	
	Risk from environmental exposure is driven by soil.	

Contributing exposure scenario		
Use descriptors covered	ERC8d: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC8e: Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d

Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC8f: Widespread use leading to inclusion into/onto article (outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

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 per site	260.000.000 kg

Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario		
Use descriptors covered	ERC8b: Widespread use of reactive processing aid (no inclusion into or onto article, indoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ERC8c: Widespread use leading to inclusion into/onto article (indoor)

Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Indoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	C: Consumer uses The Exposure Scenario represents an exemplary scenario of the product category
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 30 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 365 days per year
Exposed skin area	Fingertips (36 cm2)
	Amount per use 9 g
Risk Management Measures	
Consumer Measures	After contact with skin, wash immediately with plenty of water
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - dermal, long-term - systemic
Exposure estimate	1,79 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,22
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Assessment method	ECETOC TRA v2.0 Consumer

	Consumer - inhalation, long-term - systemic
Exposure estimate	6,75 mg/m³
Risk Characterization Ratio (RCR)	0,09
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	C: Consumer uses The Exposure Scenario represents an exemplary scenario of the product category
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 30 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	240 min 365 days per year
Exposed skin area	Fingertips (36 cm2)
	Amount per use 9 g
Risk Management Measures	
Consumer Measures	After contact with skin, wash immediately with plenty of water
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - dermal, long-term - systemic
Exposure estimate	1,79 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,22
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - inhalation, long-term - systemic
Exposure estimate	6,75 mg/m³
Risk Characterization Ratio (RCR)	0,09
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	C: Consumer uses The Exposure Scenario represents an exemplary scenario of the product category
Operational conditions	

Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 30 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	240 min 365 days per year
Exposed skin area	Fingertips (36 cm2)
	Amount per use 21 g
Risk Management Measures	
Consumer Measures	After contact with skin, wash immediately with plenty of water
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - dermal, long-term - systemic
Exposure estimate	1,79 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,22
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - inhalation, long-term - systemic
Exposure estimate	6,75 mg/m³
Risk Characterization Ratio (RCR)	0,09
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	C: Consumer uses
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 70 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	240 min 365 days per year
Exposed skin area	Fingertips (36 cm2)
	Amount per use 9 g
Risk Management Measures	
Consumer Measures	After contact with skin, wash immediately with plenty of water
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - dermal, long-term - systemic

Exposure estimate	1,79 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,22
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - inhalation, long-term - systemic
Exposure estimate	6,75 mg/m³
Risk Characterization Ratio (RCR)	0,09
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

****

5. Short title of exposure scenario

Consumer applications, (consumer use)
C; ERC10a, ERC11a; AC1, AC2, AC3, AC4, AC5, AC6, AC7, AC8, AC10, AC11, AC13

Control of exposure and risk management measures

Contributing exposure scenario		
Use descriptors covered	ERC10a: Widespread use of articles with low release (outdoor)	
Operational conditions		
Annual amount per site	260.000.000 kg	
Minimum emission days per year Continuous	300	
Release to air from process	8390 kg/d	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Other Factors: Environment	Outdoor use.	
Release to waste water from process	2600 kg/d	
Release to soil from process	0 kg/d	
Risk Management Measures		
Soil treatment measures considered suitable are, e.g.		Sewage Sludge incineration
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Waste-Related Measures		
Prescribed disposal method	waste combuster	
Exposure estimate and reference to its source		
Assessment method	EUSES v2.1	
Risk Characterization Ratio (RCR)	0,092	
	Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario

Use descriptors covered	ERC11a: Widespread use of articles with low release (indoor)
Operational conditions	
Annual amount per site	260.000.000 kg
Minimum emission days per year Continuous	300
Release to air from process	8390 kg/d
Receive Surf. Water (Flow Rate).	18.000 m3/d
Other Factors: Environment	Indoor use.
Release to waste water from process	2600 kg/d
Release to soil from process	0 kg/d
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	Sewage Sludge incineration
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Waste-Related Measures	
Prescribed disposal method	waste combuster
Exposure estimate and reference to its source	
Assessment method	EUSES v2.1
Risk Characterization Ratio (RCR)	0,092
	Risk from environmental exposure is driven by freshwater.

Contributing exposure scenario	
Use descriptors covered	C: Consumer uses
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 30 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	240 min 365 days per year
Exposed skin area	Fingertips (36 cm2)
	Amount per use 9 g
Risk Management Measures	
Consumer Measures	After contact with skin, wash immediately with plenty of water
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - dermal, long-term - systemic
Exposure estimate	1,79 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,22
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1

Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - inhalation, long-term - systemic
Exposure estimate	6,75 mg/m³
Risk Characterization Ratio (RCR)	0,09
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	C: Consumer uses The Exposure Scenario represents an exemplary scenario of the product category
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 30 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	480 min 365 days per year
Exposed skin area	Fingertips (36 cm2)
	Amount per use 9 g
Risk Management Measures	
Consumer Measures	After contact with skin, wash immediately with plenty of water
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - dermal, long-term - systemic
Exposure estimate	1,79 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,22
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - inhalation, long-term - systemic
Exposure estimate	6,75 mg/m³
Risk Characterization Ratio (RCR)	0,09
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	C: Consumer uses The Exposure Scenario represents an exemplary scenario of the product category

Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 30 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	240 min 365 days per year
Exposed skin area	Fingertips (36 cm2)
	Amount per use 21 g
Risk Management Measures	
Consumer Measures	After contact with skin, wash immediately with plenty of water
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - dermal, long-term - systemic
Exposure estimate	1,79 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,22
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - inhalation, long-term - systemic
Exposure estimate	6,75 mg/m³
Risk Characterization Ratio (RCR)	0,09
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	C: Consumer uses The Exposure Scenario represents an exemplary scenario of the product category
Operational conditions	
Concentration of the substance	methyl methacrylate Content: >= 0 % - <= 70 %
Physical state	liquid
Vapour pressure of the substance during use	37 hPa
Duration and Frequency of activity	240 min 365 days per year
Exposed skin area	Fingertips (36 cm2)
	Amount per use 9 g
Risk Management Measures	
Consumer Measures	After contact with skin, wash immediately with plenty of water

Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - dermal, long-term - systemic
Exposure estimate	1,79 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,22
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Assessment method	ECETOC TRA v2.0 Consumer
	Consumer - inhalation, long-term - systemic
Exposure estimate	6,75 mg/m³
Risk Characterization Ratio (RCR)	0,09
	Given values represent the highest calculated exposure as a worst case assumption, Calculated as PC1
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

****