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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: 24.09.2025 Version: 4.0
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Product: **METHACRYLIC ACID GLACIAL**
(ID no. 30041966/SDS_GEN_DE/EN)
Date of print 14.10.2025

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

1.1. Product identifier

METHACRYLIC ACID GLACIAL

Chemical name: methacrylic acid; 2-methylpropenoic acid
CAS Number: 79-41-4

REACH registration number: 01-2119463884-26-0076, 01-2119463884-26-0001, 01-2119463884-26-0104, 01-2119463884-26

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

Relevant identified uses: Monomer.
Recommended use: for industrial use only
Not recommended use: cosmetics, Pharmaceutical

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]

Acute Tox. 4 (oral)	H302 Harmful if swallowed.
Acute Tox. 4 (Inhalation - mist)	H332 Harmful if inhaled.
Acute Tox. 3 (dermal)	H311 Toxic in contact with skin.
Skin Corr. 1A	H314 Causes severe skin burns and eye damage.
Eye Dam. 1	H318 Causes serious eye damage.
STOT SE 3	H335 May cause respiratory irritation.

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

STOT SE 3, irr. to respiratory syst.: >= 1 %

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

2.2. Label elements

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

Pictogram:

Signal Word:

Danger

Hazard Statement:

H311	Toxic in contact with skin.
H335	May cause respiratory irritation.
H314	Causes severe skin burns and eye damage.
H302 + H332	Harmful if swallowed or if inhaled.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P271	Use only outdoors or in a well-ventilated area.

Precautionary Statements (Response):

P310	Immediately call a POISON CENTER or physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary Statements (Storage):

P403 + P233	Store in a well-ventilated place. 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: methacrylic acid

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).
Skin resorption hazard.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

methacrylic acid

CAS Number: 79-41-4
EC-Number: 201-204-4
INDEX-Number: 607-088-00-5

Acute Tox. 4 (oral)
Acute Tox. 4 (Inhalation - mist)
Acute Tox. 3 (dermal)
Skin Corr. 1A
Eye Dam. 1
STOT SE 3 (irr. to respiratory syst.)
H311, H335, H314, H302 + H332

Specific concentration limit:

STOT SE 3, irr. to respiratory syst.: >= 1 %

Regulatory relevant ingredients

methacrylic acid

	Content (W/W): >= 99,5 % - <= 100 % CAS Number: 79-41-4 EC-Number: 201-204-4 INDEX-Number: 607-088-00-5	Acute Tox. 4 (oral) Acute Tox. 4 (Inhalation - mist) Acute Tox. 3 (dermal) Skin Corr. 1A Eye Dam. 1 STOT SE 3 (irr. to respiratory syst.) H311, H335, H314, H302 + H332 <u>Specific concentration limit:</u> STOT SE 3, irr. to respiratory syst.: >= 1 %
acrylic acid		
	Content (W/W): >= 0 % - <= 0,15 % CAS Number: 79-10-7 EC-Number: 201-177-9 INDEX-Number: 607-061-00-8 Substance with EU occupational exposure limit	Acute Tox. 4 (Inhalation - vapour) Acute Tox. 4 (oral) Aquatic Chronic 2 Aquatic Acute 1 Acute Tox. 4 (dermal) Flam. Liq. 3 Eye Dam. 1 Skin Corr. 1A M-factor acute: 1 H226, H314, H302 + H312 + H332, H411, H400 <u>Specific concentration limit:</u> STOT SE 3, irr. to respiratory syst.: 1 - < 5 %

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. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

On skin contact:
Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

On contact with eyes:

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

On ingestion:
Do not induce vomiting. 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: Risk of pulmonary edema. Symptoms can appear later.

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. Avoid contact with the skin, eyes and clothing.

Take off immediately all contaminated clothing.

6.2. Environmental precautions

Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants.

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.

Because of the possible separation from the stabilizer the product should never be partially melted and taken. Ensure that there is no crystallized product in the container before use.

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.
Do not store product below the indicated minimum temperature, because crystallization should be absolutely avoided.

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): (6.1C) Combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects

Storage stability:
Storage temperature: 18 - 25 °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.

79-10-7: acrylic acid

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
STEL value 59 mg/m3 ; 20 ppm (OEL (EU))
indicative
TWA value 29 mg/m3 ; 10 ppm (OEL (EU))
indicative

OEL 30 mg/m3 ; 10 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)
Short Term Exposure Factor: (TRGS 900 (DE))
Ceiling limit value/factor: 1
Substance listed with exceeding factor and category of short time value.
Skin Designation (TRGS 900 (DE))
The substance can be absorbed through the skin.

79-41-4: methacrylic acid

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 180 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)

PNEC

STP: 100 mg/l

freshwater: 0,82 mg/l

marine water: 0,082 mg/l

sediment (freshwater): 3,09 mg/kg

sediment (marine water): 0,309 mg/kg

soil: 0,137 mg/kg

DNEL

worker:
Long-term exposure- systemic effects, dermal: 4,25 mg/kg

worker:
Long-term exposure- systemic effects, Inhalation: 39,3 mg/m3

worker:
Long-term exposure - local effects, dermal: 0,38 mg/cm2

worker:
Long-term exposure - local effects, Inhalation: 44 mg/m3

consumer:
Long-term exposure- systemic effects, dermal: 5,35 mg/kg

consumer:
Long-term exposure- systemic effects, Inhalation: 11,7 mg/m3

consumer:
Long-term exposure- systemic effects, oral: 5,35 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:
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):
butyl rubber (butyl) - 0.7 mm coating thickness
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.
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Tightly fitting safety goggles (splash 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)., protection boots (f.e. according to EN 20346), antistatic

General safety and hygiene measures

Avoid inhalation of vapour. Avoid contact with the skin, eyes and clothing. 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:	not determined	
Melting point:	15,4 - 15,5 °C Literature data.	
Boiling point:	162 °C (1.013 hPa) Literature data.	
Flammability:	Combustible liquid.	(derived from flash point)
Lower explosion limit:	1,6 %(V) (65 °C) For liquids not relevant for classification and labelling.	
Upper explosion limit:	8,1 %(V) (96 °C) For liquids not relevant for classification and labelling.	
Flash point:	67 °C Literature data.	(closed cup)
Auto-ignition temperature:	400 °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:	2,0 - 2,2 (100 g/l, 20 °C)	
Viscosity, kinematic:	(20 °C) not determined	
Viscosity, dynamic:	1,38 mPa.s (25 °C) Literature data.	
Thixotropy:	not thixotropic	
Solubility in water:	98 g/l (20 °C, pH 1,2 - 2)	
Solubility (qualitative) solvent(s):	organic solvents miscible	

Partitioning coefficient n-octanol/water (log Kow):	0,93 (22 °C; pH value: approx. 2,2) Literature data.	(other)
Vapour pressure:	0,97 hPa (20 °C) Literature data.	(calculated)
Relative density:	1,01 (20 °C)	
Density:	1,01 g/cm3 (20 °C) Literature data.	
	0,9831 g/cm3 (50 °C)	(OECD Guideline 109)
Relative vapour density (air):	2,96 (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

Corrodes metals in the presence of water.

Other safety characteristics

pKA:	4,66 (25 °C)	
Adsorption/water - soil:	KOC: 15; log KOC: 1,176	(other)
Surface tension:	65,9 mN/m (20 °C; 1,01 g/l)	(Directive 84/449/EEC, A.5, Ring method)
Molar mass:	86,09 g/mol	
Other Information:	Study scientifically not justified.	
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:	Corrodes metals in the presence of water.	
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. Avoid temperatures below the crystallization range.

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:

Of moderate toxicity after single ingestion. Of pronounced toxicity after short-term skin contact. Of moderate toxicity after short-term inhalation.

Experimental/calculated data:

LD50 rat (oral): 1.320 mg/kg (similar to OECD guideline 401)

LC50 rat (by inhalation): > 3,6 - < 4,7 mg/l 4 h (similar to OECD guideline 403)
The test result applies only to the substance transferred into respirable aerosol (particles < 20 µm).
An aerosol was tested.
LD50 rabbit (dermal): 500 - 1.000 mg/kg

Irritation

Assessment of irritating effects:

Highly corrosive! Damages skin and eyes.

Experimental/calculated data:

Skin corrosion/irritation

rabbit: Corrosive. (OECD Guideline 404)

Serious eye damage/irritation

rabbit: irreversible damage (Draize test)

Respiratory/Skin sensitization

Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:

Buehler test guinea pig: Non-sensitizing. (similar to OECD guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:

The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Carcinogenicity

Assessment of carcinogenicity:
The whole of the information assessable provides no indication of a carcinogenic effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Reproductive toxicity

Assessment of reproduction toxicity:
The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Developmental toxicity

Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies. The chemical structure does not suggest a specific alert for such an effect. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

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

not applicable

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. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to 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) 85 mg/l, Oncorhynchus mykiss (Fish test acute, Flow through.)
The statement of the toxic effect relates to the analytically determined concentration.

Aquatic invertebrates:
EC50 (48 h) > 130 mg/l, Daphnia magna (Daphnia test acute, Flow through.)
The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants:
EC50 (72 h) 45 mg/l (growth rate), Selenastrum capricornutum (OECD Guideline 201)
The statement of the toxic effect relates to the analytically determined concentration.

Microorganisms/Effect on activated sludge:

EC10 (17,0 h) 100 mg/l, Pseudomonas putida (DIN 38412 Part 8, aerobic)

Chronic toxicity to fish:
No observed effect concentration (35 d) 10 mg/l, Brachydanio rerio (OECD Guideline 210, Flow through.)

Chronic toxicity to aquatic invertebrates:
No observed effect concentration (21 d) >= 53 mg/l, Daphnia magna (OECD Guideline 211, Flow through.)
The statement of the toxic effect relates to the analytically determined concentration.

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

Soil living organisms:
EC10 (28 d) 1000 mg/L, soil dwelling microorganisms (OECD Guideline 217, 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:
86 % CO_2 formation relative to the theoretical value (28 d) (OECD 301D; 92/69/EWG, C.4-E) (aerobic, activated sludge, domestic)

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

Information on Stability in Water (Hydrolysis):
$t_{1/2}$ > 28 d (25 °C, pH value7), (OECD Guideline 111, pH 7)

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

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:
The product should not be allowed to reach either ground or open waters.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Must be sent to a suitable incineration plant, observing local regulations.

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

SECTION 14: Transport Information

Land transport

ADR

UN number or ID number:	UN2531
UN proper shipping name:	METHACRYLIC ACID, STABILIZED
Transport hazard class(es):	8
Packing group:	II
Environmental hazards:	no
Special precautions for user:	Tunnel code: E

RID

UN number or ID number:	UN2531
UN proper shipping name:	METHACRYLIC ACID, STABILIZED
Transport hazard class(es):	8
Packing group:	II
Environmental hazards:	no
Special precautions for user:	None known

Inland waterway transport

ADN

UN number or ID number:	UN2531
UN proper shipping name:	METHACRYLIC ACID, STABILIZED
Transport hazard class(es):	8
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 2531
UN proper shipping name:	METHACRYLIC ACID, STABILIZED
Transport hazard class(es):	8
Packing group:	II

Environmental hazards:	no Marine pollutant: NO
Special precautions for user:	EmS: F-A; S-B

Air transport

IATA/ICAO

UN number or ID number:	UN 2531
UN proper shipping name:	METHACRYLIC ACID, STABILIZED
Transport hazard class(es):	8
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

Maritime transport in bulk is not intended.

SECTION 15: Regulatory Information

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

Prohibitions, Restrictions and Authorizations

Chemical Prohibition Ordinance (DE): Annex 2
Restriction Type: Restricted substance

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

Hazardous Incident Ordinance (Germany):
Listed in above regulation: no
Classification applies for standard conditions of temperature and pressure.

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):
Listed in above regulation: no
Classification applies for standard conditions of temperature and pressure.

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

5.2.5 class I: Organic gases class I 0,15 %

acrylic acid

Water hazard class (§6 AwSV para.4 (Legal binding announcement of the substance in the Federal Gazette)): (1) Weakly water polluting. ID-No.: 1252

TRGS 514 'Storage of highly poisonous and poisonous substances in packagings and transportable containers'
Law on the Protection of Working Youth
The Maternity Protection Act needs to be considered.
Regulation on prohibitions and restrictions on the marketing of dangerous substances, preparations and goods in accordance with the chemical law (Germany)
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)

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. 4
Acute Tox. 4 (oral)
Acute Tox. 3 (dermal)
Acute Tox. 4 (Inhalation - mist)
Skin Corr. 1A
STOT SE 3 (irritating to respiratory system)
Aquatic Acute 3
Eye Dam. 1

This product is of industrial quality and unless otherwise specified or agreed intended exclusively for industrial use. Any other intended applications should be discussed with the manufacturer.

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

Acute Tox.	Acute toxicity
Skin Corr.	Skin corrosion
Eye Dam.	Serious eye damage
STOT SE	Specific target organ toxicity — single exposure
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Aquatic Acute	Hazardous to the aquatic environment - acute
Flam. Liq.	Flammable liquids
H311	Toxic in contact with skin.
H335	May cause respiratory irritation.
H314	Causes severe skin burns and eye damage.
H302 + H332	Harmful if swallowed or if inhaled.
H226	Flammable liquid and vapour.
H302 + H312 + H332	Harmful if swallowed, in contact with skin or if inhaled.
H411	Toxic to aquatic life with long lasting effects.
H400	Very toxic to aquatic life.

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.

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

Annex: Exposure Scenarios

Index

1. Formulation & (re)packing of substances and mixtures
SU9, SU12; ERC2; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC15

2. Use as an intermediate
SU8; ERC6a; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC15

3. Polymer production, (dry polymerisation)
SU9, SU12; ERC6c; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15

4. (use in industrial settings), Use in/as Rigid Foam, Use in Coatings, Use in Adhesives, Use in Sealants
SU9, SU12; ERC6c; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15, PROC19

5. Polymer production, (wet polymerisation)
SU9, SU12; ERC6c; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15

6. (use in professional settings), Use in/as Rigid Foam, Use in Coatings, Use in Adhesives, Use in Sealants
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7. (consumer use), Use in/as Rigid Foam, Use in Coatings, Use in Adhesives, Use in Sealants
ERC8f; PC1

8. (consumer use), Use in plastics
ERC10a; AC13

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1. Short title of exposure scenario

Formulation & (re)packing of substances and mixtures
SU9, SU12; ERC2; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC15

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC2: Formulation into mixture
Operational conditions	
Annual amount used in the EU	5.000.000 kg
Minimum emission days per year	300

Emission factor air	0 %
Emission factor water	0,7 %
Emission factor soil	0,01 %
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	No application of sludge to soil
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,103398
	Risk from environmental exposure is driven by freshwater sediment.
Maximum amount of safe use	16.119 kg/d
Risk from environmental exposure is driven by freshwater sediment.	

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	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker

	Worker - dermal, long-term - systemic
Exposure estimate	0,0034 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,000807
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,0359 mg/m³
Risk Characterization Ratio (RCR)	0,000913
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,032269
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	3,5871 mg/m³
Risk Characterization Ratio (RCR)	0,091274
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial

Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,032269
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	3,5871 mg/m³
Risk Characterization Ratio (RCR)	0,091274
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %

Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0686 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,016134
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
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: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes Use domain: industrial
Operational conditions	

Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %

Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker, Reduction factor for local exhaust ventilation (LEV) has been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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

	Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC15: Use a laboratory reagent. Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	

Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0343 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,008067
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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2. Short title of exposure scenario

Use as an intermediate
SU8; ERC6a; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC15

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC6a: Use of intermediate
Operational conditions	
Annual amount used in the EU	15.000.000 kg
Minimum emission days per year	300
Emission factor air	0 %
Emission factor water	0,3 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	No application of sludge to soil
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,13259
	Risk from environmental exposure is driven by freshwater sediment.

Maximum amount of safe use	37.710,4 kg/d
Risk from environmental exposure is driven by freshwater sediment.	

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	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0034 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,000807
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,0359 mg/m³
Risk Characterization Ratio (RCR)	0,000913
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid

Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,032269
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	3,5871 mg/m³
Risk Characterization Ratio (RCR)	0,091274
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,032269
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker

	Worker - inhalation, long-term - systemic
Exposure estimate	3,5871 mg/m³
Risk Characterization Ratio (RCR)	0,091274
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0686 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,016134
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
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: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %

Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic

Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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

Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker

	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC15: Use a laboratory reagent. Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0343 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,008067
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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3. Short title of exposure scenario

Polymer production, (dry polymerisation)
SU9, SU12; ERC6c; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15

Control of exposure and risk management measures

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 used in the EU	15.000.000 kg
Minimum emission days per year	300
Emission factor air	0 %
Emission factor water	0 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,002261
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	22.110,5 t/d
Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
Use descriptors covered	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	

Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0034 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,000807
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,0359 mg/m³
Risk Characterization Ratio (RCR)	0,000913
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,032269
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	3,5871 mg/m³
Risk Characterization Ratio (RCR)	0,091274
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario

Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,032269
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	3,5871 mg/m³
Risk Characterization Ratio (RCR)	0,091274
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor

	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0686 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,016134
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
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: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or	Effectiveness: 70 %

controlled ventilation (5 to 10 air changes per hour)	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC14: Tabletting, compression, extrusion, pelletisation, granulation Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	

Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,3429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,080672
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC15: Use a laboratory reagent. Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0343 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,008067
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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4. Short title of exposure scenario

(use in industrial settings), Use in/as Rigid Foam, Use in Coatings, Use in Adhesives, Use in Sealants SU9, SU12; ERC6c; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15, PROC19

Control of exposure and risk management measures

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 used in the EU	1.000.000 kg
Minimum emission days per year	20
Emission factor air	0,01 %
Emission factor water	0,7 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	No application of sludge to soil
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,307741
	Risk from environmental exposure is driven by freshwater sediment.
Maximum amount of safe use	16.247,4 kg/d
Risk from environmental exposure is driven by freshwater sediment.	

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	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0034 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,000807
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,0359 mg/m³
Risk Characterization Ratio (RCR)	0,000913
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker

	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,032269
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	3,5871 mg/m³
Risk Characterization Ratio (RCR)	0,091274
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,032269
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	3,5871 mg/m³
Risk Characterization Ratio (RCR)	0,091274
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Use domain: industrial

Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0686 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,016134
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
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: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	

Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid

	Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	

Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC10: Roller application or brushing Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid

	Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,8229 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,193613
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	6,4567 mg/m³
Risk Characterization Ratio (RCR)	0,164294
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC10: Roller application or brushing Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with ‘basic’ employee	Effectiveness: 90 %

training.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,6457 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,387227
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	6,4567 mg/m³
Risk Characterization Ratio (RCR)	0,164294
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,8229 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,193613
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	6,4567 mg/m³
Risk Characterization Ratio (RCR)	0,164294
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC14: Tabletting, compression, extrusion, pelletisation,

	granulation Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,3429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,080672
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC15: Use a laboratory reagent. Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %

Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0343 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,008067
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
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
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,4143 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,332773
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2,1522 mg/m³
Risk Characterization Ratio (RCR)	0,054765
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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5. Short title of exposure scenario

Polymer production, (wet polymerisation)
SU9, SU12; ERC6c; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15

Control of exposure and risk management measures

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 used in the EU	15.000.000 kg
Minimum emission days per year	200
Emission factor air	0,1 %
Emission factor water	1 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Treat soil emissions to provide a typical removal efficiency of (%)	0 %
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
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,153316
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	3.424,3 kg/d
Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
Use descriptors covered	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. Use domain: industrial
Operational conditions	

Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0034 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,000807
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,0359 mg/m³
Risk Characterization Ratio (RCR)	0,000913
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker

	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,032269
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	3,5871 mg/m³
Risk Characterization Ratio (RCR)	0,091274
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,032269
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	3,5871 mg/m³
Risk Characterization Ratio (RCR)	0,091274
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Use domain: industrial

Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0686 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,016134
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
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: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	

Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid

	Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	

Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC14: Tabletting, compression, extrusion, pelletisation, granulation Use domain: industrial
Operational conditions	

Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,3429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,080672
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC15: Use a laboratory reagent. Use domain: industrial
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0343 mg/kg bw/day

Risk Characterization Ratio (RCR)	0,008067
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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6. Short title of exposure scenario

(use in professional settings), Use in/as Rigid Foam, Use in Coatings, Use in Adhesives, Use in Sealants ERC8f; PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15, PROC19

Control of exposure and risk management measures

Contributing exposure scenario		
Use descriptors covered	ERC8f: Widespread use leading to inclusion into/onto article (outdoor)	
Operational conditions		
Annual amount used in the EU	1.000.000 kg	
Minimum emission days per year	365	
Emission factor air	15 %	
Emission factor water	1 %	
Emission factor soil	0,5 %	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2.000 m3/d
Exposure estimate and reference to its source		
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0,003837	
	Risk from environmental exposure is driven by soil.	
Maximum amount of safe use	1.428,1 kg/d	
Risk from environmental exposure is driven by soil.		

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes Use domain: professional
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: professional
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week

Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 80 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: professional
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic

Exposure estimate	25,1096 mg/m³
Risk Characterization Ratio (RCR)	0,638921
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	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
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	methacrylic acid Content: >= 0 % - <= 100 %

Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,161345
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC10: Roller application or brushing Use domain: professional
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	

Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,6457 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,387227
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	16,1419 mg/m³
Risk Characterization Ratio (RCR)	0,410735
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC10: Roller application or brushing Use domain: professional
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,6457 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,387227
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	16,1419 mg/m³
Risk Characterization Ratio (RCR)	0,410735
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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

Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,322689
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC14: Tabletting, compression, extrusion, pelletisation, granulation Use domain: professional
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air	Effectiveness: 70 %

changes per hour)	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,3429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,080672
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,7612 mg/m³
Risk Characterization Ratio (RCR)	0,273823
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC15: Use a laboratory reagent. Use domain: professional
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0343 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,008067
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	17,9354 mg/m³
Risk Characterization Ratio (RCR)	0,456372
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: professional
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with intensive management supervision control.	Effectiveness: 99 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker, ECETOC TRA modified version: Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	0,8486 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,199664
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	9,6851 mg/m³
Risk Characterization Ratio (RCR)	0,246441
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: professional
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.

Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with intensive management supervision control.	Effectiveness: 99 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker, ECETOC TRA modified version: Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	0,8486 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,199664
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	9,6851 mg/m³
Risk Characterization Ratio (RCR)	0,246441
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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7. Short title of exposure scenario

(consumer use), Use in/as Rigid Foam, Use in Coatings, Use in Adhesives, Use in Sealants
ERC8f; PC1

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC8f: Widespread use leading to inclusion into/onto article (outdoor)
Operational conditions	
Annual amount used in the EU	500.000 kg
Minimum emission days per year	365
Emission factor air	15 %
Emission factor water	1 %
Emission factor soil	0,5 %
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10

Dilution factor coast	100

Risk Management Measures	
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,00234
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	117,1 kg/d
Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
Use descriptors covered	PC1_1: Subcategory: Glues, hobby use
Operational conditions	
Concentration of the substance	methacrylic acid Content: >= 0 % - <= 5 %
Vapour pressure of the substance during use	97 Pa
Duration and Frequency of activity	Exposure duration: 4 h 365 uses per year
Room size	20 m3
Indoor/Outdoor	Indoor
Ventilation rate per hour	0,6
Exposed skin area	Fingertips (36 cm2)
Uptake fraction dermal	100 %
Uptake fraction inhalation	85 %
	Amount per use 9 g Relevant for inhalative exposure estimates
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA, Consumer
	Consumer - dermal, long-term - systemic
Exposure estimate	0,2977 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,055654
Assessment method	EASY TRA v5.2, ECETOC TRA, Consumer
	Consumer - inhalation, long-term - systemic
Exposure estimate	5,625 mg/m³
Risk Characterization Ratio (RCR)	0,480769
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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8. Short title of exposure scenario

(consumer use), Use in plastics
ERC10a; 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 used in the EU	2.000 kg
Minimum emission days per year	365
Emission factor air	0,05 %
Emission factor water	3,2 %
Emission factor soil	3,2 %
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2.000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v5.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,002271
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	4,8 kg/d
Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
Use descriptors covered	AC13: Plastic articles In accordance to Article 14 (2a) of the REACh Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the concentration of the substance in a preparation is less than the cut-off value referred to in Article 11, paragraph 3 of Regulation (EC) No 1272/2008.

Operational conditions	
Vapour pressure of the substance during use	97 Pa

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