We create chemistry

Safety data sheet

BASF safety data sheet. This is a translation of the country-specific safety data sheet into a language other than that required by law. This document does not replace the safety data sheet provided according to Regulation (EC) No 1907/2006.
Date / Revised: 23.09.2025 Version: 4.0
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Product: **ACRYLIC ACID CRUDE**
(ID no. 30041216/SDS_GEN_DE/EN)
Date of print 11.10.2025

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

1.1. Product identifier

ACRYLIC ACID CRUDE

Chemical name: 2-Propenoic acid
INDEX-Number: 607-061-00-8
CAS Number: 79-10-7

REACH registration number: 01-2119452449-31-0001, 01-2119452449-31-0002, 01-2119452449-31-0103, 01-2119452449-31-0104, 01-2119452449-31-0119

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

Relevant identified uses: Monomer.
Uses advised against: All consumer uses are strongly advised against., Use of substance in coatings (professional), Use of substance in inks and toners (professional)
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 (Inhalation - vapour)	H332 Harmful if inhaled.
Acute Tox. 4 (oral)	H302 Harmful if swallowed.
Aquatic Chronic 2	H411 Toxic to aquatic life with long lasting effects.
Aquatic Acute 1	H400 Very toxic to aquatic life.
Acute Tox. 4 (dermal)	H312 Harmful in contact with skin.
Flam. Liq. 3	H226 Flammable liquid and vapour.
Eye Dam. 1	H318 Causes serious eye damage.
Skin Corr. 1A	H314 Causes severe skin burns and eye damage.

M-factor acute: 1

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

STOT SE 3, irr. to respiratory syst.: 1 - < 5 %

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

M-factor acute: 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:

H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
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.

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):

P405	Store locked up.

Precautionary Statements (Disposal):

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

Labeling of special preparations (GHS):

EUH208: May produce an allergic reaction. Contains: maleic acid, maleic anhydride

2.3. Other hazards

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

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

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

acrylic acid

Content (W/W): >= 99 %	Acute Tox. 4 (Inhalation - vapour)
CAS Number: 79-10-7	Acute Tox. 4 (oral)
EC-Number: 201-177-9	Aquatic Chronic 2
INDEX-Number: 607-061-00-8	Aquatic Acute 1
	Acute Tox. 4 (dermal)
Substance with EU occupational exposure limit	Flam. Liq. 3
	Eye Dam. 1
	Skin Corr. 1A

M-factor acute: 1
H226, H314, H302 + H312 + H332, H411, H400

Specific concentration limit:

STOT SE 3, irr. to respiratory syst.: 1 - < 5 %

Regulatory relevant ingredients

acrylic acid

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

acetic acid ... %

Content (W/W): < 0,2 %	Flam. Liq. 3
CAS Number: 64-19-7	Skin Corr. 1A
EC-Number: 200-580-7	Eye Dam. 1
INDEX-Number: 607-002-00-6	H226, H314
	Specific concentration limit:
Substance with EU occupational exposure limit	Eye Irrit. 2: 10 - < 25 %
	Skin Irrit. 2: 10 - < 25 %
	Skin Corr. 1B: 25 - < 90 %
	Skin Corr. 1A: >= 90 %

maleic acid

Content (W/W): < 0,03 %	Acute Tox. 4 (oral)
CAS Number: 110-16-7	Acute Tox. 4 (dermal)
EC-Number: 203-742-5	Skin Irrit. 2
INDEX-Number: 607-095-00-3	Eye Irrit. 2
	Skin Sens. 1
	STOT SE 3 (irr. to respiratory syst.)
	H319, H315, H317, H335, H302 + H312
	Specific concentration limit:
	Skin Sens. 1: >= 0,1 %

maleic anhydride

Content (W/W): < 0,001 % CAS Number: 108-31-6 EC-Number: 203-571-6 INDEX-Number: 607-096-00-9	Acute Tox. 4 (oral) Skin Corr. 1B Eye Dam. 1 Skin Sens. 1A Resp. Sens. 1 STOT RE (Respiratory system) 1 (by inhalation) H314, H302, H334, H317, H372 EUH071 Specific concentration limit: Skin Sens. 1A: >= 0,001 %

acrolein

Content (W/W): < 0,0015 % CAS Number: 107-02-8 EC-Number: 203-453-4 INDEX-Number: 605-008-00-3 Substance with EU occupational exposure limit	Flam. Liq. 2 Acute Tox. 1 (Inhalation - vapour) Acute Tox. 2 (oral) Acute Tox. 3 (dermal) Skin Corr. 1B Eye Dam. 1 Aquatic Acute 1 Aquatic Chronic 1 M-factor acute: 100 M-factor chronic: 1 H225, H311, H314, H300 + H330, H400, H410 EUH071 Specific concentration limit: Skin Corr./Irrit. 1B: >= 0,1 %

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

3.2. Mixtures

Not applicable

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

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.

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

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

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

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:
dry powder, water spray, carbon dioxide, foam

Unsuitable extinguishing media for safety reasons:
water jet

Additional information:
Use extinguishing measures to suit surroundings.

5.2. Special hazards arising from the substance or mixture

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

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

5.3. Advice for fire-fighters

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

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

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

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

SECTION 6: Accidental Release Measures

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

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

Pack in tightly closed containers for disposal.

6.1. Personal precautions, protective equipment and emergency procedures

Handle in accordance with good industrial hygiene and safety practice.

Avoid all sources of ignition: heat, sparks, open flame. Use antistatic tools. Avoid contact with the skin, eyes and clothing.

Take off immediately all contaminated clothing.

6.2. Environmental precautions

Do not discharge into waterways or sewer systems without proper authorization. Contain contaminated water/firefighting water.

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. Do not open warm or swollen product containers. Remove persons to safety and alert fire brigade.

The temperatures which must be avoided are to be considered. Protect against heat. Protect from direct sunlight. Protect contents from the effects of light.

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. Obtain Information from supplier/ manufacturer before dissolving totally or partially crystallized product. The ambient temperature of the container may not exceed the stated temperature limit when melting the product or keeping it at moderate temperature.

Avoid all sources of ignition: heat, sparks, open flame. 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.
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): (3) Flammable liquids

Storage stability:
Storage temperature: 15 - 35 °C
Storage duration: 12 Months
The stated storage temperature should be noted.
Avoid prolonged storage.
This product should be processed as soon as possible.
During storage, an unavoidable dimerization takes place, which reaction rate can be reduced by a storage temperature as low as possible.
It is recommended to keep a safe distance of +2 degrees above the crystallization range.
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.

64-19-7: acetic acid ... %
TWA value 25 mg/m3 ; 10 ppm (OEL (EU))
indicative

OEL 25 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 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 50 mg/m3 ; 20 ppm (EU SCOEL)
Ceiling limit value/factor: 15 min
TWA value 25 mg/m3 ; 10 ppm (EU SCOEL)
Ceiling limit value/factor: 8HR

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.

107-02-8: acrolein

Skin Designation (TRGS 900 (DE))
The substance can be absorbed through the skin.
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 0,05 mg/m3 ; 0,02 ppm (TRGS 900 (DE))
Ceiling limit value/factor: 2.5
TWA value 0,05 mg/m3 ; 0,02 ppm (EU SCOEL)
Ceiling limit value/factor: 8HR
STEL value 0,12 mg/m3 ; 0,05 ppm (EU SCOEL)
Ceiling limit value/factor: 15 min

108-31-6: maleic anhydride

Short Term Exposure Factor: (TRGS 900 (DE)), Vapor and aerosol
Ceiling limit value/factor: 1
Substance listed with exceeding factor and category of short time value.

OEL 0,081 mg/m3 ; 0,02 ppm (TRGS 900 (DE)), Vapor and aerosol
Ceiling limit value/factor: 2.5
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

freshwater: 0,003 mg/l

marine water: 0,0003 mg/l

intermittent release: 0,0013 mg/l

STP: 0,9 mg/l

sediment (freshwater): 0,0236 mg/kg

sediment (marine water): 0,00236 mg/kg

soil: 1 mg/kg

oral (secondary poisoning): 0,03 mg/kg

DNEL

worker:
Long- and short-term exposure - local effects, Inhalation: 30 mg/m3

worker:
Long- and short-term exposure - systemic effects, Inhalation: 30 mg/m3

consumer:
Long- and short-term exposure - systemic effects, Inhalation: 3,6 mg/m3

consumer:
Long- and short-term exposure - local effects, Inhalation: 3,6 mg/m3

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
Manufacturer's directions for use should be observed because of great diversity of types.
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Eye protection:
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 contact with the skin, eyes and clothing. Avoid inhalation of vapour. 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:	light yellow to dark brown	
Odour:	vinegar-like	
Odour threshold:	not determined	
Melting point:	13 °C Literature data.	
Boiling point:	141 °C (1.013 hPa) Literature data.	
Flammability:	Flammable liquid and vapour.	(derived from flash point)

Lower explosion limit:		(air)
	(46 °C) The lower explosion point of the substance/mixture has been determined. The explosion point describes the temperature of a flammable liquid at which the concentration of the saturated vapour mixed with air equals the lower explosion limit.	
Upper explosion limit:		
	For liquids not relevant for classification and labelling.	
Flash point:	48,5 °C	(DIN 51755, closed cup)
Auto-ignition temperature:	438 °C	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated. It is not a self-decompositionable substance.	
SADT:	Not a substance/mixture liable to self-decomposition according to GHS.	
pH value:	2 (approx. 70 g/l, 20 °C) Literature data.	
Viscosity, kinematic:		
	(20 °C) not determined	
Viscosity, dynamic:	1,149 mPa.s (25 °C) Literature data.	
Thixotropy:	not thixotropic	
Solubility in water:	miscible, Literature data. (25 °C)	
Solubility (qualitative) solvent(s):	organic solvents miscible	
Partitioning coefficient n-octanol/water (log Kow):	0,46 (25 °C)	(OECD Guideline 107)
Vapour pressure:	5,29 hPa (25 °C) Literature data.	
Relative density:	1,05 (20 °C) Literature data.	
Density:	1,05 g/cm3 (20 °C) Literature data.	
	1,0161 g/cm3 (50 °C)	(OECD Guideline 109)
Relative vapour density (air):	2,48 (20 °C) Heavier than air.	(calculated)

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:	not shock-sensitive 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.

Flammable liquids

Sustained combustibility:	not determined

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 or moisture.

Other safety characteristics

pKA:	4,26 (25 °C)	
Adsorption/water - soil:	KOC: approx. 42,8; log KOC: approx. 1,6	(OECD Guideline 106)
Surface tension:	69,6 mN/m (20 °C; 1 g/l)	(Directive 92/69/EEC, A.5, OECD harmonized ring method)
Molar mass:	72,06 g/mol	
SAPT-Temperature:		
	According to SP386 it is ensured that the level of chemical stabilization is sufficient to prevent dangerous polymerization during total duration of carriage. - This information is valid for the recently stabilized product.	

Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.

SECTION 10: Stability and Reactivity

10.1. Reactivity

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

Corrosion to metals:	Corrodes metals in the presence of water or moisture.	
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 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 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 short-term inhalation. Of moderate toxicity after single ingestion. Virtually nontoxic after a single skin contact.

Irritation

Assessment of irritating effects:

Corrosive! Damages skin and eyes.

Experimental/calculated data:

Skin corrosion/irritation

rabbit: Corrosive. (OECD Guideline 404)

Serious eye damage/irritation

rabbit: irreversible damage (BASF-Test)

Respiratory/Skin sensitization

Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:

Freund's complete adjuvant test (FCA) guinea pig: Non-sensitizing.

Germ cell mutagenicity

Assessment of mutagenicity:

In the majority of tests performed (bacteria/microorganisms/cell cultures) a mutagenic effect was not found. A mutagenic effect was also not observed in in-vivo assays.

Carcinogenicity

Assessment of carcinogenicity:
Results from a number of long-term carcinogenity studies are available. Taking into account all of the information, there is no indication that the substance itself is carcinogenic. IARC Group 3 (not classifiable as to human carcinogenicity).

Reproductive toxicity

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

Developmental toxicity

Assessment of teratogenicity:

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

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

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:
Very toxic (acute effect) 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. Toxic to aquatic organisms based on long-term (chronic) toxicity study data.

Toxicity to fish:
LC50 (96 h) 27 mg/l, Salmo gairdneri, syn. O. mykiss (EPA 72-1, Flow through.)
The statement of the toxic effect relates to the analytically determined concentration.

Aquatic invertebrates:
EC50 (48 h) 95 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) 0,13 mg/l (growth rate), Scenedesmus subspicatus (Guideline 92/69/EEC, C.3, static)
The details of the toxic effect relate to the nominal concentration.

EC10 (72 h) 0,03 mg/l (growth rate), Scenedesmus subspicatus (Guideline 92/69/EEC, C.3, static)
The details of the toxic effect relate to the nominal concentration.

Microorganisms/Effect on activated sludge:
EC20 (0,5 h) 900 mg/l, activated sludge, domestic (DIN EN ISO 8192, aquatic)
Nominal concentration.

Chronic toxicity to fish:
No observed effect concentration (45 d) >/= 10.1 mg/l, Oryzias latipes (OECD Guideline 210, Flow through.)

Chronic toxicity to aquatic invertebrates:
No observed effect concentration (21 d) 3,8 mg/l, Daphnia magna (OPP 72-4 (EPA-Guideline), Flow through.)
The statement of the toxic effect relates to the analytically determined concentration.

Assessment of terrestrial toxicity:
Toxic effects have been observed in studies with soil living organisms.

Soil living organisms:
No observed effect concentration (28 d) 100 ppm, other soil dwelling microorganisms (OECD Guideline 217, artificial soil)

LC50 (14 d) > 1.000 mg/kg, Eisenia foetida (Directive 88/302/EEC, part C, p. 95, 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:
90 - 100 % DOC reduction (9 d) (OECD 301 A (new version)) (aerobic, activated sludge, domestic, non-adapted)

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

Information on Stability in Water (Hydrolysis):
$t_{1/2}$ > 365 d (25 °C), (OECD Guideline 111, pH 7)

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
Does not accumulate in organisms.

Bioaccumulation potential:

Bioconcentration factor(BCF): 3,16, other (calculated)

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:
Very toxic (acute effect) to aquatic organisms.

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:	UN2218
UN proper shipping name:	ACRYLIC ACID, STABILIZED
Transport hazard class(es):	8, 3, EHSM
Packing group:	II
Environmental hazards:	yes
Special precautions for user:	Tunnel code: D/E

RID

UN number or ID number:	UN2218
UN proper shipping name:	ACRYLIC ACID, STABILIZED
Transport hazard class(es):	8, 3, EHSM
Packing group:	II

Environmental hazards:	yes
Special precautions for user:	None known

Inland waterway transport

ADN

UN number or ID number:	UN2218
UN proper shipping name:	ACRYLIC ACID, STABILIZED
Transport hazard class(es):	8, 3, EHSM
Packing group:	II
Environmental hazards:	yes
Special precautions for user:	None known

Transport in inland waterway vessel

UN number or ID number:	UN2218
UN proper shipping name:	ACRYLIC ACID, STABILIZED
Transport hazard class(es):	8, 3, INST, N1
Packing group:	II
Environmental hazards:	yes
Type of inland waterway vessel:	C
Cargo tank design:	2
Cargo tank type:	2

Sea transport

IMDG

UN number or ID number:	UN 2218
UN proper shipping name:	ACRYLIC ACID, STABILIZED
Transport hazard class(es):	8, 3, EHSM
Packing group:	II
Environmental hazards:	yes Marine pollutant: YES
Special precautions for user:	EmS: F-E; S-C

Air transport

IATA/ICAO

UN number or ID number:	UN 2218
UN proper shipping name:	ACRYLIC ACID, STABILIZED
Transport hazard class(es):	8, 3
Packing group:	II
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	None known

14.1. UN number or ID number
See corresponding entries for “UN number or ID number” for the respective regulations in the tables above.

14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

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

14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards
See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Maritime transport in bulk according to IMO instruments

Regulation:	IBC-Code
Product name:	Acrylic acid
Pollution category:	Y
Ship Type:	2

SECTION 15: Regulatory Information

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

Prohibitions, Restrictions and Authorizations

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

Hazardous Incident Ordinance (Germany):
List entry in regulation: 1.2.5.3
Classification applies for standard conditions of temperature and pressure.
List entry in regulation: 1.3.1
Classification applies for standard conditions of temperature and pressure.

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):
List entry in regulation: E1
Classification applies for standard conditions of temperature and pressure.
List entry in regulation: P5c
Classification applies for standard conditions of temperature and pressure.

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

5.2.5 class I: Organic gases class I	100,00 %
acrylic acid acrolein maleic anhydride	
5.2.5 class II: Organic gases class II	0,20 %
acetic acid ... %	

Water hazard class (§6 AwSV para.4 (Legal binding announcement of the substance in the Federal Gazette)): (2) significantly water polluting. ID-No.: 11

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

15.2. Chemical Safety Assessment

Chemical Safety Assessment performed

SECTION 16: Other Information

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

Acute Tox. 4 (Inhalation - vapour)
Flam. Liq. 3
Skin Corr. 1A
Aquatic Acute 1
Acute Tox. 4 (oral)
Aquatic Chronic 2
Eye Dam. 1

M-factor acute: 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. Safe Handling and Storage aspects are covered in a brochure which is available on request.

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

Acute Tox.	Acute toxicity
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Aquatic Acute	Hazardous to the aquatic environment - acute
Flam. Liq.	Flammable liquids
Eye Dam.	Serious eye damage
Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity — single exposure
Skin Irrit.	Skin irritation
Eye Irrit.	Eye irritation
Skin Sens.	Skin sensitization
Resp. Sens.	Respiratory sensitization
STOT RE	Specific target organ toxicity — repeated exposure
Skin Corr./Irrit.	Skin corrosion/irritation
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
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.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H302 + H312	Harmful if swallowed or in contact with skin.
H302	Harmful if swallowed.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H372	Causes damage to organs (Respiratory system) through prolonged or repeated exposure (inhalation).
H225	Highly flammable liquid and vapour.
H311	Toxic in contact with skin.
H300 + H330	Fatal if swallowed or inhaled.
H410	Very toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Abbreviations

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

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

Annex: Exposure Scenarios

Index

1. Use as an intermediate, (use in industrial settings)
ERC6a; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9

2. Polymer production, (use in industrial settings)
ERC6c; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9

3. Polymer production, Downstream User, (use in industrial settings)
ERC6c; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9

4. Formulation & (re)packing of substances and mixtures
ERC2; PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9

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

6. Use as laboratory reagent/agent, (use in industrial settings)
ERC1; PROC15

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1. Short title of exposure scenario

Use as an intermediate, (use in industrial settings)
ERC6a; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9

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	300.000.000 kg
Minimum emission days per year	300
Emission factor air	0,001 %
Emission factor water	0,01 %
Emission factor soil	0,1 %
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 v4.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,499991
	Risk from environmental exposure is driven by marine water.
Maximum amount of safe use	2.000 t/d
Risk from environmental exposure is driven by marine water.	

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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,002 mg/cm²/day
Risk Characterization Ratio (RCR)	0,002
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	0,03 mg/m³
Risk Characterization Ratio (RCR)	0,001001
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	1,5013 mg/m³
Risk Characterization Ratio (RCR)	0,050044
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	1,5013 mg/m³
Risk Characterization Ratio (RCR)	0,050044
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,024 mg/cm²/day
Risk Characterization Ratio (RCR)	0,024
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,0026 mg/m³
Risk Characterization Ratio (RCR)	0,100087
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,0026 mg/m³
Risk Characterization Ratio (RCR)	0,100087
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	60 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 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,008 mg/cm²/day
Risk Characterization Ratio (RCR)	0,008
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local

Exposure estimate	21,0183 mg/m³
Risk Characterization Ratio (RCR)	0,70061
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	6,0052 mg/m³
Risk Characterization Ratio (RCR)	0,200174
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	6,0052 mg/m³
Risk Characterization Ratio (RCR)	0,200174
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	60 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 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local

Exposure estimate	18,0157 mg/m³
Risk Characterization Ratio (RCR)	0,600522
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,4 mg/cm²/day
Risk Characterization Ratio (RCR)	0,4
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,4 mg/cm²/day
Risk Characterization Ratio (RCR)	0,4
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 25 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	15 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 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,024 mg/cm²/day
Risk Characterization Ratio (RCR)	0,024
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	27,0235 mg/m³
Risk Characterization Ratio (RCR)	0,900784
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 95 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,7533 mg/m³
Risk Characterization Ratio (RCR)	0,125109
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	7,5065 mg/m³
Risk Characterization Ratio (RCR)	0,250218
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	15 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 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,02 mg/cm²/day
Risk Characterization Ratio (RCR)	0,02
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	22,5196 mg/m³
Risk Characterization Ratio (RCR)	0,750653
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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2. Short title of exposure scenario

Polymer production, (use in industrial settings)
ERC6c; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9

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	200.000.000 kg
Minimum emission days per year	300

Emission factor air	0,001 %
Emission factor water	0,01 %
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 v4.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,499991
	Risk from environmental exposure is driven by marine water.
Maximum amount of safe use	1.333,4 t/d
Risk from environmental exposure is driven by marine water.	

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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,01 mg/cm²/day
Risk Characterization Ratio (RCR)	0,01

Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	0,03 mg/m³
Risk Characterization Ratio (RCR)	0,001001
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	1,5013 mg/m³
Risk Characterization Ratio (RCR)	0,050044
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	acrylic acid Content: >= 0 % - <= 100 %

Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	1,5013 mg/m³
Risk Characterization Ratio (RCR)	0,050044
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,024 mg/cm²/day
Risk Characterization Ratio (RCR)	0,024

Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,0026 mg/m³
Risk Characterization Ratio (RCR)	0,100087
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,0026 mg/m³
Risk Characterization Ratio (RCR)	0,100087
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	60 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 %
Use suitable chemically resistant	Effectiveness: 80 %

gloves.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,008 mg/cm²/day
Risk Characterization Ratio (RCR)	0,008
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	21,0183 mg/m³
Risk Characterization Ratio (RCR)	0,70061
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	6,0052 mg/m³
Risk Characterization Ratio (RCR)	0,200174
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	6,0052 mg/m³
Risk Characterization Ratio (RCR)	0,200174
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	60 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 %
Use suitable chemically resistant	Effectiveness: 80 %

gloves.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	18,0157 mg/m³
Risk Characterization Ratio (RCR)	0,600522
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,4 mg/cm²/day
Risk Characterization Ratio (RCR)	0,4
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,4 mg/cm²/day
Risk Characterization Ratio (RCR)	0,4
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local

Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %

Physical state	liquid
Vapour pressure of the substance during use	529 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: 95 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,7533 mg/m³
Risk Characterization Ratio (RCR)	0,125109
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2

Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	7,5065 mg/m³
Risk Characterization Ratio (RCR)	0,250218
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	15 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 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,02 mg/cm²/day
Risk Characterization Ratio (RCR)	0,02
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	22,5196 mg/m³
Risk Characterization Ratio (RCR)	0,750653
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	acrylic acid Content: >= 0 % - <= 100 %

Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2

Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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3. Short title of exposure scenario

Polymer production, Downstream User, (use in industrial settings)
ERC6c; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9

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	200.000.000 kg	
Minimum emission days per year	300	
Emission factor air	0,001 %	
Emission factor water	0,01 %	
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 v4.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0,499991	
	Risk from environmental exposure is driven by marine water.	
Maximum amount of safe use	1.333,4 t/d	

Risk from environmental exposure is driven by marine water.

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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,01 mg/cm²/day
Risk Characterization Ratio (RCR)	0,01
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	0,03 mg/m³
Risk Characterization Ratio (RCR)	0,001001
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	1,5013 mg/m³
Risk Characterization Ratio (RCR)	0,050044
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	1,5013 mg/m³
Risk Characterization Ratio (RCR)	0,050044
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,024 mg/cm²/day
Risk Characterization Ratio (RCR)	0,024
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,0026 mg/m³
Risk Characterization Ratio (RCR)	0,100087
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,0026 mg/m³
Risk Characterization Ratio (RCR)	0,100087
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	60 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 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,008 mg/cm²/day
Risk Characterization Ratio (RCR)	0,008
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	21,0183 mg/m³
Risk Characterization Ratio (RCR)	0,70061
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	6,0052 mg/m³
Risk Characterization Ratio (RCR)	0,200174
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	6,0052 mg/m³
Risk Characterization Ratio (RCR)	0,200174

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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	60 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 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	18,0157 mg/m³
Risk Characterization Ratio (RCR)	0,600522
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,4 mg/cm²/day
Risk Characterization Ratio (RCR)	0,4
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,4 mg/cm²/day
Risk Characterization Ratio (RCR)	0,4
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 95 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,7533 mg/m³
Risk Characterization Ratio (RCR)	0,125109
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	7,5065 mg/m³
Risk Characterization Ratio (RCR)	0,250218
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	15 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)	
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,02 mg/cm²/day
Risk Characterization Ratio (RCR)	0,02
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	22,5196 mg/m³
Risk Characterization Ratio (RCR)	0,750653
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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4. Short title of exposure scenario

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

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	200.000.000 kg
Minimum emission days per year	300
Emission factor air	0,001 %

Emission factor water	0,3 %
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 v4.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,499991
	Risk from environmental exposure is driven by marine water.
Maximum amount of safe use	133.335,8 kg/d
Risk from environmental exposure is driven by marine water.	

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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local

Exposure estimate	0,001 mg/cm²/day
Risk Characterization Ratio (RCR)	0,001
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	0,03 mg/m³
Risk Characterization Ratio (RCR)	0,001001
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,02 mg/cm²/day
Risk Characterization Ratio (RCR)	0,02
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,02 mg/cm²/day
Risk Characterization Ratio (RCR)	0,02
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	21,0183 mg/m³
Risk Characterization Ratio (RCR)	0,70061
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Wear chemically resistant gloves in combination with 'basic' employee	Effectiveness: 90 %

training.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Wear chemically resistant gloves in combination with ‘basic’ employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,1 mg/cm²/day
Risk Characterization Ratio (RCR)	0,1
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Wear chemically resistant gloves in combination with 'basic' employee	Effectiveness: 90 %

training.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,1 mg/cm²/day
Risk Characterization Ratio (RCR)	0,1
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,1 mg/cm²/day
Risk Characterization Ratio (RCR)	0,1
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	22,5196 mg/m³
Risk Characterization Ratio (RCR)	0,750653
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,1 mg/cm²/day
Risk Characterization Ratio (RCR)	0,1
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,1 mg/cm²/day
Risk Characterization Ratio (RCR)	0,1
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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5. Short title of exposure scenario

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

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	100.000.000 kg
Minimum emission days per year	300
Emission factor air	0,001 %
Emission factor water	0,01 %
Emission factor soil	0,1 %
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 v4.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,499991
	Risk from environmental exposure is driven by marine water.
Maximum amount of safe use	666.678,8 kg/d
Risk from environmental exposure is driven by marine water.	

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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,01 mg/cm²/day
Risk Characterization Ratio (RCR)	0,01
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	0,03 mg/m³
Risk Characterization Ratio (RCR)	0,001001
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	acrylic acid Content: >= 0 % - <= 100 %

Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	1,5013 mg/m³
Risk Characterization Ratio (RCR)	0,050044
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04

Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	1,5013 mg/m³
Risk Characterization Ratio (RCR)	0,050044
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,024 mg/cm²/day
Risk Characterization Ratio (RCR)	0,024
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %

Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,0026 mg/m³
Risk Characterization Ratio (RCR)	0,100087
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local

Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,0026 mg/m³
Risk Characterization Ratio (RCR)	0,100087
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	60 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 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,008 mg/cm²/day
Risk Characterization Ratio (RCR)	0,008
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	21,0183 mg/m³
Risk Characterization Ratio (RCR)	0,70061
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	6,0052 mg/m³
Risk Characterization Ratio (RCR)	0,200174
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	

Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	6,0052 mg/m³
Risk Characterization Ratio (RCR)	0,200174
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	60 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 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,04 mg/cm²/day
Risk Characterization Ratio (RCR)	0,04
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	18,0157 mg/m³
Risk Characterization Ratio (RCR)	0,600522
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,4 mg/cm²/day
Risk Characterization Ratio (RCR)	0,4
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local

Exposure estimate	0,4 mg/cm²/day
Risk Characterization Ratio (RCR)	0,4
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %

Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 95 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2

Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,7533 mg/m³
Risk Characterization Ratio (RCR)	0,125109
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	7,5065 mg/m³
Risk Characterization Ratio (RCR)	0,250218
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid

Vapour pressure of the substance during use	529 Pa
Duration and Frequency of activity	15 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 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,02 mg/cm²/day
Risk Characterization Ratio (RCR)	0,02
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	22,5196 mg/m³
Risk Characterization Ratio (RCR)	0,750653
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2

Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,2 mg/cm²/day
Risk Characterization Ratio (RCR)	0,2
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	15,0131 mg/m³
Risk Characterization Ratio (RCR)	0,500435
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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6. Short title of exposure scenario

Use as laboratory reagent/agent, (use in industrial settings)
ERC1; PROC15

Control of exposure and risk management measures

Contributing exposure scenario

Use descriptors covered	ERC1: Manufacture of the substance
Operational conditions	
Annual amount used in the EU	10.000 kg
Minimum emission days per year	20
Emission factor air	0,001 %
Emission factor water	0,05 %
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 v4.2, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0,499991
	Risk from environmental exposure is driven by marine water.
Maximum amount of safe use	230 kg/d
Risk from environmental exposure is driven by marine water.	

Contributing exposure scenario	
Use descriptors covered	PROC15: Use a laboratory reagent. Use domain: industrial
Operational conditions	
Concentration of the substance	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,02 mg/cm²/day
Risk Characterization Ratio (RCR)	0,02
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,0026 mg/m³
Risk Characterization Ratio (RCR)	0,100087
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 suitable respiratory protection.	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,02 mg/cm²/day
Risk Characterization Ratio (RCR)	0,02
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	3,0026 mg/m³
Risk Characterization Ratio (RCR)	0,100087
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	acrylic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	529 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 ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - local
Exposure estimate	0,012 mg/cm²/day
Risk Characterization Ratio (RCR)	0,012
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - local
Exposure estimate	21,0183 mg/m³
Risk Characterization Ratio (RCR)	0,70061
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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