We create chemistry

# Safety data sheet



## 1. Substance/preparation and manufacturer/supplier identification

### Product name:
ACRYLIC ACID GLACIAL

Use: 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

Manufacturer/supplier:
BASF Australia Limited (ABN 62 008 437 867)
Level 12, 28 Freshwater Place Southbank
Victoria 3006, AUSTRALIA
Telephone: +61 3 8855-6600
Telefax number: +61 3 8855-6511

Emergency information:
BASF Emergency Advice Number: 1800 803 440 (24h) [within Australia]
BASF Emergency Advice Number: + 61 3 8855 6666 [outside Australia]

## 2. Hazard identification

Classification of the substance and mixture:
Acute toxicity: Cat.4 (Inhalation - vapour)
Acute toxicity: Cat.4 (oral)
Flammable liquids: Cat.3
Serious eye damage/eye irritation: Cat.1
Skin corrosion/irritation: Cat.1A
Hazardous to the aquatic environment - chronic: Cat.2
Hazardous to the aquatic environment - acute: Cat.1

M-factor acute: 1

Label elements and precautionary statement:

Pictogram:

Signal Word:
Danger

Hazard Statement:

| | |
|---|---|
| H226 | Flammable liquid and vapour. |
| H314 | Causes severe skin burns and eye damage. |
| H302 + H332 | Harmful if swallowed or if inhaled |
| H411 | Toxic to aquatic life with long lasting effects. |
| H400 | Very toxic to aquatic life. |

Precautionary Statements (Prevention):

| | |
|---|---|
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves, protective clothing and eye protection or face protection. |
| P273 | Avoid release to the environment. |
| P260 | Do not breathe dust/gas/mist/vapours. |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P243 | Take action to prevent static discharges. |
| P241 | Use explosion-proof electrical, ventilating and lighting equipment. |
| P270 | Do not eat, drink or smoke when using this product. |
| P264 | Wash contaminated body parts thoroughly after handling. |
| P233 | Keep container tightly closed. |
| P242 | Use only non-sparking tools. |
| P240 | Ground and bond container and receiving equipment. |

Precautionary Statements (Response):

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|---|---|
| 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. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Remove or Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| P301 + P330 + P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting. |
| P363 | Wash contaminated clothing before reuse. |
| P391 | Collect spillage. |
| P370 + P378 | In case of fire: Use water spray, dry powder, foam or carbon dioxide for extinction. |

Precautionary Statements (Storage):

| | |
|---|---|
| P405 | Store locked up. |
| P403 + P235 | Store in a well-ventilated place. Keep cool. |

Precautionary Statements (Disposal):

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

Other hazards which do not result in classification:
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.

## 3. Composition/information on ingredients

Chemical nature

Substance nature: Substance

acrylic acid (Content (W/W): >= 99.5 %)
CAS Number: 79-10-7

**Hazardous ingredients**

acrylic acid

| | |
|---|---|
| Content (W/W): 99.5 % - 100 % | Acute Tox.: Cat. 4 (Inhalation - vapour) |
| CAS Number: 79-10-7 | Acute Tox.: Cat. 4 (oral) |
| | Flam. Liq.: Cat. 3 |
| | Eye Dam./Irrit.: Cat. 1 |
| | Skin Corr./Irrit.: Cat. 1A |
| | Aquatic Chronic: Cat. 2 |
| | Aquatic Acute: Cat. 1 |
| | M-factor acute: 1 |

## 4. First-Aid Measures

General advice:
First aid personnel should pay attention to their own safety. Remove affected person from danger area. Immediately remove contaminated clothing. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Avoid contact with the skin, eyes and 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 soap and water, seek medical attention.

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:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention. Do not induce vomiting.

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

## 5. Fire-Fighting Measures

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.

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

Burning produces harmful and toxic fumes. Do not breathe gas/vapour.

Shut off or stop released substance/product under safe conditions. Do not release chemically contaminated water into drains, soil or surface water. Sufficient measures must be taken to retain the water used for extinguishing. Dispose of contaminated water and soil according to local regulations.

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.

Further information:
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.

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

## 6. Accidental Release Measures

Personal precautions:
Avoid all sources of ignition: heat, sparks, open flame. Avoid contact with the skin, eyes and clothing. Ensure adequate ventilation. Breathing protection required.

Take off immediately all contaminated clothing. Keep people away and stay on the upwind side. Beware of pits and confined spaces.

Use antistatic tools. Handle in accordance with good industrial hygiene and safety practice.

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

Methods for cleaning up or taking 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.

Additional information: 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.

## 7. Handling and Storage

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.

Ensure adequate inhibitor and dissolved oxygen level. Avoid all sources of ignition: heat, sparks, open flame.

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. Containers should be grounded against electrostatic charge. 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. Avoid influence of heat.

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

Storage

Further information on storage conditions: Prior to storage ensure that the transfer equipment used and the intended storage containers do not contain other substances/products. Before transfer to stock the identity of the product must be proved to be without doubt. The entrance to storage rooms is to be granted only to appropriately trained personnel.
The stabilizer is only effective in the presence of oxygen. Maintain contact with atmosphere containing 5 - 21% oxygen. Never use tanks with inert-gas installation for storage.
Risk of polymerization. Protect against heat. Protect from direct sunlight. Protect contents from the effects of light. 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 stability:
Storage temperature: 15 - 25 °C
Storage duration: 12 Months
The stated storage temperature should be noted.
Avoid prolonged storage.

This product should be processed as soon as possible.
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.
The product is stabilized, the shelf life should be noted.
Do not store with less than 10 % headspace above liquid.
Ensure adequate inhibitor and dissolved oxygen level.
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.

## 8. Exposure controls and personal protection

Components with occupational exposure limits

acrylic acid, 79-10-7;
TWA value 2 ppm (ACGIHTLV)
Skin Designation (AU NOEL)
The substance can be absorbed through the skin.
TWA value 5.9 mg/m3 ; 2 ppm (AU NOEL)
Skin Designation (OEL (AU))
The substance can be absorbed through the skin.
TWA value 5.9 mg/m3 ; 2 ppm (OEL (AU))
Skin Designation (ACGIHTLV)
Danger of cutaneous absorption
Skin Designation (ACGIHTLV)
Danger of cutaneous absorption

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 inhalation of vapour. Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is required additionally to the stated personal protection equipment.

## 9. Physical and Chemical Properties

| | | |
|---|---|---|
| Form: | liquid | |
| Colour: | colourless | |
| Odour: | vinegar-like | |
| Odour threshold: | not determined | |
| pH value: | 2<br>(approx. 70 g/l, 20 °C)<br>Literature data. | |
| pKA: | 4.26<br>(25 °C) | |
| Melting point: | 13 °C<br>Literature data. | |
| Boiling point: | 141 °C<br>(1,013 hPa)<br>Literature data. | |
| Flash point: | 48.5 °C | (DIN 51755, closed cup) |
| Evaporation rate: | Value can be approximated from Henry's Law Constant or vapor pressure. | |
| Flammability (solid/gas): | Flammable liquid and vapour. | (derived from flash point) |
| Lower explosion limit: | (46 °C)<br>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. | (air) |
| Upper explosion limit: | For liquids not relevant for classification and labelling. | |
| Ignition temperature: | 438 °C | |
| Thermal decomposition: | No decomposition if stored and handled as prescribed/indicated. | |

| | | |
|---|---|---|
| | It is not a self-decompositionable substance. | |
| Self ignition: | Based on its structural properties the product is not classified as self-igniting. | Test type: Spontaneous self-ignition at room-temperature. |
| Self heating ability: | not applicable, the product is a liquid | |
| SADT: | Not a substance/mixture liable to self-decomposition according to GHS. | |
| Explosion hazard: | Based on the chemical structure there is no indication of explosive properties. | |
| Fire promoting properties: | Based on its structural properties the product is not classified as oxidizing. | |
| Vapour pressure: | 5.29 hPa<br>(25 °C)<br>Literature data. | |
| Density: | 1.05 g/cm3<br>(20 °C)<br>Literature data. | |
| | 1.0161 g/cm3<br>(50 °C) | (OECD Guideline 109) |
| Relative density: | 1.05<br>(20 °C)<br>Literature data. | |
| Relative vapour density (air): | 2.48<br>(20 °C)<br>Heavier than air. | (calculated) |
| Solubility in water: | miscible, Literature data.<br>(25 °C) | |
| Solubility (qualitative) solvent(s): | organic solvents<br>miscible | |
| Partitioning coefficient n-octanol/water (log Pow): | 0.46<br>(25 °C) | (OECD Guideline 107) |
| Adsorption/water - soil: | KOC: approx. 42.8; log KOC: approx. 1.6 | (OECD Guideline 106) |
| Surface tension: | 69.6 mN/m<br>(20 °C; 1 g/l) | (Directive 92/69/EEC, A.5, OECD harmonized ring method) |
| Viscosity, dynamic: | 1.149 mPa.s<br>(25 °C)<br>Literature data. | |
| Viscosity, kinematic: | (20 °C)<br>not determined | |
| Molar mass: | 72.06 g/mol | |

## 10. Stability and Reactivity

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

| | |
|---|---|
| Thermal decomposition: | No decomposition if stored and handled as prescribed/indicated. |
| Thermal decomposition: | It is not a self-decompositionable substance. |

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

Corrosion to metals: Corrodes metals in the presence of water or moisture.

Hazardous reactions:
Explosion and fire hazard exists under confined conditions. Ignitable air mixtures can form when the product is heated above the flash point and/or when sprayed or atomized. Formation of explosive gas/air mixtures.
Polymerization coupled with heat formation.
Risk of spontaneous polymerization by oxygen depletion of the liquid phase. Risk of spontaneous polymerization when heated or in the presence of UV radiation. Risk of spontaneous and violent self-polymerization if inhibitor is lost or product is exposed to excessive heat. Polymerization produces gases which may burst closed or confined containers. Reactions may cause ignition.
Radical formation can cause exothermic polymerization. Reacts with peroxides and other radical components. Risk of spontaneous polymerization in the presence of starters for radical chain reactions (e.g. peroxides). Reacts with nitric acid. Polymerizes explosively in contact with strong oxidizing agents. 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.

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

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

## 11. Toxicological Information

### Routes of exposure

#### Acute oral toxicity

Experimental/calculated data:

LD50rat (oral): 1,000 - < 2,000 mg/kg (OECD Guideline 423)

**Acute inhalation toxicity**

LC50 rat (by inhalation): > 5.1 mg/l 4 h (OECD Guideline 403)
The vapour was tested.

**Acute dermal toxicity**

LD50 rabbit (dermal): > 2,000 mg/kg (OECD Guideline 402)

**Assessment of acute toxicity**

Of moderate toxicity after short-term inhalation. Of moderate toxicity after single ingestion. Virtually nontoxic after a single skin contact.

**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.

## 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)

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

## 12. Ecological Information

### Ecotoxicity

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:

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

### Mobility

Assessment transport between environmental compartments:
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

### Persistence and degradability

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)

### Bioaccumulation potential

Assessment bioaccumulation potential:
Does not accumulate in organisms.

Bioaccumulation potential:
Bioconcentration factor: 3.16, other (calculated)

### Additional information

Other ecotoxicological advice:
Very toxic (acute effect) to aquatic organisms.

## 13. Disposal Considerations

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.

## 14. Transport Information

**Domestic transport:**

| | |
|---|---|
| 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 |
| Special precautions for user: | None known |

**Further information**
Hazchem Code:2W
IERG Number:19P

**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<br>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 |

## 15. Regulatory Information

**Other regulations**

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): Not Scheduled

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

**Registration status:**

| | |
|---|---|
| AICS, AU | released / listed |

## 16. Other Information

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.

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

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.