

## Chemical Safety Data Sheet MSDS / SDS

## Acrylic acid, monoester with propane-1,2-diol SDS

Revision Date:2024-04-25 Revision Number:1

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

Product name: Acrylic acid, monoester with propane-1,2-diol

CAS: 25584-83-2

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses: For R&amp;D use only. Not for medicinal, household or other use.

Uses advised against: none

**Company Identification**

Company: Chemicalbook.in

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**SECTION 2: Hazards identification****Classification of the substance or mixture**

Acute toxicity - Category 3, Oral

Acute toxicity - Category 3, Dermal

Skin corrosion, Sub-category 1B  
Skin sensitization, Category 1  
Acute toxicity - Category 3, Inhalation

### GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

### Hazard statement(s)

H301 Toxic if swallowed  
H311 Toxic in contact with skin  
H314 Causes severe skin burns and eye damage  
H317 May cause an allergic skin reaction  
H331 Toxic if inhaled

### Precautionary statement(s)

### Prevention

P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P271 Use only outdoors or in a well-ventilated area.

### Response

P301+P316 IF SWALLOWED: Get emergency medical help immediately.  
P321 Specific treatment (see ... on this label).  
P330 Rinse mouth.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P316 Get emergency medical help immediately.  
P361+P364 Take off immediately all contaminated clothing and wash it before reuse.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P363 Wash contaminated clothing before reuse.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333+P317 If skin irritation or rash occurs: Get medical help.  
P362+P364 Take off contaminated clothing and wash it before reuse.

#### **Storage**

P405 Store locked up.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

#### **Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### **Other hazards which do not result in classification**

no data available

### **SECTION 3: Composition/information on ingredients**

#### **Substance**

Chemical name:	Acrylic acid, monoester with propane-1,2-diol
Common names and synonyms:	Acrylic acid, monoester with propane-1,2-diol
CAS number:	25584-83-2
EC number:	247-118-0
Concentration:	100%

### **SECTION 4: First aid measures**

#### **Description of necessary first-aid measures**

#### **If inhaled**

Fresh air, rest. Refer for medical attention.

#### **Following skin contact**

Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention .

#### **Following eye contact**

Rinse with plenty of water (remove contact lenses if easily possible). Refer for medical attention.

#### **Following ingestion**

Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

#### **Most important symptoms/effects, acute and delayed**

Inhalation irritates nose and throat and causes coughing; lung injury may occur. Ingestion causes irritation and burning of mouth and stomach. Vapor irritates eyes. Contact with liquid causes severe burns of eyes and burns of skin. (USCG, 1999)

#### **Indication of immediate medical attention and special treatment needed, if necessary**

no data available

## **SECTION 5: Firefighting measures**

#### **Suitable extinguishing media**

Excerpt from ERG Guide 154 [Substances - Toxic and/or Corrosive (Non-Combustible)]: SMALL FIRE: Dry chemical, CO<sub>2</sub> or water spray. LARGE FIRE: Dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal; do not scatter the material. FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. (ERG, 2016)

#### **Specific hazards arising from the chemical**

Excerpt from ERG Guide 154 [Substances - Toxic and/or Corrosive (Non-Combustible)]: Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Some are oxidizers and may ignite combustibles (wood, paper, oil, clothing, etc.). Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. For electric vehicles or equipment, ERG Guide 147 (lithium ion batteries) or ERG Guide 138 (sodium batteries) should also be consulted. (ERG, 2016)

#### **Special protective actions for fire-fighters**

Use water spray, dry powder, alcohol-resistant foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with

water.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal protection: chemical protection suit and filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Collect leaking liquid in covered containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

### Environmental precautions

Personal protection: chemical protection suit and filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Collect leaking liquid in covered containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

### Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## SECTION 7: Handling and storage

### Precautions for safe handling

NO open flames. Above 97°C use a closed system and ventilation. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Separated from food and feedstuffs, strong bases and strong acids. Store only if stabilized. See Notes. Cool. Keep in the dark. Store in an area without drain or sewer access. Provision to contain effluent from fire extinguishing.

## SECTION 8: Exposure controls/personal protection

### Control parameters

### **Occupational Exposure limit values**

MAK sensitization of skin (SH)

### **Biological limit values**

no data available

### **Appropriate engineering controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### **Individual protection measures, such as personal protective equipment (PPE)**

#### **Eye/face protection**

Wear face shield or eye protection in combination with breathing protection.

#### **Skin protection**

Protective gloves. Protective clothing.

#### **Respiratory protection**

Use ventilation, local exhaust or breathing protection.

#### **Thermal hazards**

no data available

## **SECTION 9: Physical and chemical properties and safety characteristics**

Physical state:	Liquid.
Colour:	Colorless.
Odour:	no data available
Melting point/freezing point:	-23.4 °C.

Boiling point or initial boiling point and boiling range:	198.5 °C. Remarks:Extrapolated.
Flammability:	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	99 °C. Atm. press.:1 013.25 hPa.
Auto-ignition temperature:	308 °C. Atm. press.:1 001 - 1 016 mBar.
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	kinematic viscosity (in mm <sup>2</sup> /s) = 8.63. Temperature:20°C. Remarks:Measured.;dynamic viscosity (in mPa s) = 9.1. Temperature:20°C. Remarks:Calculated.
Solubility:	in water, g/100ml at 25°C: 30.7 (good)
Partition coefficient n-octanol/water:	log Pow = 0.2. Temperature:25 °C. Remarks:PH value is not reported.
Vapour pressure:	0.01 hPa. Temperature:20 °C. Remarks:Extrapolated.;1.18 hPa. Temperature:50 °C. Remarks:Measured.
Density and/or relative density:	1 054 kg/m <sup>3</sup> . Temperature:20 °C.
Relative vapour density:	4.5 (vs air)
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

The substance may polymerize due to heating and under the influence of light, and peroxides. Decomposes on heating. This produces toxic and corrosive fumes including acrolein. Reacts violently with strong acids, strong bases, strong oxidants and peroxides. This generates fire hazard.

#### **Chemical stability**

no data available

#### **Possibility of hazardous reactions**

HYDROXYPROPYL ACRYLATE polymerizes readily in the presence of heat and light generating much heat; reacts with strong oxidants. REF [Handling Chemicals Safely, 1980. p. 235].

#### **Conditions to avoid**

no data available

#### **Incompatible materials**

Water

#### **Hazardous decomposition products**

no data available

### **SECTION 11: Toxicological information**

#### **Acute toxicity**

Oral: LD50 - rat (male) - 820 mg/kg bw.

Inhalation: IHT - rat - 0.833 mg/L air (nominal).

Dermal: LD50 - rat (male/female) - > 1 000 mg/kg bw.

#### **Skin corrosion/irritation**

no data available

#### **Serious eye damage/irritation**



no data available

#### **Respiratory or skin sensitization**

no data available

#### **Germ cell mutagenicity**

no data available

#### **Carcinogenicity**

no data available

#### **Reproductive toxicity**

no data available

#### **STOT-single exposure**

The substance is severely irritating to the skin and eyes. The substance is irritating to the respiratory tract. If swallowed the substance may cause vomiting and could result in aspiration pneumonitis.

#### **STOT-repeated exposure**

Repeated or prolonged contact with skin may cause dermatitis. Repeated or prolonged contact may cause skin sensitization. See Notes.

#### **Aspiration hazard**

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

## **SECTION 12: Ecological information**

#### **Toxicity**

Toxicity to fish: LC50 - Pimephales promelas - 3.61 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia magna - 5.2 mg/L - 48 h.

Toxicity to algae: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 6.98 mg/L - 72 h.

Toxicity to microorganisms: EC20 - activated sludge, domestic - ca. 1 000 mg/L - 30 min. Remarks:Respiration rate.

#### **Persistence and degradability**

no data available

#### **Bioaccumulative potential**

no data available

#### **Mobility in soil**

no data available

#### **Other adverse effects**

no data available

### **SECTION 13: Disposal considerations**

#### **Disposal methods**

##### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

##### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

### **SECTION 14: Transport information**

#### **UN Number**

ADR/RID: UN1760 (For reference only, please check.)  
IMDG: UN1760 (For reference only, please check.)  
IATA: UN1760 (For reference only, please check.)

#### **UN Proper Shipping Name**

ADR/RID: CORROSIVE LIQUID, N.O.S. (For reference only, please check.)  
IMDG: CORROSIVE LIQUID, N.O.S. (For reference only, please check.)  
IATA: CORROSIVE LIQUID, N.O.S. (For reference only, please check.)

#### **Transport hazard class(es)**

ADR/RID: 8 (For reference only, please check.)  
IMDG: 8 (For reference only, please check.)  
IATA: 8 (For reference only, please check.)

#### **Packing group, if applicable**

ADR/RID: I (For reference only, please check.)  
IMDG: I (For reference only, please check.)  
IATA: I (For reference only, please check.)

#### **Environmental hazards**

ADR/RID: No  
IMDG: No  
IATA: No

#### **Special precautions for user**

no data available

#### **Transport in bulk according to IMO instruments**

no data available

## **SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC)**

Listed.

**Korea Existing Chemicals List (KECL)**

Listed.

**SECTION 16: Other information**

**Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:  
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

Do NOT take working clothes home. Skin cross-sensitization with other acrylates is possible. A typical commercial sample of hydroxypropyl acrylate contains approximately 75-80% 2-hydroxypropyl acrylate and 20-25% 1-methyl-2-hydroxyethyl acrylate. The purity of the saleable product is at least 97% combined isomers. See ICSC 0899. An added stabilizer or inhibitor can influence the toxicological properties of this substance; consult an expert. The effectiveness of phenolic inhibitors is dependent on the presence of oxygen. Store under air rather than inert atmosphere.

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any