

# SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0

Creation Date: Aug 10, 2017

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## 1. Identification

### 1.1 GHS Product identifier

Product name                      Glycidyl methacrylate

### 1.2 Other means of identification

Product number                  -

Other names                      Glycidyl Methacrylate

### 1.3 Recommended use of the chemical and restrictions on use

Identified uses                  For industry use only. CBI,Intermediates

Uses advised against          no data available

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## 2. Hazard identification

### 2.1 Classification of the substance or mixture

Acute toxicity - Oral, Category 4

Acute toxicity - Dermal, Category 4

Skin irritation, Category 2

Eye irritation, Category 2

Skin sensitization, Category 1

Acute toxicity - Inhalation, Category 4

### 2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Warning

Hazard statement(s)

H302 Harmful if swallowed

H312 Harmful in contact with skin

H315 Causes skin irritation

H319 Causes serious eye irritation

H317 May cause an allergic skin reaction

H332 Harmful 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.

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+P312 IF SWALLOWED: Call a POISON CENTER/doctor/...if you feel unwell.

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water/...

P312 Call a POISON CENTER/doctor/...if you feel unwell.

P321 Specific treatment (see ... on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Storage

none

Disposal

P501 Dispose of contents/container to ...

## 2.3 Other hazards which do not result in classification

none

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## 3. Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Glycidyl methacrylate	Glycidyl methacrylate	106-91-2	none	100%

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## 4. First-aid measures

### 4.1 Description of necessary first-aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Fresh air, rest. Half-upright position. Refer for medical attention.

In case of skin contact

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

In case of eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

If swallowed

Rinse mouth. Do NOT induce vomiting. Give one or two glasses of water to drink. Refer for medical attention .

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

The liquid irritates eyes about as much as soap. Prolonged contact with skin produces irritation and dermatitis. (USCG, 1999)

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

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary ... . Monitor for shock and treat if necessary ... . For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport ... . Do not use emetics. For ingestion, rinse mouth and administer 5 mL/kg up to 200 mL of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal ... . /Esters and related compounds/

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## 5. Fire-fighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Fires involving this chemical can be controlled using a dry chemical, carbon dioxide or Halon extinguisher.

### 5.2 Specific hazards arising from the chemical

Special Hazards of Combustion Products: Irritating vapors are generated when heated (USCG, 1999)

### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

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## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

### 6.2 Environmental precautions

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Collect leaking and spilled liquid in covered containers as far as possible. Do NOT let this chemical enter the environment.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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## 7. Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store only if stabilized. Cool. Well closed. Keep in the dark. Separated from strong oxidants, strong bases and strong acids. Separated from food and feedstuffs. Store in an area without drain or sewer access. Provision to contain effluent from fire extinguishing. Temp during storage must be kept low to minimize formation of peroxides and other oxidation products. ... Storage temp below 30°C are recommended for the polyfunctional methacrylates. ... The methacrylate monomers should not be stored for longer than one year. Shorter

storage times are recommended for the aminomethacrylates, ie, three months, and the polyfunctional methacrylates, ie, six months. Many of these compounds are sensitive to UV light and should, therefore, be stored in the dark. The methacrylic esters may be stored in mild steel, stainless steel, or aluminum.

/Methacrylic acid & derivatives/

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## 8. Exposure controls/personal protection

### 8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

### 8.2 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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

Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

Wear dust mask when handling large quantities.

## Thermal hazards

no data available

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### 9. Physical and chemical properties

Physical state	Colorless liquid, fruity odor.
Colour	Colorless liquid
Odour	Fruity odor
Melting point/ freezing point	-146°C(lit.)
Boiling point or initial boiling point and boiling range	189°C(lit.)
Flammability	Combustible.
Lower and upper explosion limit / flammability limit	no data available
Flash point	76°C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	5.481 cP at 70 deg F
Solubility	In water:0.5-1.0 g/100 mL at 20 °C
Partition coefficient n-octanol/water (log value)	0.96
Vapour pressure	0.582mmHg at 25°C
Density and/or relative density	1.042g/mL at 25°C(lit.)
Relative vapour density (air = 1):	4.9
Particle characteristics	no data available

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### 10. Stability and reactivity

#### 10.1 Reactivity

no data available

#### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Epoxides, such as GLYCIDYL METHACRYLATE, are highly reactive. They polymerize in the presence of catalysts or when heated. These polymerization reactions can be violent. Compounds in this group react with acids, bases, and oxidizing and reducing agents. They react, possibly violently with water in the presence of acid and other catalysts.

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

When heated to decomp it emits acrid smoke and fumes.

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## 11. Toxicological information

Acute toxicity

- Oral: LD50 Rat oral 597 mg/kg
- Inhalation: no data available
- Dermal: no data available

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

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

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## 12. Ecological information

### 12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

Glycidyl methacrylate, present at 100 mg/l, reached 93-94% of its theoretical BOD in 4 weeks using an activated sludge inoculum and the Japanese MITI test(1).

### 12.3 Bioaccumulative potential

An estimated BCF of 3 was calculated for glycidyl methacrylate(SRC), using an estimated log Kow of 0.81(1,SRC) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low.

### 12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc for glycidyl methacrylate can be estimated to be about 10(SRC). According to a classification scheme(2), this estimated Koc value suggests that glycidyl methacrylate is expected to have very high mobility in

soil.

## 12.5 Other adverse effects

no data available

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## 13. Disposal considerations

### 13.1 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.

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## 14. Transport information

### 14.1 UN Number

ADR/RID: UN2922

IMDG: UN2922

IATA: UN2922

### 14.2 UN Proper Shipping Name

ADR/RID: CORROSIVE LIQUID, TOXIC, N.O.S.

IMDG: CORROSIVE LIQUID, TOXIC, N.O.S.

IATA: CORROSIVE LIQUID, TOXIC, N.O.S.

### 14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

### 14.4 Packing group, if applicable

ADR/RID: II

IMDG: II

IATA: II

### 14.5 Environmental hazards

ADR/RID: no

IMDG: no

IATA: no

## 14.6 Special precautions for user

no data available

## 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

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## 15. Regulatory information

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

Chemical name	Common names and synonyms	CAS number	EC number
Glycidyl methacrylate	Glycidyl methacrylate	106-91-2	none
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.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.

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## 16. Other information

Information on revision

Creation Date            Aug 10, 2017

Revision Date           Aug 10, 2017

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/>

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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 damage resulting from handling or from contact with the above product.