

# SAFETY DATA SHEET

## 1. PRODUCT

### 1.1 Product identifiers

Name: Glycidyl methacrylate

CAS-No.: 106-91-2

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

Identified uses : Laboratory chemicals, Synthesis of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 4), H227

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 3), H311

Skin corrosion (Category 1C), H314

Serious eye damage (Category 1), H318

Skin sensitisation (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 1B), H350


Reproductive toxicity (Category 1B), H360

Specific target organ toxicity - single exposure, Inhalation (Category 1), Respiratory Tract, H370

Acute aquatic toxicity (Category 2), H401

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal word	Danger
Hazard statement(s)	H227 Combustible liquid. H302 + H332 Harmful if swallowed or if inhaled H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H341 Suspected of causing genetic defects. H350 May cause cancer. H360 May damage fertility or the unborn child. H370 Causes damage to organs (Respiratory Tract) if inhaled. H401 Toxic to aquatic life.

Precautionary statement(s)	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.</p> <p>P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.</p> <p>P264 Wash skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P281 Use personal protective equipment as required.</p> <p>P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.</p> <p>P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.</p> <p>P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.</p> <p>P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.</p> <p>P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.</p> <p>P403 + P235 Store in a well-ventilated place. Keep cool.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container to an approved waste disposal plant.</p>
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## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms:	Methacrylic acid 2,3-epoxypropyl ester 2,3-Epoxypropyl methacrylate
Formula:	C <sub>7</sub> H <sub>10</sub> O <sub>3</sub>
Molecular weight:	142.15 g/mol
CAS-No.:	106-91-2
EC-No.:	203-441-9

### Hazardous components

Component	Classification	Concentration
Glycidyl methacrylate	Fam. Liq. 4; Acute Tox. 4; Acute Tox. 3; Skin Corr. 1C; Eye Dam. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Repr. 1B; STOT SE 1; Aquatic Acute 2; H227, H302 + H332, H311, H314, H317, H318, H341, H350, H360, H370, H401	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

<b>General advice</b>
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
<b>If inhaled</b>
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>In case of skin contact</b>
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
<b>In case of eye contact</b>

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### **4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### **4.2 Indication of any immediate medical attention and special treatment needed**

No data available

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### **5. FIREFIGHTING MEASURES**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### **5.2 Special hazards arising from the substance or mixture**

No data available

#### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

#### **5.4 Further information**

Use water spray to cool unopened containers.

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### **6. ACCIDENTAL RELEASE MEASURES**

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

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations.

Vapours can accumulate in low areas.

For personal protection see section 8.

#### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

#### **6.4 Reference to other sections**

For disposal see section 13.

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### **7. HANDLING AND STORAGE**

#### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature 2 - 8 °C

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Glycidyl methacrylate	106-91-2	TWA	0.500000 ppm	USA. Workplace Environmental Exposure Levels (WEEL)
	Remarks	Skin Dermal Sensitization Notation		

### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

Eye/face protection	Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection	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. Splash contact Material: Nature latex/chloroprene Minimum layer thickness: 0.6 mm Break through time: 49 min Material tested:Lapren® (KCL 706 / Aldrich Z677558, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body Protection	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Form: liquid Colour: colourless
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	Melting point/freezing point: -41.49 °C (-42.68 °F) at ca.1,013 hPa (760 mmHg)

Initial boiling point and boiling range	189 °C (372 °F) - lit.
Flash point	76 °C (169 °F) - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	ca.4.2 hPa (3.2 mmHg) at 25 °C (77 °F) - OECD Test Guideline 104
Vapour density	No data available
Relative density	1.042 g/mL at 25 °C (77 °F) - lit.
Water solubility	ca.50 g/l at 25 °C (77 °F) - OECD Test Guideline 105 - hydrolyses
Partition coefficient: n-octanol/water	log Pow: ca.0.96 at 25 °C (77 °F) - OECD Test Guideline 107
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

## 9.2 Other safety information

Solubility in other solvents:

Benzene

Alcohol

Ether

Surface tension: 25 mN/m at 20 °C (68 °F)

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

Contains the following stabiliser(s):

Mequinol (>=50 - <=150 ppm)

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Strong oxidizing agents, Strong acids and strong bases, Peroxides

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

<b>Acute toxicity</b>
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LD50 Oral - Rat - 597 mg/kg Inhalation: No data available LC0 Inhalation - Rat - male and female - 4 h - > 412 ppm (OECD Test Guideline 403) LD50 Dermal - Rabbit - 480 mg/kg No data available
<b>Skin corrosion/irritation</b>
Skin - Rabbit Result: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days. - 4 h (OECD Test Guideline 404)
<b>Serious eye damage/eye irritation</b>
Eyes - Rabbit Result: Risk of serious damage to eyes. - 7 d
<b>Respiratory or skin sensitisation</b>
No data available
<b>Germ cell mutagenicity</b>
In vitro tests showed mutagenic effects Mutation in mammalian somatic cells. S. typhimurium Result: positive Chromosome aberration test in vitro Lungs Result: positive Mutagenicity (micronucleus test) Mouse Result: positive
<b>Carcinogenicity</b>
Possible human carcinogen IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
<b>Reproductive toxicity</b>
May damage fertility. Reproductive toxicity - Rat - male and female Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated ). Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females). Presumed human reproductive toxicant
<b>Specific target organ toxicity -single exposure</b>
Inhalation - The substance or mixture is classified as specific target organ toxicant, single exposure, category 1. - Respiratory Tract
<b>Specific target organ toxicity -repeated exposure</b>
No data available
<b>Aspiration hazard</b>
No data available
<b>Additional Information</b>
RTECS: Not available To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach - Irregularities - Based on Human Evidence (Epichlorhydrin) Stomach - Irregularities - Based on Human Evidence (Mequinol)

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish	semi-static test LC50 - Oryzias latipes - 5.7 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - 24.9 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test IC50 - Selenastrum capricornutum (green algae) - 14.6 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	No data available

## 12.2 Persistence and degradability

Biodegradability	aerobic Biochemical oxygen demand - Exposure time 28 d Result: 94 % - Readily biodegradable (OECD Test Guideline 301C)
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## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

<b>Product</b>
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
<b>Contaminated packaging</b>
Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 2922 Class: 8 (6.1) Packing group: III

Proper shipping name: Corrosive liquids, toxic, n.o.s. (Glycidyl methacrylate)

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

### IMDG

UN number: 2922 Class: 8 (6.1) Packing group: III EMS-No: F-A, S-B

Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Glycidyl methacrylate)

### IATA

UN number: 2922 Class: 8 (6.1) Packing group: III

Proper shipping name: Corrosive liquid, toxic, n.o.s. (Glycidyl methacrylate)

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## 15. REGULATORY INFORMATION

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.



## Massachusetts Right To Know Components

Component	CAS-No.	Revision Date
Epichlorhydrin	106-89-8	2008-11-03

## Pennsylvania Right To Know Components

Component	CAS-No.	Revision Date
Glycidyl methacrylate	106-91-2	
Epichlorhydrin	106-89-8	2008-11-03

## New Jersey Right To Know Components

Component	CAS-No.	Revision Date
Glycidyl methacrylate	106-91-2	

## California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

Component	CAS-No.	Revision Date
Epichlorhydrin	106-89-8	2007-09-28

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Component	CAS-No.	Revision Date
Epichlorhydrin	106-89-8	2007-09-28

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## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. Acute toxicity

Aquatic Acute Acute aquatic toxicity

Carc. Carcinogenicity

Eye Dam. Serious eye damage

Flam. Liq. Flammable liquids

H227 Combustible liquid.

H302 Harmful if swallowed.

H302 + H332 Harmful if swallowed or if inhaled

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H360 May damage fertility or the unborn child.

H370 Causes damage to organs (ORG\_SING\_INHA) if inhaled.

H401 Toxic to aquatic life.

Muta. Germ cell mutagenicity

Repr. Reproductive toxicity

Skin Corr. Skin corrosion

Skin Sens. Skin sensitisation

STOT SE Specific target organ toxicity - single exposure

### HMIS Rating



Health hazard: 2

Chronic Health Hazard: \*

Flammability: 2

Physical Hazard 0

**NFPA Rating**

Health hazard: 2

Fire Hazard: 2

Reactivity Hazard: 0

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