

# SAFETY DATA SHEET

according to the OSHA  
Hazard Communication Standard

Version 6.10  
Revision Date 07/14/2026  
Print Date 07/15/2026

## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : 2-Hydroxyethyl methacrylate

Product Number : 477028  
Brand : Aldrich  
Index-No. : 607-124-00-X  
CAS-No. : 868-77-9

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

Identified uses : Laboratory chemicals, Synthesis of substances

Restrictions on use : Not Available

### 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

### 1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-  
527-3887 CHEMTREC (International) 24  
Hours/day; 7 Days/week

---

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

**Hazards for the product as supplied**

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitisation : Category 1

### Other hazards

None known.

### GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**  
P261 Avoid breathing mist or vapours.  
P264 Wash skin thoroughly after handling.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P280 Wear protective gloves/ eye protection/ face protection.  
**Response:**  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
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 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

---

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

CAS-No. : 868-77-9

### Components

| Chemical name                  | CAS No./Unique ID | Concentration (% w/w) | Trade secret |
|--------------------------------|-------------------|-----------------------|--------------|
| 2-hydroxyethyl methacrylate    | 868-77-9*         | $\geq 90 - \leq 100$  | -            |
| ethylene glycol dimethacrylate | 97-90-5*          | $\geq 0.1 - < 1$      | -            |

\* Indicates that the identifier is a CAS No.

Actual concentration is withheld as a trade secret

---

## SECTION 4. FIRST AID MEASURES

|                                                             |                                                                                                                                                                          |
|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice                                              | : Show this safety data sheet to the doctor in attendance.                                                                                                               |
| If inhaled                                                  | : After inhalation: fresh air.                                                                                                                                           |
| In case of skin contact                                     | : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.                                           |
| In case of eye contact                                      | : After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.                                                                     |
| If swallowed                                                | : After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately. |
| Most important symptoms and effects, both acute and delayed | : The most important known symptoms and effects are described in the labelling (see section 2 GHS label elements) and/or in section 11                                   |
| Protection of first-aiders                                  | : For personal protection see section 8.                                                                                                                                 |
| Notes to physician                                          | : No data available                                                                                                                                                      |

---

## SECTION 5. FIREFIGHTING MEASURES

|                                |                                                                                |
|--------------------------------|--------------------------------------------------------------------------------|
| Suitable extinguishing media   | : Foam<br>Carbon dioxide (CO <sub>2</sub> )<br>Dry powder                      |
| Unsuitable extinguishing media | : For this substance/mixture no limitations of extinguishing agents are given. |
| Specific hazards during        | : Combustible.                                                                 |

Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

|                                                |                                                                                                                                                                 |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazardous combustion products                  | : Carbon oxides                                                                                                                                                 |
| Specific extinguishing methods                 | : No data available                                                                                                                                             |
| Further information                            | : Prevent fire extinguishing water from contaminating surface water or the ground water system.                                                                 |
| Special protective equipment for fire-fighters | : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. |

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

|                                                                     |                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency procedures | : Advice for non-emergency personnel:<br>Do not breathe vapours, aerosols.<br>Avoid substance contact.<br>Ensure adequate ventilation.<br>Evacuate the danger area, observe emergency procedures, consult an expert.<br>Advice for emergency responders:<br>Wear appropriate personal protective equipment, as indicated in Section 8. |
| Environmental precautions                                           | : Do not let product enter drains.                                                                                                                                                                                                                                                                                                     |
| Methods and materials for containment and cleaning up               | : Cover drains. Collect, bind, and pump off spills.<br>Observe possible material restrictions (see sections 7 and 10).<br>Take up with liquid-absorbent material (e.g.                                                                                                                                                                 |

Chemizorb® ). Dispose of properly. Clean up affected area.

---

## SECTION 7. HANDLING AND STORAGE

For precautions see section 2 GHS label elements

Further information on storage conditions : Tightly closed.

Storage class : 10, Combustible liquids

Recommended storage temperature : 36 - 46 °F / 2 - 8 °C

---

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

**Engineering measures** : No data available

### Personal protective equipment

Respiratory protection : required when vapours/aerosols are generated.  
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: : Filter A-(P2)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

### Hand protection

Material : Chloroprene  
Break through time : 480 min  
Glove thickness : 0.65 mm  
Protective index : Full contact  
Manufacturer : KCL 720 Camapren®

|                          |                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material                 | : Latex gloves                                                                                                                                                                                                                                                                                                                                                                                |
| Break through time       | : 10 min                                                                                                                                                                                                                                                                                                                                                                                      |
| Glove thickness          | : 0.6 mm                                                                                                                                                                                                                                                                                                                                                                                      |
| Protective index         | : Splash contact                                                                                                                                                                                                                                                                                                                                                                              |
| Manufacturer             | : Lapren® (KCL 706 / Aldrich Z677558, Size M)                                                                                                                                                                                                                                                                                                                                                 |
| Remarks                  | : This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: <a href="http://www.kcl.de">www.kcl.de</a> ). |
| Eye protection           | : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).<br>Safety glasses                                                                                                                                                                                                                                             |
| Skin and body protection | : protective clothing                                                                                                                                                                                                                                                                                                                                                                         |
| Hygiene measures         | : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.                                                                                                                                                                                                                                                               |

---

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

|                             |                                                                      |
|-----------------------------|----------------------------------------------------------------------|
| Appearance                  | : liquid                                                             |
| Colour                      | : colourless                                                         |
| Odour                       | : ester-like                                                         |
| Odour Threshold             | : No data available                                                  |
| pH                          | : No data available                                                  |
| Melting point/ range        | : 10 °F / -12 °C<br>Method: lit.                                     |
| Boiling point/boiling range | : 153 °F / 67 °C (4.7 hPa)<br>Method: lit.                           |
| Flash point                 | : 223 °F / 106 °C<br>(1,013.25 hPa)<br>Method: ASTM D 93, closed cup |
| Evaporation rate            | : No data available                                                  |

Aldrich - 477028

Page 6 of 14

|                                                     |                                                                                       |
|-----------------------------------------------------|---------------------------------------------------------------------------------------|
| Flammability (solid, gas)                           | : No data available                                                                   |
| Flammability (liquids)                              | : No data available                                                                   |
| Burning rate                                        | : No data available                                                                   |
| Self-ignition                                       | : 707 °F / 375 °C<br>1,024 hPa<br>Autoignition temperature                            |
| Upper explosion limit /<br>Upper flammability limit | : No data available                                                                   |
| Lower explosion limit /<br>Lower flammability limit | : No data available                                                                   |
| Vapour pressure                                     | : 0.08 hPa (68 °F / 20 °C)<br>Method: OECD Test Guideline 104                         |
| Relative vapour density                             | : No data available                                                                   |
| Relative density                                    | : No data available                                                                   |
| Density                                             | : 1.073 g/mL (77 °F / 25 °C)<br>Method: lit.                                          |
| Solubility(ies)<br>Water solubility                 | : 100 g/l (68 °F / 20 °C)                                                             |
| Partition coefficient: n-<br>octanol/water          | : log Pow: 0.42 (77 °F / 25 °C)<br>Method: OECD Test Guideline 107                    |
| Autoignition temperature                            | : No data available                                                                   |
| Decomposition<br>temperature                        | : No data available                                                                   |
| Viscosity<br>Viscosity, dynamic                     | : 9 mPa.s (68 °F / 20 °C)                                                             |
| Viscosity, kinematic                                | : 6.36 mm <sup>2</sup> /s (68 °F / 20 °C)<br>3.42 mm <sup>2</sup> /s (104 °F / 40 °C) |
| Flow time                                           | : No data available                                                                   |
| Explosive properties                                | : No data available                                                                   |
| Oxidizing properties                                | : none                                                                                |
| Molecular weight                                    | : 130.14 g/mol                                                                        |

Aldrich - 477028

Page 7 of 14

Particle characteristics  
Particle size : No data available

---

## SECTION 10. STABILITY AND REACTIVITY

Reactivity : Forms explosive mixtures with air on intense heating.  
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Chemical stability : The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions : Violent reactions possible with:  
Amines  
peroxi compounds  
polymerisation initiators

Conditions to avoid : Exposure to moisture  
Heat  
Light.  
Strong heating.

Incompatible materials : No data available

Hazardous decomposition products : In the event of fire: see section 5

---

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 5,564 mg/kg

Inhalation: No data available

LD50 Dermal - Rabbit - male - > 5,000 mg/kg

#### Skin corrosion/irritation

Remarks: Causes skin irritation.

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes.

(Draize Test)

#### Respiratory or skin sensitization

in vivo assay - Guinea pig

Result: May cause sensitisation by skin contact.

(Maximisation Test)

#### Germ cell mutagenicity

Aldrich - 477028

Page 8 of 14

Test Type: In vitro mammalian cell gene mutation test  
Test system: Chinese hamster ovary cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative

Test Type: Micronucleus test  
Species: Rat

Application Route: Oral  
Method: OECD Test Guideline 474  
Result: negative

### **Carcinogenicity**

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 on OSHA's list of regulated carcinogens.

### **Reproductive toxicity**

No data available

### **Specific target organ toxicity - single exposure**

No data available

### **Specific target organ toxicity - repeated exposure**

No data available

### **Aspiration hazard**

No data available

## **11.2 Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 300 mg/kg

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

---

## **SECTION 12. ECOLOGICAL INFORMATION**

### **Ecotoxicity**

#### **Components:**

#### **2-hydroxyethyl methacrylate:**

Toxicity to fish : LC50 (Oryzias latipes): > 100 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203

|                                                                        |                                                                                                                                                              |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to daphnia and other aquatic invertebrates                    | : EC50 ( <i>Daphnia magna</i> (Water flea)): 380 mg/l<br>Exposure time: 48 h<br>Test Type: Immobilization<br>Method: OECD Test Guideline 202                 |
| Toxicity to algae/aquatic plants                                       | : EC50 ( <i>Selenastrum capricornutum</i> (green algae)): 836 mg/l<br>Exposure time: 72 h<br>Test Type: Growth inhibition<br>Method: OECD Test Guideline 201 |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : NOEC ( <i>Daphnia magna</i> (Water flea)): 24.1 mg/l<br>Exposure time: 21 d<br>Method: OECD Test Guideline 211                                             |

**ethylene glycol dimethacrylate:**

|                                                                        |                                                                                                                                                                                                                   |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                                       | : LC50 ( <i>Danio rerio</i> (zebra fish)): 15.95 mg/l<br>End point: mortality<br>Exposure time: 96 h<br>Test Type: static test<br>Method: OECD Test Guideline 203<br>GLP: yes                                     |
| Toxicity to daphnia and other aquatic invertebrates                    | : EC50 ( <i>Daphnia magna</i> (Water flea)): 44.9 mg/l<br>End point: Immobilization<br>Exposure time: 48 h<br>Test Type: static test<br>Analytical monitoring: yes<br>Method: OECD Test Guideline 202<br>GLP: yes |
| Toxicity to algae/aquatic plants                                       | : ErC50 ( <i>Pseudokirchneriella subcapitata</i> ): 19 mg/l<br>Exposure time: 96 h<br>Test Type: static test<br>Analytical monitoring: yes<br>Method: OECD Test Guideline 201<br>GLP: yes                         |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : NOEC ( <i>Daphnia magna</i> (Water flea)): 5.05 mg/l<br>End point: mortality<br>Exposure time: 21 d<br>Test Type: semi-static test<br>Analytical monitoring: yes<br>Method: OECD Test Guideline 211<br>GLP: yes |
| Toxicity to microorganisms                                             | : EC50 (activated sludge): 570 mg/l<br>Exposure time: 3 h<br>Test Type: static test                                                                                                                               |

## **Persistence and degradability**

### **Components:**

#### **2-hydroxyethyl methacrylate:**

Biodegradability : aerobic  
Inoculum: activated sludge  
Concentration: 100 mg/l  
Result: Readily biodegradable.  
Biodegradation: 92 - 100 %  
Exposure time: 14 d  
Method: OECD Test Guideline 301C

#### **ethylene glycol dimethacrylate:**

Biodegradability : aerobic  
Inoculum: activated sludge, non-adapted  
Concentration: 2.01 mg/l  
Result: Readily biodegradable.  
Biodegradation: 71.2 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
GLP: yes

## **Bioaccumulative potential**

### **Components:**

#### **2-hydroxyethyl methacrylate:**

Partition coefficient: n- : log Pow: 0.42 (77 °F / 25 °C)  
octanol/water pH: 5.9 - 6.1  
Method: OECD Test Guideline 107

#### **ethylene glycol dimethacrylate:**

Partition coefficient: n- : log Pow: 2.4  
octanol/water Method: OECD Test Guideline 107

## **Mobility in soil**

No data available

## **Other adverse effects**

### **Components:**

#### **2-hydroxyethyl methacrylate:**

Additional ecological : No data available  
information

#### **ethylene glycol dimethacrylate:**

Aldrich - 477028

Page 11 of 14

Additional ecological information : No data available

### **Endocrine disrupting properties**

No data available

---

## **SECTION 13. DISPOSAL CONSIDERATIONS**

### **Disposal methods**

Waste from residues : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

---

## **SECTION 14. TRANSPORT INFORMATION**

### **International Regulations**

#### **IATA-DGR**

Not regulated as a dangerous good

#### **IMDG-Code**

Not regulated as a dangerous good

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

Not applicable for product as supplied.

### **National Regulations**

#### **49 CFR**

Not regulated as a dangerous good

Poison Inhalation Hazard : No

### **Special precautions for user**

Remarks : Not classified as dangerous in the meaning of transport regulations.

---

## **SECTION 15. REGULATORY INFORMATION**

### **CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

### **SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

### **SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Acute Health Hazard

**SARA 313** : 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.

## **US State Regulations**

### **Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

### **Maine Chemicals of High Concern**

Product does not contain any listed chemicals

### **Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

### **Washington Chemicals of High Concern**

Product does not contain any listed chemicals

### **The components of this product are reported in the following inventories:**

US TSCA : All substances listed as active on the TSCA inventory

### **TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

---

## **SECTION 16. OTHER INFORMATION**

### **Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a

test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Copyright 2025 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

Revision Date : 07/14/2026

US / EN