

MATERIAL SAFETY DATA SHEET

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Version 1.8

Section 1 - Product and Company Information

Product Name 2-HYDROXYETHYL METHACRYLATE, 97%
Product Number 128635
Brand ALDRICH

Company Sigma-Aldrich
Address 3050 Spruce Street
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
2-HYDROXYETHYL METHACRYLATE	868-77-9	No

Ingredient Name	CAS #	Percent	SARA 313
Stabilized with:	None		
DIETHYLENE GLYCOL MONOMETHACRYLATE	2351-43-1	3	No
METHACRYLIC ACID	79-41-4	<= 1.5	No
OTHER ESTER ADDUCTS	None	0.7	No
ETHYLENE GLYCOL	107-21-1	0.25	Yes
4-METHOXYPHENOL	150-76-5	0.035	No
ETHYLENE OXIDE	75-21-8	0.001	Yes

Formula C6H10O3

Synonyms Ethylene glycol methacrylate * Ethylene glycol, monomethacrylate * Glycol methacrylate * Glycol monomethacrylate * Hydroxyethyl methacrylate * beta-Hydroxyethyl methacrylate * 2-Hydroxyethyl methacrylate * Mhoromer * Monomer MG-1 * Monomethacrylic ether of ethylene glycol

RTECS Number: OZ4725000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Corrosive.

Harmful in contact with skin and if swallowed. Causes severe burns. May cause sensitization by skin contact.

Readily absorbed through skin. Target organ(s): Kidneys. Liver.

HMIS RATING

HEALTH: 3*

FLAMMABILITY: 1

REACTIVITY: 1

NFPA RATING

HEALTH: 3

FLAMMABILITY: 1

REACTIVITY: 1

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

EXPLOSION HAZARDS

May explode when heated. Closed containers may rupture and explode during runaway polymerization.

FLASH POINT

214 °F 101 °C Method: closed cup

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.
Specific Method(s) of Fire Fighting: Use water spray to cool fire-exposed containers.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Shut off all sources of ignition. Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for

disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Avoid contact with eyes, skin, and clothing.
Avoid prolonged or repeated exposure. Do not breathe vapor.

STORAGE

Suitable: Keep tightly closed.
Store at 2-8°C

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). 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.
Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

Section 9 - Physical/Chemical Properties

Appearance

Physical State: Clear liquid
Color: Colorless

Property	Value	At Temperature or Pressure
Molecular Weight	130.14 AMU	
pH	N/A	
BP/BP Range	67 °C	3.5 mmHg
MP/MP Range	46.0 - 50.0 °C	
Freezing Point	N/A	
Vapor Pressure	0.01 mmHg	25 °C
Vapor Density	5 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	1.071 g/cm ³	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	214 °F 101 °C	Method: closed cup

Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	N/A
Refractive Index	1.453
Optical Rotation	N/A
Miscellaneous Data	N/A
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Conditions to Avoid: Light. Heat. Moisture.

Materials to Avoid: Oxidizing agents, Free radical initiators, Steel, Peroxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: May occur

Hazardous Polymerization Reactions: Loss of inhibitor

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.

Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

SENSITIZATION

Skin: May cause allergic skin reaction.

TARGET ORGAN(S) OR SYSTEM(S)

Heart. Liver. Kidneys.

SIGNS AND SYMPTOMS OF EXPOSURE

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

TOXICITY DATA

Oral

Rat

5050 mg/kg

LD50

Remarks: Behavioral:Coma.

Intraperitoneal

Rat

1250 MG/KG

LD50

Oral

Mouse

3275 mg/kg

LD50

Remarks: Behavioral:Coma.

Intraperitoneal

Mouse

497 MG/KG
LD50

Oral
Guinea pig
4680 mg/kg
LD50

Remarks: Behavioral:Coma.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat Rat
Dose: 3062 MG/KG 3062 MG/KG
Route of Application: Oral Oral
Exposure Time: (35W PRE) (35W PRE)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Effects on Embryo or Fetus: Fetal death. Effects on Embryo or Fetus: Fetal death. Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Species: Rat Rat
Dose: 3062 MG/KG 3062 MG/KG
Route of Application: Oral Oral
Exposure Time: (35W MALE) (35W MALE)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on Embryo or Fetus: Fetal death. Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xi

Indication of Danger: Irritant.

R: 36/37/38-43

Risk Statements: Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.

S: 26-36/37

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Corrosive.

Risk Statements: Harmful in contact with skin and if swallowed. Causes severe burns. May cause sensitization by skin contact.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Statements: Readily absorbed through skin. Target organ(s): Kidneys. Liver.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

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. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.