

SPI Supplies Division

Structure Probe, Inc.

206 Garfield Ave., West Chester, PA 19381-0656 USA

Phone: 1-(610)-436-5400 Fax: 1-(610)-436-5755

sds@2spi.com

<http://www.2spi.com>

Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: July 11, 2017

SPI Catalog # 02678-AB

Ethylene Glycol Dimethacrylate

Section 1.1: Identification

Chemical Name/Synonyms Ethylene Glycol Dimethacrylate; Ethylene Dimethacrylate

Product or Trade Name Ethylene Glycol Dimethacrylate

CAS #'s 97-90-5

Chemical Formula..... C₁₀H₁₄O₄

Section 1.2: Relevant Uses/Restrictions

Scientific research and development.

Monomer in polymer embedding kits.

Section 1.3: Supplier of the Safety Data Sheet

SPI Supplies Division

Structure Probe, Inc.

206 Garfield Ave., West Chester, PA 19381-0656 USA

Phone: 1-(610)-436-5400 Fax: 1-(610)-436-5755

sds@2spi.com

<http://www.2spi.com>

Manufacturer's CAGE: 1P573

Section 1.4: Emergency telephone number

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-741-5970

Toll-free phone: 1-(800)-424-9300 USA + Canada only

Section 2: Hazard Identification

2.1 Classification of the substance

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

Skin Sensitizer, Category 1B

Specific Target Organ Toxicity, Category 3 (respiratory system)

Acute Aquatic Toxicity, Category 3

2.2 Label elements

Pictogram



Signal Word: Warning

Hazard statements:

- H317 May cause an allergic reaction.
- H335 May cause respiratory irritation.
- H402 Harmful to aquatic life.

Precautionary statements:

- P261 Avoid breathing dust/ fume/ gas/ spray/ mist/ vapors.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P363 Wash contaminated clothing before reuse.
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/ container to an approved waste disposal plant.

Unknown percentage statements (if needed): No additional relevant information.

2.3 Other Hazards Not Otherwise Classified (HNOC) or not covered by GHS: none

Hazardous Material Information System USA

Health 2
Fire Hazard 1
Reactivity 0
Personal Protection

NFPA Rating (estimated)

Health 2
Flammability..... 1
Reactivity 0

Section 3: Composition

3.1 Substances:

<u>Substance</u>	<u>CAS Number</u>	<u>Percent by Weight</u>
Ethane-1,2-diol dimethacrylate	97-90-5	<= 100.0%

Section 4: First Aid Measures

4.1 Description of first aid measures:

General Advice: Consult a physician. Show this SDS to the doctor in attendance. Move out of dangerous area.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact: In case of contact, immediately flush skin with plenty of soap and water. Remove contaminated clothing and shoes. Consult a physician.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes as a precaution.

Ingestion: If swallowed, never give anything by mouth to an unconscious person. Rinse out mouth with water. Consult a physician.

Self-protection of the first aider: No further data available.

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.

4.3 Indication of any immediate medical attention and special treatment needed: No further data available.

Section 5: Fire Fighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media: Water spray, alcohol-resistant foam, dry powder, or carbon dioxide (CO₂).

5.2 Specific hazards arising from the substance or mixture

No data available.

5.3 Advice for firefighters

Special protective equipment and precautions for firefighters: Wear self-contained breathing apparatus for firefighting.

Section 6: Accidental Release Measures

6.1 Personal precautions

Assure sufficient ventilation.
Use personal protective clothing.
Keep away from sources of ignition.
Use breathing apparatus if exposed to vapors/ dust/ mist/ aerosol.
Evacuate personnel to safe areas.

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 material for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste.

Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see Section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes.

Avoid inhalation of vapor or mist.

For precautions see Section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in dry and well-ventilated place.

7.3 Specific end uses

Scientific research and development.

Monomer in polymer embedding kits.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

Section 8: Exposure Controls and Personal Protection

8.1 Control parameter and Personal Protection

Workplace exposure limits

Contains no substances with occupational exposure limit values or hazardous component without workplace control parameters.

Biological limit values: No data available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice.

Wash hands before breaks and at the end of the workday.

8.2.2 Individual protection measures

Hand protection:

Butyl rubber gloves (0.3mm), Break through time ca. 480 min (EN374).

Handle in accordance with good industrial hygiene and safety practice.

Wash hands before breaks and at the end of the workday.

Eye/Face Protection:

Face shield, safety glasses with side shield or goggles (ANSI Z87.1 or equivalent).

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 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).

8.2.3 Environmental exposure controls: No additional information available.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: Clear, colorless liquid

Odor: Ester-like

Odor threshold: No data available

pH: No data available

Melting point/Freezing point: -19.99 °C (-3.98 °F)

Boiling point/Boiling point range: 98-100 °C (208 °F) at 7hPa (5 mm Hg)

Flash Point: 101.5 °C (214.7 °F) closed cup

Evaporation rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapor Pressure: 1 hPa (1 mm Hg) at 20 °C (68 °F)

Density: 1.051 g/cm³ at 25 °C (77 °F)

Solubility in water: 5 g/L at 20 °C (68 °F)

Partition coefficient (n-octanol/water): log Pow 1.22

auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: 3.038 mm²/s at 20 °C (68 °F)

9.2 Other information: None

Section 10: Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Chemical Stability: Stable under normal storage conditions.

10.3 Possibility of Hazardous Reactions: No data available.

10.4 Conditions to avoid: May polymerize on exposure to light. Exposure to light.

10.5 Incompatible materials: Strong acids, Strong oxidizing agents, Strong bases, Reducing agents, Amines, Heavy metals, Peroxides, Free radical initiators.

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.

Section 11: Toxicological Information

Information on the likely routes of exposure

11.1 Information on toxicological effects

a. acute toxicity

Acute Oral Toxicity	LD50 rat	3,300 mg/kg
Acute Dermal Toxicity	No data available	

b. skin corrosion/irritation

Caustic burning/irritation of skin	rabbit, Draize test	No skin irritation
------------------------------------	---------------------	--------------------

c. serious eye damage/irritation

OECD Test Guidelines	rabbit	No eye irritation
----------------------	--------	-------------------

d. respiratory or skin sensitization

No data available

e. germ cell mutagenicity

Mouse lymphocyte	Mutation in mammalian somatic cells
------------------	-------------------------------------

f. 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 identified as a carcinogen or potential carcinogen by OSHA.

g. reproductive toxicity

No data available

h. STOT-single exposure

May cause respiratory irritation.

i.. STOT-repeated exposure

No data available

j. aspiration hazard

No data available

Additional information:

RTECS: OZ4400000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach – Irregularities – Based on Human Evidence (Mequinol).

Section 12: Ecological Information

12.1 Toxicity

Toxicity to fish		
LC50	other fish, OECD 203, 96 h	15.95 mg/L

12.2 Persistence and degradability

Biodegradability Result: 71.6% - Readily biodegradable

12.3 Bio-accumulative 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

No data available

Section 13: Disposal Considerations**13.1 Waste treatment methods****Product:**

Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method. CYRO encourages the recycle, recovery, and reuse of materials, where permitted, as an alternative to disposal as a waste.

Contaminated packaging:

Dispose of as unused product.

Section 14: Transport Information

DOT (US): Not regulated as a dangerous goods.

IMDG: Not regulated as a dangerous goods.

IATA:

UN Number: 3334

Class: 9

Packing group: III

Proper shipping name: Aviation regulated liquid, n.o.s. (Ethylene dimethacrylate)

Section 15: Regulatory Information**15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture****US Federal 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.

SARA 311/312 Hazards:

Acute Health Hazard

US State Regulations:

Massachusetts Right to Know Components:

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

Pennsylvania Right To Know Components:

Ethane-1,2-diol dimethacrylate CAS No. 97-90-5

New Jersey Right To Know Components:

Ethane-1,2-diol dimethacrylate CAS No. 97-90-5

California Prop. 65 Components:

This product does not contain any chemical(s) known to State of California to cause cancer, birth defects, or other reproductive harm.

15.2 Chemical Safety Assessment

A chemical safety assessment not required / not conducted.

Date of Preparation: 11 July 2017

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

CMRG: Chemical Manufacturer's Recommended Guidelines

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulative and Toxicological

vPvB: very Persistent and very Bio-accumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

STEL: Short Term Exposure Limit

CEIL: Ceiling

OECD: Organization for Economic Co-operation and Development

Section 16: Other Information

Disclaimer of Liability:

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to

customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues or fluids.

The information and recommendations set forth above are taken from sources believed to be accurate as of the date hereof, however SPI Supplies and Structure Probe, Inc. make no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assume no liability to any user thereof. The information contained in this sheet does not constitute a hazard assessment and should not be used in place of the user's own assessment of work place risks as required by other health and safety legislation. Be aware of the Structure Probe, Inc. Copyright Policy. Structure Probe, Inc. grants a nonexclusive license to make unlimited copies of this safety sheet for internal use only. Quite obviously, this information would pertain only to this material when purchased from SPI Supplies as product from other sources, with other ingredients and impurity levels could have substantially different properties.