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**1. PRODUCT AND COMPANY IDENTIFICATION****1.1 Product identifiers**

Product name : Tetraethylene glycol dimethacrylate

Product Number : 86680

Brand : Aldrich

CAS-No. : 109-17-1

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

Identified uses : Laboratory chemicals, Synthesis of substances

**1.3 Details of the supplier of the safety data sheet**Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

**1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

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**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

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

**2.2 GHS Label elements, including precautionary statements**

Pictogram : none

Signal word : Warning

Hazard statement(s)  
H227 : Combustible liquid.Precautionary statement(s)  
P210 : Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P370 + P378 : In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
P403 + P235 : Store in a well-ventilated place. Keep cool.  
P501 : Dispose of contents/ container to an approved waste disposal plant.**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none**

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**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Formula : C<sub>16</sub>H<sub>26</sub>O<sub>7</sub>  
Molecular weight : 330.37 g/mol  
CAS-No. : 109-17-1  
EC-No. : 203-653-1

#### Hazardous components

Component	Classification	Concentration
<b>3,6,9-Trioxaundecamethylene dimethacrylate</b>		
		<= 100 %

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

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## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

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

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### 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

### 4.3 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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. 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.

### 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.

### 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

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.

Recommended storage temperature 2 - 8 °C

Light sensitive. Heat sensitive.

#### 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
Hydroquinone	123-31-9	TWA	1.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Eye irritation Eye damage Adopted values or notations enclosed are those for which changes are proposed in the NIC See Notice of Intended Changes (NIC) Confirmed animal carcinogen with unknown relevance to humans Sensitizer		
		TWA	1 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Dermal Sensitization Eye irritation Eye damage 2015 Adoption Confirmed animal carcinogen with unknown relevance to humans		
		TWA	2.000000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	2 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		C	2.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		15 minute ceiling value		
		PEL	2 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

##### Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Hydroquinone	123-31-9	Methemoglobin	1.500 %	In blood	ACGIH - Biological Exposure Indices (BEI)
	Remarks	During or end of shift			

## 8.2 Exposure controls

### Appropriate engineering controls

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

### Personal protective equipment

#### 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

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.

#### Body Protection

Impervious clothing, 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.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |   |  |
|---|--|
| a) Appearance                                   | Form: clear, viscous liquid<br>Colour: light brown |
| b) Odour  | No data available                                  |
| c) Odour Threshold                              | No data available                                  |
| d) pH   | 6.8 - 7.2  |
| e) Melting point/freezing point                 | No data available                                  |
| f) Initial boiling point and boiling range      | 220 °C (428 °F) at 1,013 hPa (760 mmHg)            |
| g) Flash point                                  | 82 °C (180 °F) - closed cup                        |
| h) Evaporation rate                             | No data available                                  |
| i) Flammability (solid, gas)                    | No data available                                  |
| j) Upper/lower flammability or explosive limits | No data available                                  |
| k) Vapour pressure                              | No data available                                  |
| l) Vapour density                               | No data available                                  |
| m) Relative density                             | 1.082 g/mL at 20 °C (68 °F)                        |
| n) Water solubility                             | No data available                                  |
| o) Partition coefficient: n-octanol/water       | No data available                                  |
| p) Auto-ignition temperature                    | No data available                                  |
| q) Decomposition                                | No data available                                  |

temperature

- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

## 9.2 Other safety information

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.

Contains the following stabiliser(s):

Hydroquinone (0.006 %)

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Free radical initiators, Oxidizing agents, Reducing agents, Heavy metals

### 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

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available

No data available

Inhalation: No data available

Inhalation: No data available

LD50 Dermal - Rabbit - > 3,000 mg/kg

No data available

No data available

#### Skin corrosion/irritation

No data available

Skin - Rabbit

Result: Mild skin irritation

#### Serious eye damage/eye irritation

No data available

No data available

#### Respiratory or skin sensitisation

No data available

No data available

#### Germ cell mutagenicity

No data available

Mouse  
lymphocyte  
Cytogenetic analysis

Mouse  
lymphocyte  
Micronucleus test

### **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.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- 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.

### **Reproductive toxicity**

No data available  
No data available  
No data available  
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

### **Additional Information**

RTECS: OZ4000000

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

Liver - Irregularities - Based on Human Evidence (Hydroquinone)

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## **12. ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

No data available  
No data available

### **12.2 Persistence and degradability**

No data available

### **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**

No data available  
No data available

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

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.

#### Contaminated packaging

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### DOT (US)

NA-Number: 1993      Class: NONE      Packing group: III  
Proper shipping name: Combustible liquid, n.o.s. (3,6,9-Trioxaundecamethylene dimethacrylate)  
Reportable Quantity (RQ):

Poison Inhalation Hazard: No

### IMDG

UN number: 3082      Class: 9      Packing group: III      EMS-No: F-A, S-F  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (3,6,9-Trioxaundecamethylene dimethacrylate)  
Marine pollutant:yes

### IATA

UN number: 3082      Class: 9      Packing group: III  
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (3,6,9-Trioxaundecamethylene dimethacrylate)

### Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

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## 15. REGULATORY INFORMATION

### SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

	CAS-No.	Revision Date
Hydroquinone	123-31-9	2007-07-01

### 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

Fire Hazard

**Reportable Quantity** : lowest RQ > 999999 lbs

lowest RQ > 999999 lbs

### Massachusetts Right To Know Components

	CAS-No.	Revision Date
Hydroquinone	123-31-9	2007-07-01

### Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Hydroquinone	123-31-9	2007-07-01
3,6,9-Trioxaundecamethylene dimethacrylate	109-17-1	

### New Jersey Right To Know Components

	CAS-No.	Revision Date
3,6,9-Trioxaundecamethylene dimethacrylate	109-17-1	

### California Prop. 65 Components

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

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## 16. OTHER INFORMATION

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

H227 Combustible liquid.

#### HMIS Rating

Health hazard: 0

Chronic Health Hazard:

Flammability: 2

Physical Hazard 0

#### NFPA Rating

Health hazard: 0

Fire Hazard: 2

Reactivity Hazard: 0

#### Further information

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#### Preparation Information

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956

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