

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Methyl methacrylate  
Product Number : M55909  
Brand : Aldrich  
Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA  
Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # : (314) 776-6555

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C<sub>5</sub>H<sub>8</sub>O<sub>2</sub>  
Molecular Weight : 100.12 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Methyl methacrylate</b>			
80-62-6	201-297-1	607-035-00-6	-

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Flammable Liquid  
Target Organ Effect  
Skin sensitizer  
Irritant

##### Target Organs

Liver, Kidney

#### HMIS Classification

Health Hazard: 2  
Chronic Health Hazard: \*  
Flammability: 3  
Physical hazards: 2

#### NFPA Rating

Health Hazard: 2  
Fire : 3  
Reactivity Hazard: 2

#### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.

#### 4. 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

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### If swallowed

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

#### 5. FIRE-FIGHTING MEASURES

##### Flammable properties

Flash point 9 °C (48 °F) - closed cup

Ignition temperature 435 °C (815 °F)

##### Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

##### Specific hazards

Flash back possible over considerable distance. Container explosion may occur under fire conditions.

##### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

##### Further information

Use water spray to cool unopened containers.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions

Use personal protective equipment. Avoid breathing vapors, 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.

##### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

##### Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

#### 7. HANDLING AND STORAGE

##### 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.

**Storage**

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. Store in cool place.

Recommended storage temperature: 2 - 8 °C

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
Methyl methacrylate	80-62-6	TWA	50 ppm	2000-03-01	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs ) and Biological Exposure Indices (BEIs)
Remarks	Refers to Appendix A -- Carcinogens. 2000 Adoption				
		STEL	100 ppm	2000-03-01	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs ) and Biological Exposure Indices (BEIs)
	Refers to Appendix A -- Carcinogens. 2000 Adoption				
		TWA	100 ppm 410 mg/m3	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
		TWA	100 ppm 410 mg/m3	1993-06-30	US. Department of Labor - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL) 29 CFR 1910.1000 Air Contaminants.

## Personal protective equipment

### 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).

### Hand protection

Handle with gloves.

### Eye protection

Safety glasses

### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

### Hygiene measures

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	liquid
Colour	colourless

### Safety data

pH	no data available
Melting point	-48 °C (-54 °F)
Boiling point	98 - 100 °C (208 - 212 °F)
Flash point	9 °C (48 °F) - closed cup
Ignition temperature	435 °C (815 °F)
Lower explosion limit	2.12 %(V)
Upper explosion limit	12.5 %(V)
Vapour pressure	51.3 hPa (38.5 mmHg) at 25 °C (77 °F)
Density	0.943 g/cm <sup>3</sup>
Water solubility	15 g/l
Partition coefficient: n-octanol/water	log Pow: 1.38
Relative vapour density	3.46 - (Air = 1.0)

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Conditions to avoid

Heat, flames and sparks.

Heat. May polymerize on exposure to light.

### Materials to avoid

Oxidizing agents, Peroxides, Amines, Bases, acids, Reducing agents, Halogens

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

**Hazardous reactions**

Vapours may form explosive mixture with air.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

LD50 Oral - rat - 7,872 mg/kg

Remarks: Behavioral:Muscle weakness. Behavioral:Coma. Respiratory disorder

LC50 Inhalation - rat - 4 h - 78,000 mg/m3

LD50 Dermal - rabbit - > 5,000 mg/kg

Remarks: Prolonged skin contact may cause skin irritation and/or dermatitis.

**Irritation and corrosion**

no data available

**Sensitisation**

May cause allergic skin reaction.

**Chronic exposure**

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

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.

**Signs and Symptoms of Exposure**

Central nervous system depression, Drowsiness, Irritability, Dizziness, Ataxia., narcosis

**Potential Health Effects**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Target Organs</b>	Liver, Kidney,

**12. ECOLOGICAL INFORMATION****Elimination information (persistence and degradability)**

no data available

**Ecotoxicity effects**

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 125.5 - 275.0 mg/l - 96 h
Toxicity to daphnia and other aquatic	EC50 - Daphnia magna (Water flea) - 720 mg/l

invertebrates.

Toxicity to algae EC50 - Selenastrum capricornutum (green algae) - 170 mg/l - 96 h

**Further information on ecology**

no data available

**13. DISPOSAL CONSIDERATIONS**

**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION**

**DOT (US)**

UN-Number: 1247 Class: 3 Packing group: II  
Proper shipping name: Methyl methacrylate monomer, stabilized

**IMDG**

UN-Number: 1247 Class: 3 Packing group: II EMS-No: F-E, S-D  
Proper shipping name: METHYL METHACRYLATE, MONOMER, STABILIZED  
Marine pollutant: No

**IATA**

UN-Number: 1247 Class: 3 Packing group: II  
Proper shipping name: Methyl methacrylate monomer, stabilized

**15. REGULATORY INFORMATION**

**OSHA Hazards**

Flammable Liquid, Target Organ Effect, Skin sensitizer, Irritant

**TSCA Status**

On TSCA Inventory

**DSL Status**

All components of this product are on the Canadian DSL list.

**SARA 302 Components**

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

**SARA 313 Components**

Methyl methacrylate	CAS-No. 80-62-6	Revision Date 1987-01-01
---------------------	--------------------	-----------------------------

**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

Methyl methacrylate	CAS-No. 80-62-6	Revision Date 1987-01-01
---------------------	--------------------	-----------------------------

**Pennsylvania Right To Know Components**

Methyl methacrylate	CAS-No. 80-62-6	Revision Date 1987-01-01
---------------------	--------------------	-----------------------------

**New Jersey Right To Know Components**

Methyl methacrylate

CAS-No.  
80-62-6

Revision Date  
1987-01-01

**California Prop. 65 Components**

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

**16. OTHER INFORMATION**

**Further information**

Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only. 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 Co., 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.