

11/14/07

RECEIVED NOV 18 2007

SIGMA-ALDRICH**Material Safety Data Sheet**Version 3.1
Revision Date 11/06/2007
Print Date 11/07/2007**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 : C5H8O2
Molecular Weight : 100.12 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Methyl methacrylate			
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

Inhalation : May be harmful if inhaled. Causes respiratory tract irritation.
Skin : May be harmful if absorbed through skin. Causes skin irritation.
Eyes : Causes eye irritation.
Ingestion : 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/cm3
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

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.
Target Organs	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

Sigma-Aldrich Corporation
www.sigma-aldrich.com

Page 5 of 7

Aldrich - M55909
Delivery 0827269816-000020 Purchase Order CC/110707/KRAHN

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 ComponentsSigma-Aldrich Corporation
www.sigma-aldrich.com

Page 6 of 7

Aldrich - M55909
Delivery 0827269816-000020 Purchase Order CC/110707/KRAHN

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.