

Section 1. Product and Company Identification

Product Name Methyl Methacrylate
CAS Number 80-62-6

Parchem - fine & specialty chemicals
415 Huguenot Street
New Rochelle, NY 10801
☎ (914) 654-6800 ☎ (914) 654-6899
🌐 parchem.com ✉ info@parchem.com

EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
All other Origins: 1 (813) 248-0585
Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

Classification in accordance with 29 CFR 1910.1200

Flammable Liquids, Category 2
Skin Corrosion / Irritation, Category 2
Eye Damage / Irritation, Category 2A
Respiratory sensitizer, Category 1
Skin sensitizer, Category 1
Toxic to Reproduction, Category 2
Specific Target Organ Toxicity - Single Exposure, Category 3 (central nervous system and respiratory tract)
Specific Target Organ Toxicity - Repeated Exposure, Category 1 (central nervous system and respiratory system)
Hazardous to the Aquatic Environment - Acute Hazard, Category 3

GHS Label Elements

Pictograms:



Signal word: Danger

Hazard and precautionary statements

Hazard Statement(s)

Highly flammable liquid and vapor.
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.



May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
May cause respiratory irritation.
May cause drowsiness and dizziness.
Causes damage to central nervous system and respiratory system through prolonged or repeated exposure.
Harmful to aquatic life.

Precautionary Statement(s)

Prevention: Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe vapor or mist. Wear protective gloves and eye/face protection. Wash thoroughly after handling. In case of inadequate ventilation wear respiratory protection. Do not eat, drink, or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment.

Response: In case of fire, use media appropriate for extinction. IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal: Dispose of in accordance with applicable regulations

Section 3. Composition / Information on Ingredients

Common Name Methyl Methacrylate
Synonym(s) Methyl methacrylate, monomer inhibited; 2-Propenoic acid, 2-methyl-, methyl ester; Methacrylic acid, methyl ester; Methyl 2-methyl-2-propenoate
Formula C₅H₈O₂
CAS Number 80-62-6

COMPONENT	CAS NUMBER	CONCENTRATION
Methyl methacrylate, inhibited	80-62-6	100%

Section 4. First Aid Measures

Description of Necessary Measures

Inhalation: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.



Skin: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eyes: Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Then get immediate medical attention.

Ingestion: If swallowed, get medical attention.

Most Important Symptoms/Effects

Acute: Respiratory tract irritation, skin irritation, eye irritation, central nervous system depression, allergic reactions

Delayed: Allergic reactions, reproductive effects, central nervous system damage, respiratory system damage

Indication of Immediate Medical Attention and Special Treatment: For inhalation, consider oxygen.

Section 5. Firefighting Measures

Suitable Extinguishing Media: Regular dry chemical, carbon dioxide, water spray, alcohol-resistant foam. Large fires: water spray or fog, alcohol-resistant foam.

Unsuitable Extinguishing Media: Do not use high-pressure water streams.

Specific Hazards Arising from the Chemical: Severe fire hazard. Moderate explosion hazard. Vapor/air mixtures are explosive above flash point. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Containers may rupture or explode if exposed to heat.

Hazardous Combustion Products: Oxides of carbon

Fire Fighting Measures: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible, then take the following precautions: keep unnecessary people away, isolate hazard area, and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car, or tank truck: evacuation radius = 800 meters (1/2 mile). Water may be ineffective.

Special Protective Equipment and Precautions for Firefighters: Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:

Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

Methods and Materials for Containment and Cleaning Up: Avoid heat, flames, sparks, and other sources of ignition. Remove sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: dike for later disposal. Keep unnecessary people away, isolate hazard area, and deny entry. Stay upwind and keep out of



low areas. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

Section 7. Handling and Storage

Precautions for Safe Handling: Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe vapor or mist. Wear protective gloves and eye/face protection. Wash thoroughly after handling. In case of inadequate ventilation wear respiratory protection. Do not eat, drink, or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Conditions for Safe Storage, including any Incompatibilities: Store and handle in accordance with all current regulations and standards. Avoid heat, flames, sparks, and other sources of ignition. Protect from physical damage. Store outside or in a detached building. Store with flammable liquids. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Grounding and bonding required. Keep separated from incompatible substances.

Incompatibilities: Acids, bases, combustible materials, metals, oxidizing materials, peroxides

Section 8. Exposure Controls / Personal Protection

Component Exposure Limits

ACGIH: 50 ppm TWA

100 ppm STEL

OSHA (Final): 100 ppm TWA; 410 mg/m³ TWA

OSHA (Vacated): 100 ppm TWA; 410 mg/m³ TWA

NIOSH: 100 ppm TWA; 410 mg/m³ TWA

Component Biological Limit Values: There are no biological limit values for any of this product's components.

IDLH: 1000 ppm

Appropriate Engineering Controls: Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eyes/Face Protection: Wear splash resistant safety goggles with a face-shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection: Wear appropriate chemical resistant clothing.

Glove Recommendations: Wear appropriate chemical resistant gloves.



Respiratory Protection: The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.

1000 ppm

Any supplied-air respirator operated in a continuous-flow mode.

Any air-purifying respirator with a full face-piece and an organic vapor canister.

Any air-purifying full-face-piece respirator (gas mask) with a chin-style, front-mounted or back-mounted organic vapor canister.

Any powered, air-purifying respirator with organic vapor cartridge(s).

Any self-contained breathing apparatus with a full face-piece.

Any supplied-air respirator with a full face-piece.

Emergency or planned entry into unknown concentrations or IDLH conditions -

Any self-contained breathing apparatus that has a full face-piece and is operated in a pressure-demand or other positive-pressure mode.

Any supplied-air respirator with a full face-piece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Escape -

Any air-purifying full face-piece respirator (gas mask) with a chin-style, front-mounted or back-mounted organic vapor canister.

Any appropriate escape-type, self-contained breathing apparatus.

Section 9. Physical and Chemical Properties

Physical State: Liquid

Appearance: Colorless liquid

Color: Colorless

Physical Form: Volatile liquid

Odor: Sweet odor

Odor Threshold: 0.05 ppm

pH: Not available

Melting/Freezing Point: -48°C

Boiling Point: 100°C

Flash Point: 10°C (OC)

Decomposition: Not available

Evaporation Rate: 3.1 (butyl acetate = 1)

OSHA Flammability Class: IB

LEL: 1.7%

UEL: 8.2%

Vapor Pressure: 28 mm Hg at 20°C

Vapor Density (air = 1): 3.6

Specific Gravity (water = 1): 0.9

Water Solubility: Slightly soluble

Log KOW: 1.38

Auto Ignition: 421°C

Viscosity: Not available



Molecular Weight: 100.13
Molecular Formula: C₅H₈O₂

Other Property Information: No additional information is available.

Solvent Solubility

Soluble: Ethanol, ether, acetone, methyl ethyl ketone, esters, aromatic and chlorinated solvents, tetrahydrofuran, organic solvents

Section 10. Stability and Reactivity

Chemical Stability: May polymerize violently or explosively. Avoid contact with air, light or storage and use above room temperature.

Possibility of Hazardous Reactions: May polymerize violently or explosively. Avoid contact with heat, air, light, initiators, or curing agents. Closed containers may rupture violently.

Conditions to Avoid: Avoid heat, flames, sparks, and other sources of ignition. Containers may rupture or explode if exposed to heat.

Incompatible Materials: Acids, bases, combustible materials, metals, oxidizing materials, peroxides

Hazardous Decomposition, Combustion: Oxides of carbon

Section 11. Toxicological Information

Acute and Chronic Toxicity

Component Analysis - LD50/LC50: The components of this material have been reviewed in various sources and no selected endpoints have been identified.

RTECS Acute Toxicity (selected): The components of this material have been reviewed, and RTECS publishes the following endpoints:

Inhalation: 18500 mg/m³/2 hour Inhalation Mouse LC50
78000 mg/m³/4 hour Inhalation Rat LC50

Acute Toxicity Level

Slightly Toxic: Inhalation, ingestion

INFORMATION ON LIKELY ROUTES OF EXPOSURE

Inhalation: Irritation, allergic reactions, vomiting, headache, drowsiness, dizziness, loss of coordination, difficulty breathing, changes in blood pressure, sleep disturbances, pain in extremities, lung congestion, kidney damage, liver damage

Ingestion: Irritation, allergic reactions, nausea, vomiting, headache, dizziness, drowsiness, loss of coordination, kidney damage, liver damage, coma

Skin Contact: Irritation, allergic reactions, rash

Eye Contact: Irritation, tearing, eye damage

Immediate Effects: Respiratory tract irritation, skin irritation, eye irritation, central nervous system depression, allergic reactions



Delayed Effects: Allergic reactions, reproductive effects, central nervous system damage, respiratory system damage

Medical Conditions Aggravated by Exposure: Kidney disorders, liver disorders, respiratory disorders, skin disorders and allergies

Irritation/Corrosivity Data: Respiratory tract irritation, skin irritation, eye irritation

RTECS IRRITATION

The components of this material have been reviewed, and RTECS publishes the following endpoints: 150 mg Eyes Rabbit; 10 gm/open Skin Rabbit; 2 percent Skin Woman

Local Effects

Irritant: Inhalation, skin, eye

Target Organs: Immune system (sensitizer), central nervous system

Respiratory Sensitization: Component data indicate the substance is sensitizing.

Dermal Sensitization: Component data indicate the substance is sensitizing.

Carcinogenicity

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 60 [1994]; Supplement 7 [1987] (Group 3 (not classifiable))

RTECS Mutagenic: The components of this material have been reviewed, and RTECS publishes data for one or more components.

Reproductive Effects Data: Available data characterizes this substance as a reproductive hazard.

RTECS Reproductive Effects: The components of this material have been reviewed, and RTECS publishes the following endpoints: 116 ppm Inhalation Mouse TLo (6 hour, pregnant 4-13 day(s)); 500 mg/m³ Inhalation Rat TLo (prior to copulation 122 day(s)); 54 mg/m³ Inhalation Rat TLo (24 hour, prior to copulation 8 week); 500 mg/m³ Inhalation Rat TLo (prior to copulation 119 day(s)); 4480 mg/m³ Inhalation Rat TLo (2 hour, pregnant 6-18 day(s)); 109 gm/m³ Inhalation Rat TLo (54 minute(s), pregnant 6-15 day(s)); 109 gm/m³ Inhalation Rat TLo (17 minute(s), pregnant 6-15 day(s)); 500 mg/m³ Inhalation Rat TLo (prior to copulation 98 day(s), pregnant 21 day(s)); 405 mg/kg Intraperitoneal Rat TDLo (pregnant 5-15 day(s)); 801 mg/kg Intraperitoneal Rat TDLo (pregnant 5-15 day(s)); 10 mg/m³ Inhalation Woman TLo (pregnant 9 year(s))

RTECS Tumorigenic: The components of this material have been reviewed, and RTECS publishes data for one or more components.

Specific Target Organ Toxicity - Single Exposure: Respiratory system, central nervous system

Specific Target Organ Toxicity - Repeated Exposure: Central nervous system, respiratory system

Aspiration Hazard: No data available.



Section 12. Ecological Information

Ecotoxicity: Harmful to aquatic life.

Component Analysis - Aquatic Toxicity

Fish: 96 Hr LC50 *Pimephales promelas*: 243 - 275 mg/L [flow-through]; 96 Hr LC50 *Pimephales promelas*: 125.5 - 190.7 mg/L [static]; 96 Hr LC50 *Lepomis macrochirus*: 170 - 206 mg/L [flow-through]; 96 Hr LC50 *Lepomis macrochirus*: 153.9 - 341.8 mg/L [static]; 96 Hr LC50 *Oncorhynchus mykiss*: >79 mg/L [flow-through]; 96 Hr LC50 *Oncorhynchus mykiss*: >79 mg/L [static]; 96 Hr LC50 *Poecilia reticulata*: 326.4 - 426.9 mg/L [static]

Algae: 96 Hr EC50 *Pseudokirchneriella subcapitata*: 170 mg/L

Invertebrate: 48 Hr EC50 *Daphnia magna*: 69 mg/L

Persistence and Degradability: This material is believed to be subject to biodegradation.

Bioaccumulative Potential: Bioconcentration potential in aquatic organisms is low based on BCF value of 4.

Mobility: Expected to have high mobility in soil.

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

US DOT Information

Shipping Name: Methyl methacrylate monomer, stabilized

UN/NA #: UN1247

Hazard Class: 3

Packing Group: II

Required Label(s): 3

IMDG Information

Shipping Name: Methyl methacrylate monomer, stabilized

UN #: UN1247

Hazard Class: 3

Packing Group: II

Required Label(s): 3



Section 15. Regulatory Information

Component Analysis

U.S. Federal Regulations: This material contains one or more of the following chemicals required to be identified under SARA Section 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan: methyl methacrylate, inhibited (80-62-6)

SARA 313: 1.0% de minimis concentration

CERCLA: 1000 lb final RQ; 454 kg final RQ

SARA 311/312 Hazardous Categories

Acute Health: Yes

Chronic Health: Yes

Fire: Yes

Pressure: No

Reactive: Yes

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists: methyl methacrylate, inhibited

CAS: 80-62-6

CA: Yes

MA: Yes

MN: Yes

NJ: Yes

PA: Yes

Not regulated under California Proposition 65

Component Analysis - Inventory

Component: Methyl methacrylate, inhibited

CAS: 80-62-6

US: Yes

CA: DSL

EU: EIN

AU: Yes

PH: Yes

JP: Yes

KR: Yes

CN: Yes

NZ: Yes

NFPA Ratings

Health: 2

Fire: 3

Reactivity: 2



Section 16. Other Information

Disclaimer: 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.

REVISION DATE: 6/2/2015

