

# SAFETY DATA SHEET

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## SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

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**CAS Number:** 80-62-6  
**Product Name:** Methyl Methacrylate (MMA)  
**Revision Date:** Apr 10, 2018 **Date Printed:** Apr 10, 2018  
**Version:** 1.2 **Supersedes Date:** Dec 11, 2017  
**Manufacturer's Name:** Thames River Chemical Corp.  
**Address:** 5230 Harvester Road Burlington, ON, CA, L7L 4X4  
**Emergency Phone:** Canada Call CANUTEC: 1-888-CAN-UTEC (226-8832); U.S.A. Call CHEMTREC (800) 424-9300  
**Information Phone Number:** 905-681-5353  
**Fax:** 905-681-5377  
**Product/Recommended Uses:** For laboratory or industrial use only.

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## SECTION 2) HAZARDS IDENTIFICATION

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### Classification

Eye Irritation - Category 2B  
Flammable Liquids - Category 2  
Skin Irritation - Category 2  
Skin Sensitizer - Category 1  
Specific Target Organ Toxicity -Single Exposure (Respiratory Tract Irritation) - Category 3

### Pictograms



### Signal Word

Danger

### Hazard Statements - Health

Causes eye irritation  
Causes skin irritation  
May cause an allergic skin reaction  
May cause respiratory irritation

### Hazard Statements - Physical

Highly flammable liquid and vapor

### Precautionary Statements - General

If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read label before use.

### Precautionary Statements - Prevention

Wash thoroughly/Wash hands thoroughly after handling.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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 action to prevent static discharges.

Wear protective gloves/protective clothing/eye protection/face protection.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Contaminated work clothing should not be allowed out of the workplace.

Use only outdoors or in a well-ventilated area.

### Precautionary Statements - Response

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.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

In case of fire: Use carbon dioxide, alcohol foam, water spray or dry chemical to extinguish.

IF ON SKIN: Wash with plenty of water and soap.

Specific treatment (see first-aid on the SDS).

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing. And wash it before reuse.

If skin irritation or a rash occurs: Get medical advice/attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor, if you feel unwell.

### Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool.

Store in a well-ventilated place. Store locked up.

### Precautionary Statements - Disposal

Dispose of contents/container in accordance with local/national/international regulation. Waste management should be in full compliance with national, regional and local laws.

### Physical Hazards Not Otherwise Classified

No Data Available

### Health Hazards Not Otherwise Classified

No Data Available

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## SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

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| CAS          | Chemical Name       | % By Weight |
|--------------|---------------------|-------------|
| 0000080-62-6 | METHYL METHACRYLATE | 99% - 100%  |

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

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## SECTION 4) FIRST-AID MEASURES

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### Inhalation

Get medical advice/attention if you feel unwell or are concerned. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Remove source of exposure or move person to fresh air and keep comfortable for breathing. Eliminate all ignition sources if safe to do so. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor.

**Eye Contact**

If eye irritation persists: Get medical advice/attention. If irritation occurs, cautiously rinse eyes with lukewarm, gently flowing water for 5 minutes, while holding the eyelids open. Get immediate medical attention.

**Skin Contact**

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Store contaminated clothing under water and wash before re-use or discard. Rinse skin with water/shower and mild soap for 5 minutes or until product is removed.

**Ingestion**

Get immediate medical attention. Only induce vomiting if directed by a physician. Never give anything by mouth to an unconscious person.

**Most Important Symptoms and Effects, Both Acute and Delayed****Inhalation**

Inhalation may cause the following:

- irritation of the mucous membrane and upper respiratory tract
- headache
- nausea

**Eye Contact**

Direct contact with material can cause the following:

- slight irritation

**Skin Contact**

Direct contact with material can cause the following:

- irritation
- sensitization

Prolonged or repeated skin contact can cause the following:

- defatting
- dermatitis

May be absorbed through the skin.

**Ingestion**

This product has a low order of acute oral toxicity based on animal test data.

No Data Available

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

No Data Available

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**SECTION 5) FIRE-FIGHTING MEASURES**

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**Suitable Extinguishing Media**

Use the following extinguishing media when fighting fires involving this material: foam - dry chemical - carbon dioxide

**Unsuitable Extinguishing Media**

Do not use straight stream of water.

**Specific Hazards in Case of Fire**

Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

May be released in case of fire: carbon monoxide, carbon dioxide, organic products of decomposition.

**Fire-fighting Procedures**

Isolate immediate hazard area and keep unauthorized personnel out. Move undamaged containers from immediate hazard area if it can be done safely. Stop spill/release if it can be done safely. Cool containers with flooding quantities of water until well after fire is out.

Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Product has a low flashpoint: Use of water spray when fighting fire may be inefficient. Nitromethane and nitroethane: Do not use dry chemical extinguishers to control fires.

Large Fire: Dike fire-control water for later disposal; do not scatter the material

**Special Protective Actions**

Wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

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## SECTION 6) ACCIDENTAL RELEASE MEASURES

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### Emergency Procedure

Isolate hazard area and keep unauthorized personnel away. Stay uphill and/or upstream. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Evacuate and isolate hazard area and keep unauthorized personnel away. A vapor-suppressing foam may be used to reduce vapors.

### Recommended Equipment

Wear chemical protective clothing and positive pressure self-contained breathing apparatus (SCBA).

### Personal Precautions

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing.

### Environmental Precautions

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. Stop spill/release if it can be done safely. Dike far ahead of liquid spill for later disposal.

### Methods and Materials for Containment and Cleaning up

Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean, non-sparking tools to collect absorbed material. Ventilate area after clean-up is complete.

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## SECTION 7) HANDLING AND STORAGE

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### General

Keep away from heat. Keep away from sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Avoid breathing vapor or mist. Use only with adequate ventilation. The need for grounding and bonding of containers in accordance with OSHA 29 CFR 1910.106 and NFPA 77 should be assessed for all product transfers. Container hazardous when empty. Follow all MSDS/label precautions even after the container is emptied. Emptied container retains vapor and product residue. Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container.

### Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. Report ventilation failures immediately. The use of local ventilation is recommended to control emissions near the source.

### Storage Room Requirements

Keep in the original container at a temperature not exceeding 30°C (86 °F). Fill the container by approximately 90% as oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability. Store in a cool, dry place. Keep container closed. Protect from the action of light.

Store in dry, cool areas, out of direct sunlight and away from other sources of heat. Empty container retain residue and may be dangerous. Keep away from incompatible materials (e.g. oxidizers). Store flammable and combustible liquids in areas that are cool, dry and well ventilated to reduce vapour concentrations. Never use plastic or glass containers for storing flammable liquids. Keep containers securely sealed when not in use. Bond and ground metal containers/cylinders when transferring. Avoid storing in direct sunlight or near other heat sources; eliminate all sources of ignition. Cabinets must be labelled; FLAMMABLE - KEEP FIRE AWAY. Avoid storing in basements. Protect containers against banging or other physical damage when storing, transferring, or using them.

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## SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Eye protection

Wear indirect-vent, impact and splash resistant goggles when working with liquids

### Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber.

### Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. Check with respiratory protective equipment suppliers.

### Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

| Chemical Name       | CANsmg | CANppm | CANtmg | CANtppm | OSHA STEL (mg/m3) | OSHA STEL (ppm) | OSHA TWA (mg/m3) | OSHA TWA (ppm) | OSHA Carcinogen | OSHA Tables (Z1, Z2, Z3) | OSHA Skin designation | ACGIH STEL (mg/m3) |
|---------------------|--------|--------|--------|---------|-------------------|-----------------|------------------|----------------|-----------------|--------------------------|-----------------------|--------------------|
| METHYL METHACRYLATE | 510    | 125    | 410    | 100     |                   |                 | 410              | 100            |                 | 1                        |                       | 410                |

| Chemical Name       | ACGIH STEL (ppm) | ACGIH TWA (mg/m3) | ACGIH TWA (ppm) | ACGIH TLV Basis                            | ACGIH Carcinogen | ACGIH Notations |
|---------------------|------------------|-------------------|-----------------|--|------------------|-----------------|
| METHYL METHACRYLATE | 100              | 205               | 50              | URT & eye irr; body weight eff; pulm edema | A4               | SEN; A4         |

A4 - Not Classifiable as a Human Carcinogen, eff - Effects, irr - Irritation, pulm - Pulmonary, URT - Upper respiratory tract

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## SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

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### Physical and Chemical Properties

|                        |  |
|------------------------|--|
| Density                | 7.88 lb/gal                            |
| Specific Gravity       | 0.94                                   |
| <hr/>                  |  |
| Appearance             | Clear, colourless liquid               |
| Odor Description       | Fruity, pungent, and acrid. Ester-like |
| Odor Threshold         | 0.05 - 0.34                            |
| pH                     | N/A                                    |
| Melting/Freezing Point | -48 °C                                 |
| Low Boiling Point      | 100 °C                                 |
| High Boiling Point     | 101 °C                                 |
| Flash Point            | 10 °C                                  |
| Vapor Pressure         | 37 hPa (= mbar) at 20 °C / 68 °F       |
| Vapor Density          | 3.5 (related to air)                   |
| Evaporation Rate       | 3.1 (Butyl Acetate=1)                  |
| Upper Explosion Level  | 12.5 %(V)                              |
| Lower Explosion Level  | 2.1 %(V) at 10.5°C / 33.8°F            |
| Water Solubility       | 15.3 g/l at 20 °C / 68 °F              |
| Coefficient Water/Oil  | log Pow 1.38 (n-Octanol/water)         |
| Viscosity              | 0.53 mPa·s at 20 °C / 68 °F            |

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## SECTION 10) STABILITY AND REACTIVITY

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### Reactivity

No Data Available

**Stability**

Stable under normal storage and handling conditions.

**Conditions to Avoid**

See 'Hazardous Polymerization' for conditions to avoid.

**Hazardous Reactions/Polymerization**

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions. The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is exceeded, the product may polymerize with heat evolution.

**Incompatible Materials**

Free radical initiators. Reducing agents. Tertiary amines. Heavy metals. Peroxides. Oxidizing agents. Mineral acids.

**Hazardous Decomposition Products**

None when used as directed.

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**SECTION 11) TOXICOLOGICAL INFORMATION**

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**Likely Route of Exposure**

Inhalation, ingestion, skin absorption

**Acute Toxicity**

No Data Available

**Aspiration Hazard**

No Data Available

**Carcinogenicity**

No Data Available

**Germ Cell Mutagenicity**

No Data Available

**Reproductive Toxicity**

No Data Available

**Respiratory/Skin Sensitization**

May cause an allergic skin reaction

**Serious Eye Damage/Irritation**

Causes eye irritation

**Skin Corrosion/Irritation**

Causes skin irritation

**Specific Target Organ Toxicity - Repeated Exposure**

No Data Available

**Specific Target Organ Toxicity - Single Exposure**

May cause respiratory irritation

000080-62-6 METHYL METHACRYLATE

LC50 (rat): 7093 ppm (4-hour exposure) (5)

LC50 (mouse): 3205 ppm (13080 mg/m3) (4-hour exposure); cited as 18500 mg/m3 (2-hour exposure) (6)

LD50 (oral, rat): 7940 mg/kg (cited as 8.41 cc/kg) (1)

LD50 (oral, mouse): 3625 mg/kg (8)

LD50 (dermal, rabbit): greater than 7550 mg/kg (cited as 8.0 mL/kg) (34)

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## SECTION 12) ECOLOGICAL INFORMATION

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### Toxicity

Fish Toxicity

LC50 Oncorhynchus mykiss, OECD 203, 96 h: > 79 mg/l

Daphnia Toxicity

EC50 Daphnia magna, OECD 202, 48 h: 69 mg/l

Algae Toxicity

EC50 selenastrum capricornutum, OECD 201, 72 h: > 110 mg/l

Bacteria Toxicity

EC3 Pseudomonas putida, cell proliferation inhibition test, Bringmann-Kühn, 16 h: 100 mg/l

No Data Available

### Mobility in Soil

No Data Available

### Bio-accumulative Potential

No Data Available

### Persistence and Degradability

Easily biodegradable

### Other Adverse Effects

No Data Available

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## SECTION 13) DISPOSAL CONSIDERATIONS

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### Waste Disposal

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. It is the responsibility of the user of the product to determine at the time of disposal whether the product meets local criteria for hazardous waste. Waste management should be in full compliance with national, provincial and local laws.

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## SECTION 14) TRANSPORT INFORMATION

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### U.S. DOT Information

UN number: UN1247

Proper shipping name: Methyl methacrylate monomer, stabilized

Hazard class: 3

Packaging group: II

Hazardous substance (RQ): No Data Available

Toxic-Inhalation Hazard: No Data Available

Marine Pollutant: No Data Available

Note / Special Provision: No Data Available

### Transport Canada Information

UN number: UN1247

Proper shipping name: Methyl methacrylate monomer, stabilized

Hazard class: 3

Packaging group: II

Marine Pollutant: No Data Available

Transport in bulk (according to Annex II of MARPOL 73/78): No Data Available

Note / Special Provision: Note / Special Provision

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## SECTION 15) REGULATORY INFORMATION

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| CAS          | Chemical Name       | % By Weight | Regulation List |
|--------------|---------------------|-------------|-----------------|
| 0000080-62-6 | METHYL METHACRYLATE | 99% - 100%  | DSL, TSCA       |

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## SECTION 16) OTHER INFORMATION

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### Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CANsmg or CANspmm - Canadian Short Term Exposure Level in mg/L or in ppm; CANTmg or CANTppm - Canadian Time Weighted Average in mg/L or in ppm; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center(US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

### Version 1.2:

Revision Date: Apr 10, 2018

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