



Carolina International Sales Co., Inc

MATERIAL SAFETY DATA SHEET

2522 Plantation Center Drive
Matthews, NC 28105
(704) 845 9440

www.ciscochem.com

1. PRODUCT NAME: Methyl Methacrylate - Stabilized

2. CHEMICAL NAME:

3. SYNONYMS: MMA

4. CAS NUMBER: 80-62-6

5. COMPOSITION: Methyl Methacrylate

Cas: 80-62-6

100%

Standard grades contain inhibitors from among the following: 4-1000 (ppm)

Hydroquinone

Cas: 123-31-9

p-Methoxyphenol

Cas: 150-76-5

2, 4-Dimethyl-6-t-Butylphenol

Cas: 1879-09-0

Octacecyl 3, 5-DI-Tert-Butyl-4-Hydroxycinnamate

Cas: 2082-79-3

6. PROPERTIES: FORM: Mobile liquid

COLOR: Clear, colorless

ODOR: Characteristic strong and acrid odor

ODOR THRESHOLD: 0.5 – 1 ppm

BOILING POINT: 100.5 deg. C at 760 mm/Hg

MELTING POINT: -48 deg. C

VAPOR PRESSURE: 28 mm/Hg at 20 deg. C

DENSITY: 0.949 g/ml at 15.5 deg. C

SOLUBILITY IN WATER: 1.6 WT% (20 deg. C)

SOLUBILITY (OTHER): Miscible with most organic solvents

PARTITION COEFFICIENT: 1.38

VAPOR DENSITY (AIR=1): 3.5

7. HAZARDS: EMERGENCY OVERVIEW: Flammable. Hazardous polymerization may occur. Irritation by inhalation, in contact with skin and eye and if swallowed. May cause sensitization by skin contact. Colorless liquid with acrid, penetrating odor.

POTENTIAL HEALTH EFFECTS

EYE: Liquid and Vapors can cause moderate irritation (tears, blurred vision and redness).

SKIN: May cause skin irritation. Can cause skin sensitization.

INGESTION: Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

INHALATION: High concentration is irritant to the respiratory tract and may cause dizziness, headache and anesthetic effects.

CHRONIC (CANCER) INFORMATION: Prolonged and/or repeated exposure may lead to kidney, lung, liver, and heart damage. Unlikely to present a cancer hazard to man.

TERATOLOGY (BIRTH DEFFECT) INFORMATION: Developmental toxicity observed in animal tests but only at levels toxic to the mother.

REPRODUCTIVE INFORMATION: no information available but no adverse reproductive effects anticipated.

NFPA, NPCA-HMIS

IN CASE OF
TRANSPORT EMERGENCY
CONTACT CHEMTREC
USA: 1-800-424-9300
INTERNATIONAL: 1-703-527-3887



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NFPA Rating:

Health: 2, Flammability: 3, Reactivity: 2

NPCA-HMIS Rating:

Health: 2, Flammability: 3, Reactivity: 2

Personal Protection rating to be supplied by user depending on use conditions.

8. FIRE FIGHTING FLAMMABLE PROPERTIES

INFORMATION: FLASH POINT: 11.5 deg. C

FLAMMABLE LIMITS IN AIR, % BY VOLUME:

LOWER LIMIT: 2.1, UPPER LIMIT: 12.5

AUTOIGNITION TEMPERATURE: 421 deg. C

Fine mists are explosive below the flash point.

Flammable liquid. Vapor forms explosive mixture with air.

FIRE AND EXPLOSIVE HAZARDS: Sealed containers exposed to elevated temperatures may rupture explosively due to polymerization. Vapors are heavier than air and may travel to ignition sources and flash back.

EXTINGUISHING MEDIA: Foam, Dry Chemical, and CO₂. Water spray (by trained personnel).

FIRE FIGHTING INSTRUCTIONS: Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. Cool tank/container with water spray. Fight fire from a distance, heat may rupture containers.

9. PERSONAL PROTECTION ENGINEERING CONTROLS: Keep container tightly closed. Observe label precautions. Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits.

MEASURES: PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye and face contact due to splashing or spraying material.

RESPIRATORS: A NIOSH/MSHA approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

PROTECTIVE CLOTHING: Wear impervious clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Nitrile rubber is better than PVC.

10. FIRST AID PROCEDURES: INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT: In case of contact, immediately wash skin with soap and water. Wash contaminated clothing before reuse.

EYE CONTACT: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION: If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

11. EXPOSURE LIMITS: PEL (OSHA): 100 ppm, 8Hr. TWA

LIMITS: TLV (ACGIH): 50ppm, 8 Hr. TWA; 100 ppm, 15 min. STEL

12. TOXICOLOGICAL ANIMAL DATA:

INFORMATION: Inhalation 4 hour LC50: 7093 ppm in rats (Very low toxicity by inhalation)

Dermal LD50: > 35,500 mg/kg in rabbits (Very low toxicity by contact)

Oral LD50: 7900 mg/kg in rats (Very low toxicity by ingestion)

INHALATION: Irritating to respiratory system. High atmospheric concentrations may lead to irritation of



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the respiratory tract, dizziness, headache and anesthetic effects.

SKIN CONTACT: May cause sensitization by skin contact. Irritating to skin. Repeated and/or prolonged contact may cause dermatitis.

EYE CONTACT: High vapor concentration will cause irritation.

INGESTION: Low oral toxicity but ingestion may cause irritation of the gastrointestinal tract.

LONG TERM EXPOSURE: Repeated exposure to high levels procedures adverse effects on the heart, lungs, liver and kidneys.

Repeated exposure of animals by inhalation to levels at or above the occupational exposure level procedures adverse effects on the nasal epithelium (levels of 100 and 400 ppm).

There is no reason to believe that methyl methacrylate represents a carcinogenic or mutagenic hazard to man based upon evidence from well conducted animal studies, relevant mutagenicity studies and adequate epidemiologist studies in relevant cohorts.

Recent studies in animals in animals have shown that high exposure do not produce embryo or feototoxic nor tetratogenic effects in the presence or maternal toxicity.

None of these effects are likely to occur in humans provided exposure is maintained at or below the occupational exposure limit.

13. ECOLOGICAL INFORMATION: ENVIRONMENTAL FATE AND DISTRIBUTION: High tonnage maternal produced in wholly contained systems. Liquid with moderate volatility. Sparingly soluble in water. Product has low potential for bioaccumulation. The product is predicted to have high mobility in soil.

PERSISTENCE AND DEGRADATION: Not readily biodegradable. Chemical Oxygen Demand (COD) 88% (28 days). Inherent Biodegradation: Dissolved Organic Carbon (DOC removal) >95% (28 days).

TOXICITY: Low toxicity to fish. LC50 (fish): Typically > 100 mg./L. LC50 (fathered minnow) (96 Hr.) (static) 130 mg./L.

Harmful to aquatic invertebrates. EC50 (Daphnia Magna) (48 Hr.) 69 mg./L.

Low toxicity to algae. EC50 (Selenastrum Capricornutum) (96 Hr.) 170 mg./L.

NOEC (zebra fish) (35 day) (flow through) 8.4 mg./L.

EFFECT OM EFFLUENT TREATMENT: Product is substantially removed in biological treatment processes.

14. DISPOSAL CONSIDERAIONS: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system. Incinerate material in accordance with Federal, State/Provincial and Local requirements. Do not incinerate in closed containers. Do not allow material to contaminate ground water systems.

15. CARCINOGENIC PROPERTIES & NOTIFICATIONS: WARNING: Substance known to the State of California to cause Cancer: Not known.
WARNING: Substance known to the State of California to cause Birth Defects or other Reproductive Harm: None known.

16. TRANSPORT INFORMATION: DOT:

Proper Shipping Name: Methyl Methacrylate Monomer, Stabilized

Hazard Class: 3

I.D. No. (UN/NA): UN1247

Packing Group: II

Reportable Quantity: 1,000 lb.

SHIPPING CONTAINERS: If material is shipped in quantities greater than 1000 lb. Per container, the Proper Shipping Name is RQ Methyl Methacrylate Monomer, Stabilized.

TGD:

Proper Shipping Name: Methyl Methacrylate Monomer, Stabilized

TGD Class: 3.2 (9.2)

I.D. No. (UN/NA): UN1247



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TMD Packing Group: II

17. HANDLING & HANDLING (PERSONNEL): Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing.

STORAGE: Wash thoroughly after handling.

HANDLING (PHYSICAL ASPECTS): Close container after each use. Ground container when pouring. Keep away from heat, sparks and flames.

STORAGE: Vapors are uninhibited and may form polymers in vents or flame arresters, resulting in blockage of vents.

Keep container in a cool place. DO NOT expose to direct sunlight. Store in a well ventilated place. Keep container tightly closed. Store in accordance with National Fire Protection Association recommendations. Maintain air space inside storage containers. Inhibitor requires air (oxygen) contact to function. Check inhibitor levels after 6 months and return to original level.

18. ACCIDENTAL SAFEGUARDS (PERSONNEL)

RELEASE NOTE: Review Fire Fighting Measures and Handling (Personnel)

MEASURES: Sections before proceeding with clean up. Use appropriate Personal Protective Equipment during up.

Evacuate personnel, thoroughly ventilate area, and use self-contained breathing apparatus.

INITIAL CONTAINMENT: Remove source of heat, sparks, flame, impact, friction or electricity. Dike spill. Prevent material from entering sewers, waterways, or low areas.

SPILL CLEAN UP: Soak up with sand, oil dry or other absorbent, non-combustible material. Cleaned-up material is a RCRA Hazardous Waste.

19. REGULATORY U.S. FEDERAL REGULATIONS

INFORMATION: TSCA INVENTORY STATUS: Reportable/Included.

Superfund reportable discharge = 1000 lb.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

ACUTE: Yes

CHRONIC: No

FIRE: Yes

REACTIVITY: Yes

PRESSURE: No

CANADIAN REGULATIONS

DSL: included

WHMIS CLASSIFICATION: B2: Flammable liquid. D-2B: toxic.

F: Dangerously reactive material.



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