



**Science Lab.com**  
Chemicals & Laboratory Equipment



Health	2
Fire	1
Reactivity	0
Personal Protection	H

## Material Safety Data Sheet

### Methanesulfonic Acid Methyl Ester MSDS

#### Section 1: Chemical Product and Company Identification

**Product Name:** Methanesulfonic Acid Methyl Ester

**Catalog Codes:** SLM3850

**CAS#:** 66-27-3

**RTECS:** PB2625000

**TSCA:** TSCA 8(b) inventory: Methanesulfonic Acid Methyl Ester

**CI#:** Not available.

**Synonym:** Methyl methanesulfonate; Methane sulphonic methyl ester; Methyl mesylate; Methyl methanesulphonate; Methyl methansulphonate

**Chemical Name:** Methanesulfonic Acid Methyl Ester

**Chemical Formula:** C2-H6-O3-S

#### Contact Information:

**Sciencelab.com, Inc.**

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US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**  
1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

#### Section 2: Composition and Information on Ingredients

##### Composition:

Name	CAS #	% by Weight
Methanesulfonic Acid Methyl Ester	66-27-3	100

**Toxicological Data on Ingredients:** Methanesulfonic Acid Methyl Ester: ORAL (LD50): Acute: 225 mg/kg [Rat]. 290 mg/kg [Mouse].

#### Section 3: Hazards Identification

##### Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator).

##### Potential Chronic Health Effects:

**CARCINOGENIC EFFECTS:** Classified 2A (Probable for human.) by IARC, 2 (Some evidence.) by NTP. **MUTAGENIC EFFECTS:** Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. **TERATOGENIC EFFECTS:** Not available. **DEVELOPMENTAL TOXICITY:** Classified Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE]. The substance may be toxic to blood, the reproductive system. Repeated or prolonged exposure to the substance can produce target organs damage.

## Section 4: First Aid Measures

### Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

### Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

### Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

### Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

### Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

### Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** CLOSED CUP: 104°C (219.2°F).

**Flammable Limits:** Not available.

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>).

### Fire Hazards in Presence of Various Substances:

Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

### Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

### Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

## Section 6: Accidental Release Measures

### Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:**

If the product is in its solid form: Use a shovel to put the material into a convenient waste disposal container. If the product is in its liquid form: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

**Section 7: Handling and Storage****Precautions:**

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/ spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

**Section 8: Exposure Controls/Personal Protection****Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Personal Protection:**

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

**Section 9: Physical and Chemical Properties**

**Physical state and appearance:** Liquid.

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** 110.1 g/mole

**Color:** Clear Colorless to light yellow.

**pH (1% soln/water):** Not available.

**Boiling Point:** 203°C (397.4°F)

**Melting Point:** 20°C (68°F)

**Critical Temperature:** Not available.

**Specific Gravity:** 1.2943 (Water = 1)

**Vapor Pressure:** Not available.

**Vapor Density:** 3.8 (Air = 1)

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water.

**Solubility:**

Soluble in cold water. Soluble in dimethyl formamide, and in propylene glycol. Slightly soluble in non-polar solvents. Solubility in water is about 1:5.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Excess heat, ignition sources, incompatible materials

**Incompatibility with various substances:** Reactive with oxidizing agents, acids, alkalis.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Eye contact.

**Toxicity to Animals:** Acute oral toxicity (LD50): 225 mg/kg [Rat].

**Chronic Effects on Humans:**

CARCINOGENIC EFFECTS: Classified 2A (Probable for human.) by IARC, 2 (Some evidence.) by NTP. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE]. May cause damage to the following organs: blood, the reproductive system.

**Other Toxic Effects on Humans:**

Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator).

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:**

May cause adverse reproductive effects and birth defects(teratogenic). May affect genetic material (mutagenic). May cause cancer

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation. Inhalation: Causes respiratory tract irritation. Ingestion: Harmful if swallowed. May cause digestive tract irritation. May affect blood.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.

### Section 13: Disposal Considerations

**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### Section 14: Transport Information

**DOT Classification:** CLASS 6.1: Poisonous material.

**Identification:** : Toxic Liquid, Organic, n.o.s.(Methanesulfonic Acid Methyl Ester) UNNA: 2810 PG: III

**Special Provisions for Transport:** Not available.

### Section 15: Other Regulatory Information

**Federal and State Regulations:**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Methanesulfonic Acid Methyl Ester California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Methanesulfonic Acid Methyl Ester Illinois toxic substances disclosure to employee act: Methanesulfonic Acid Methyl Ester Pennsylvania RTK: Methanesulfonic Acid Methyl Ester Minnesota: Methanesulfonic Acid Methyl Ester Massachusetts RTK: Methanesulfonic Acid Methyl Ester Massachusetts spill list: Methanesulfonic Acid Methyl Ester New Jersey: Methanesulfonic Acid Methyl Ester California Director's List of Hazardous Substances: Methanesulfonic Acid Methyl Ester TSCA 8(b) inventory: Methanesulfonic Acid Methyl Ester

**Other Regulations:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

**Other Classifications:**

**WHMIS (Canada):**

CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).

**DSCL (EEC):**

R22- Harmful if swallowed. R33- Danger of cumulative effects. R36/37/38- Irritating to eyes, respiratory system and skin. S23- Do not breathe gas/fumes/vapour/spray [\*\*\*] S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S53- Avoid exposure - obtain special instructions before use.

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 1

**Reactivity:** 0

**Personal Protection:** h

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 1

**Reactivity:** 0

**Specific hazard:****Protective Equipment:**

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

**Section 16: Other Information**

**References:** Not available.

**Other Special Considerations:** Not available.

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