



MATERIAL SAFETY DATA SHEET

PRODUCT NAME: ETHYL METHANESULFONATE

CAS Number: 62-50-0

1. IDENTIFICATION:

Product Code : ACPL-03-EMS-92

Company Name : ADVENT CHEMBIO PRIVATE LIMITED

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2. HAZARDS IDENTIFICATION:**Hazard classification****Physical hazards****Health hazards**

Acute toxicity, Oral : Category 4

Skin irritation : Category 2

Eye irritation : Category 2

Skin sensitization : Category 1

Carcinogenicity : Category 1B

Germ cell mutagenicity : Category 1B

Reproductive toxicity : Category 2

Labels elements :**Hazard symbol** :**Signal word** : Danger

Hazard statement : Harmful if swallowed, Causes skin irritation, May cause an allergic skin reaction, Causes serious eye irritation, May cause genetic defects, May cause cancer, Suspected of damaging fertility.

Precautionary statement

Prevention : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Keep container tightly closed. Ground/ bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.



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Use only non-sparking tools. Take precautionary measures against static discharge.

Response	: IF exposed or concerned: Get medical advice/ attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Storage	: Store in a dry & well-ventilated place. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Disposal	: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification	: This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION/ INFORMATION ON INGREDIENTS:

Ingredient	CAS Number	Percent	Hazardous
Ethyl methanesulfonate	62-50-0	NLT 98.0%	Yes

4. FIRST AID MEASURES:

General information	: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Ingestion	: Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms persist.
Inhalation	: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Skin contact	: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Eye contact	: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Most important symptoms/effects, acute and delayed	: Irritating to eyes and skin.
Indication of immediate medical attention and special treatment needed	: Symptoms may be delayed. Treat symptomatically.



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5. FIRE FIGHTING MEASURES:**General information :****Suitable (and unsuitable) extinguishing media****Suitable extinguishing media :** Water spray, foam, dry powder or carbon dioxide.**Unsuitable extinguishing media :** For this substance/mixture no limitations of extinguishing agents are given.**Specific hazards arising from the chemical :** Carbon oxides, Sulfur oxides, Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapors possible in the event of fire.**Special protective equipment and precautions for firefighters****Special firefighting procedures :** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.**Special protective equipment for fire-fighters :** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.**6. ACCIDENTAL RELEASE MEASURES:****Personal precautions, protective equipment and emergency procedures :** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid breathing mists or vapors. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.**Methods and material for containment and cleaning up :** Eliminate all ignition sources if safe to do so. Use only non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.**Notification Procedures :** Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.**Environmental precautions :** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.**7. HANDLING AND STORAGE:****Precautions for safe handling :** Work under hood. Do not handle until all safety precautions have been read and understood. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye

Protection/ face protection. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Use only with adequate ventilation. Wash hands thoroughly after handling.

Conditions for safe storage, including any : Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a dry, well-ventilated place. Comply with all national, state, and local codes pertaining to the



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incompatibilities storage, handling, dispensing, and disposal of flammable liquids.

8. EXPOSURE CONTROLS PERSONAL PROTECTION:**Control parameters****Appropriate engineering**

controls : No data available

Individual protection measures, such as personal protective equipment

General information : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/face protection : Wear safety glasses with side shields (or goggles).

Hand protection : Chemical resistant gloves.

Other : Wear suitable protective clothing.

Respiratory protection : In case of inadequate ventilation use suitable respirator.

Hygiene measures : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and Protective equipment to remove contaminants. Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance : Colourless to pale yellow oil.

Odor : No data available.

Solubility : No data available.

Formula : $C_3H_8O_3S$

Molecular Weight : 124.16 g/mol

Density : 1.206 g/cm³ at 20°C

pH : No data available.

% Volatiles by volume @ 21C (70F) : No data available.

Boiling Point : 85-86°C

Melting Point : No data available.

Flash Point : 100 °C



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Vapor Density (Air=1) : No data available.

Vapor Pressure (mm Hg) : No data available.

Evaporation Rate (BuAc=1) : No data available.

10. STABILITY AND REACTIVITY:

Reactivity	: Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Chemical stability	: Material is stable under ambient conditions.
Possibility of hazardous reactions	: No data available.
Conditions to avoid	: Strong heating
Incompatible materials	: No data available.
Hazardous decomposition products	: In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION:**Information on likely routes of exposure**

Inhalation	: No data available
Skin contact	: Skin irritation
Eye contact	: Causes serious eye irritation.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

Oral Product	: LD 50 (Rat): 470 mg/kg
Dermal Product	: No data available
Inhalation Product	: No data available.
Repeated dose toxicity Product	: No data available.
Skin corrosion/irritation Product	: irritation
Serious eye damage/eye irritation Product	: Serious eye irritation.
Respiratory or skin sensitization Product	: Skin sensitizer.
Carcinogenicity Product	: Animal experiments carried out under conditions comparable with the workplace situation have shown the substance to be carcinogenic. Presumed to have carcinogenic potential for humans.
IARC Monographs on the	: No data available.



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Evaluation of Carcinogenic

Risks to Humans

US. National Toxicology

Program (NTP) Report on : No data available.

Carcinogens

US. OSHA Specifically

Regulated Substances (29 : No data available.

CFR 1910.1001-1050

Germ cell mutagenicity

In vitro Product : No data available.

Reproductive toxicity

Product : Suspected of damaging fertility.

Specific target organ

toxicity - single exposure : No data available.

Product

Specific target organ

toxicity - repeated : No data available.

exposure Product

Aspiration hazard Product : No data available.

Other effects

: No data available.

12. ECOLOGICAL INFORMATION:

Ecotoxicity

Acute hazards to the aquatic environment

Fish Product

: No data available.

Aquatic invertebrates

Product : No data available.

Chronic hazards to the aquatic environment

Fish Product

: No data available.

Aquatic invertebrates

Product : No data available.

Toxicity to Aquatic Plants

Product: : No data available.

Persistence and degradability

Biodegradation Product

: No data available.

BOD/COD ratio Product

: No data available.

Bioaccumulative potential

Bioconcentration factor

(BCF) Product : No data available on bioaccumulation.



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Partition coefficient n-octanol / water (log Kow) : No data available.

Product

Mobility in soil : No data available.

Other adverse effects : No data available.

13. DISPOSAL CONSIDERATION:

Disposal instructions : Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.

Contaminated packaging : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION:

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	NA	Ethyl methanesulfonate		Not dangerous goods	
IMDG	NA	Ethyl methanesulfonate		Not dangerous goods	
IATA	NA	Ethyl methanesulfonate		Not dangerous goods	

15. REGULATORY INFORMATION:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture

No Data Available.

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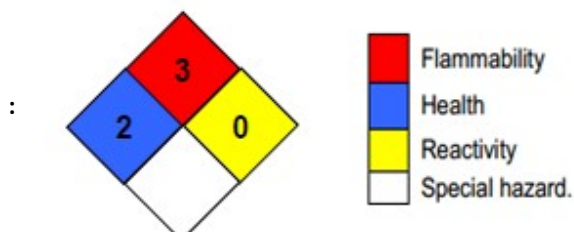
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16. OTHER INFORMATION:

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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