

3. MSDS of Ethyl Mercaptan

1. Chemical Identified	Safety Date Sheet	
Chemical Name: Ethyl Mercaptan	Chemical Classification: 3	
Synonyms: Ethanethiol	Trade Name: Ethyl Mercaptan	
Formula: C2H5SH	C.A.S. No.	U.N. No. 1: 2363
	75 – 08 - 1	
Shipping Name: Ethyl Mercaptan		
Codes/Label: 3.1 / 3		

Hazchem No.: **3WE / 2363**

Regulated identification.....

Hazardous Waste

I.D. No.: **E044**

Hazardous Ingredients	C.A.S. No.
1.Ethyl Mercaptan	75-08- 1

2. Physical and chemical data

Boiling Range/Point	35 °C	Physical State:	Appearance: Colorless liquid
		Liquid	
Melting/Freezing Point	- 147.8 ° C / - 45 ° C	Vapour Pressure	Odor mm/Hg: Repulsive
		@ 35°C : 16.2 Psig = 838 mm/Hg @ 37.8 °C	

Vapour Density (Air = 1): 2.1	Solubility in water @ 30°C: 0.70 at 20 °C / Slight	Others: -----
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Specific Gravity Water-1: 0.845 @ 15.6	PH : Not Determined
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3 Fire and Explosion Hazard data

Flammability Yes	LEL 2.8 %	%Flash Point : - 48° C	Auto ignition: 295 ° C
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TDG Flammability 1	UEL 18 %
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Explosion Sensitivity to impact:	No	Explosion Sensitivity to Static Electricity:	Yes	Hazardous Combustion Products:
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Hazardous Polymerization:	Will not occur	Oxides of Carbon, Sulphur Dioxide
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Combustible Liquid:	Yes	Explosive Material:	Yes	Corrosive: No
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Flammable Material:	NA	Oxidizer:	No	Others
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Pyrophoric Material:	NA	Organic Peroxide:	NA
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4. Reactivity Data

Chemical Stability: Stable

Incompatibility with other Material	:May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
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Reactivity: Not Established

Hazardous Reaction Product: Not Established
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5. Health Hazard Data

Routes of Entry: Skin, Inhalation, Ingestion

Emergency Treatment:

SKIN: Wash thoroughly with soap and water. Wash clothing before reuse, If Irritation occurs, get medical attention.

INHALATION: Remove to fresh air, If breathing is difficult, have trained person administer oxygen. If respiration stops, have a trained person administer artificial respiration. Get medical attention immediately.

INGESTION: Never give anything by mouth to an unconscious person. Have patient drink several glasses of water then induce vomiting by having patient tickle back of throat with finger. Keep airway clear. Get medical attention immediately.

Eye: Flush eyes with running water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention.

Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

TLV (ACGIH): **0.5 ppm**

STEL

0.5 ppm

Permissible Exposure Limit ppm other Threshold: -----
(Not known) mg/m³

mg/m³

Acute Oral Toxicity: Ethyl Mercaptan: LD50 / rat / 682 mg/kg

Acute Dermal Toxicity: Ethyl Mercaptan: LD50 / rabbit / >2000 mg/kg

Acute Inhalation Toxicity: Ethyl Mercaptan: LC50 / rat / 4,420 ppm / 4 hour(s)

Human Odour Detection Limit: 0.4 ppb

NFPA Hazard Signals

Health

Flammability

Stability

Special

2

4

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6. Preventive Measures

Personnel Protective equipment: **Chemical Safety Goggles, Face Shield, Rubber Gloves, Eye Wash-Shower, Self-Contained Breathing Apparatus**

Eye/Face Protection: Wear eye protection such as safety glasses, chemical goggles, or face shields if engineering controls or work practices are not adequate to prevent eye contact.

Skin Protection: Wear impervious protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on Operations conducted. Users should determine acceptable performance characteristics of protective clothing. Consider physical

requirements and other substances present when selecting protective clothing.

Respiratory Protection: Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Organic Vapors Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection. Air-purifying respirators are not recommended due to potential olfactory fatigue.

Handling and storage Precautions:

Handling:

- **Keep away from sources of ignition. The vapors can travel to an ignition source and flash back causing a flash fire.**
- **Avoid breathing Vapour, handle Ethyl Mercaptan with adequate ventilation. Wear NIOSH / MSHA approved respiratory protection if there is potential for exposure above the exposure limits.**
- **Do not get in eyes, on skin or clothing.**
- **Avoid static build up.**

SPECIAL MIXING AND HANDLING INSTRUCTIONS :

- **Keep container closed except when transferring material.**
- **Use with adequate ventilation.**
- **Do not reuse containers.**

STORAGE:

- **Store in a well-ventilated place. Keep cool. Store locked up away from heat, sparks and flame.**
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7. Emergency and First aid measure

Fire	Fire Extinguishing: Use foam, dry chemical or carbon dioxide (CO2) to extinguish flames
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Fire	Special procedures: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
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	Evacuate all unnecessary personnel. Shut down motors, pumps, electrical service and eliminate all sources of ignition. Use spray to keep fire exposed containers cool to avoid pressure build-up, wear self - contained breath apparatus and full protective clothing.
	Unusual Hazards: : Flammable vapors, being heavier than air, may travel long distance along the ground before reaching a source of ignition and flash back.
Exposure	First Aid measures: Refer 5. Health Hazard Data
	Antidotes/Dosages: Not Known
Spills	Steps to be taken: Should always be handled in a closed system. In case of spillage, use absorbent like activated charcoal, saw dust, dry sand and absorbers like Eco pearl. Suitable Personnel Protective Equipments to be used. Evacuate unnecessary personnel upwind of the spill area. Eliminate all sources of ignition; Do not allow entry in sewers and waterways.
	Waste disposal Method: Absorbed spilled liquid to be collected in air tight container for safe disposal. Do not dispose of sink, drain. Dispose in a safe manner in accordance with local / national regulation

8. ADDITIONAL INFORMATION / REFERENCES

ACGIH = American Conference of Governmental Industrial Hygienists.

PEL = Permissible Exposure Limit (OSHA)

STE = Short Term Exposure Limit (15 Minutes)

TDG = Transportation of Dangerous Goods. (CANADA)

TLV = Threshold Limit Value.

IDLH = Immediate Danger to Life & Health

NFPA= National Fire Protection Association.