

Material Safety Data Sheet

Ethanethiol, 99+%

ACC# 93067

Section 1 - Chemical Product and Company Identification

MSDS Name: Ethanethiol, 99+%

Catalog Numbers: AC117860000, AC117860500, AC117865000, AC299420000

Synonyms: Ethyl mercaptan; Ethyl sulphhydrate.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
75-08-1	Ethanethiol	>99	200-837-3

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid. Flash Point: -45 deg C.

Danger! Extremely flammable liquid and vapor. Vapor may cause flash fire. Harmful if inhaled. Causes eye, skin, and respiratory tract irritation. Stench. May be harmful if swallowed. May cause central nervous system effects.

Target Organs: Central nervous system, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed. May cause central nervous system effects.

Inhalation: Harmful if inhaled. Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation.

Chronic: Chronic ingestion may cause neurological symptoms.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. May accumulate static electrical charges, and may cause ignition of its own vapors. Extremely flammable liquid and vapor. Vapor may cause flash fire. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

Extinguishing Media: Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT get water inside containers. For large fires, use water spray, fog or regular foam. For small fires, use dry chemical, carbon dioxide, water spray or regular foam. Cool containers with flooding quantities of water until well after fire is out.

Flash Point: -45 deg C (-49.00 deg F)

Autoignition Temperature: 298 deg C (568.40 deg F)

Explosion Limits, Lower: 2.8 vol %

Upper: 18.2 vol %

NFPA Rating: (estimated) Health: 2; Flammability: 4; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces. Evacuate unnecessary personnel. Approach spill from upwind. Use only non-sparking tools and equipment.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale. This product may be under pressure; cool before opening. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation.

Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ethanethiol	0.5 ppm TWA	500 ppm IDLH	10 ppm Ceiling; 25 mg/m3 Ceiling

OSHA Vacated PELs: Ethanethiol: 0.5 ppm TWA; 1 mg/m3 TWA

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear, colorless

Odor: Garlic or leek odor; stench.

pH: Not available.

Vapor Pressure: 442 mm Hg @ 20 deg C

Vapor Density: 2.14 (air=1)

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 35 deg C @ 760 mm Hg

Freezing/Melting Point: -148 deg C

Decomposition Temperature: Not available.

Solubility: 6.76 G/L (20°C)

Specific Gravity/Density: .830 g/ml

Molecular Formula: C₂H₆S

Molecular Weight: 62.13

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Ignition sources, excess heat, confined spaces.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, oxides of sulfur, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 75-08-1: KI9625000

LD50/LC50:

CAS# 75-08-1:

Draize test, rabbit, eye: 84 mg;

Draize test, rabbit, eye: 100 mg/24H Moderate;

Draize test, rabbit, skin: 500 mg/24H Mild;

Inhalation, mouse: LC50 = 2770 ppm/4H;

Inhalation, rat: LC50 = 4420 ppm/4H;

Oral, rat: LD50 = 682 mg/kg;

Carcinogenicity:

CAS# 75-08-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	ETHYL MERCAPTAN	ETHYL MERCAPTAN
Hazard Class:	3	3
UN Number:	UN2363	UN2363
Packing Group:	I	I

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 75-08-1 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 75-08-1: immediate, delayed.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 75-08-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

XN F N

Risk Phrases:

R 11 Highly flammable.

R 20 Harmful by inhalation.

R 50/53 Very toxic to aquatic organisms, may cause long-term

adverse effects in the aquatic environment.

Safety Phrases:

- S 16 Keep away from sources of ignition - No smoking.
- S 25 Avoid contact with eyes.
- S 60 This material and its container must be disposed of as hazardous waste.
- S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)

CAS# 75-08-1: No information available.

Canada - DSL/NDSL

CAS# 75-08-1 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 75-08-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information
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MSDS Creation Date: 10/08/1997

Revision #5 Date: 1/31/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.