Material Safety Data Sheet
Methanethiol, 99.5+%

ACC# 71345

Section 1 - Chemical Product and Company Identification

MSDS Name: Methanethiol, 99.5+%
Catalog Numbers: AC413760000, AC413760250, AC413760500
Synonyms: Thiomethyl Alcohol; Methyl Mercaptan.
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
74-93-1	Methyl Mercaptan	>99.5	200-822-1

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid.
Danger! Extremely flammable liquid. Harmful if inhaled. Causes eye and skin irritation. May be absorbed through intact skin. Causes digestive and respiratory tract irritation. May cause central nervous system depression. May cause liver and kidney damage.
Target Organs: Kidneys, central nervous system, liver.

Potential Health Effects

Eye: Causes eye irritation.
Skin: Causes skin irritation. May be absorbed through the skin.
Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May cause central nervous system depression. Mercaptans may cause nausea and headache. Exposure to high concentrations of mercaptans can produce unconsciousness with cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), cold extremities and rapid pulse.
Inhalation: Causes respiratory tract irritation. May cause liver and kidney damage. Exposure produces central nervous system depression. Vapors may cause dizziness or suffocation. Exposure may lead to delirium, convulsions, paralysis, and coma. Exposure to high concentrations of mercaptans can produce unconsciousness with cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), cold extremities and rapid pulse. Mercaptans may cause nausea and headache. Harmful if inhaled.
Chronic: May cause liver and kidney damage. Exposure to large doses may cause central nervous system depression.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: Do not induce vomiting. 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 breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.
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. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Extremely flammable liquid and vapor. Containers may explode in the heat of a fire. Will be easily ignited by heat, sparks or flame.
Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Use agent most appropriate to extinguish fire. Do NOT use straight streams of water.
Flash Point: >-18 deg C
Autoignition Temperature: Not available.
Explosion Limits, Lower:3.9
Upper: 21.0
NFPA Rating: (estimated) Health: 4; 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. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. A vapor suppressing foam may be used to reduce vapors. Rinse area for 10 minutes with a strong Sodium Hypochorite (bleach) solution, then reabsorb material.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. 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 away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry place. Keep container closed when not in use. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Methyl Mercaptan	0.5 ppm TWA	150 ppm IDLH	10 ppm Ceiling; 20 mg/m3 Ceiling

OSHA Vacated PELs: Methyl Mercaptan: 0.5 ppm TWA; 1 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear chemical splash goggles. Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to minimize contact with skin.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: water-white - colorless
Odor: garlic-like odor - unpleasant odor
pH: Not available.
Vapor Pressure: 1520 mm Hg @ 26C
Vapor Density: 1.66
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 5.95 deg C
Freezing/Melting Point:-123 deg C
Decomposition Temperature: Not available.
Solubility: Slightly soluble.
Specific Gravity/Density:.9000g/cm3
Molecular Formula:CH4S
Molecular Weight:48.11

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, ignition sources, excess heat, strong oxidants.
Incompatibilities with Other Materials: Strong oxidizing agents, strong reducing agents, strong acids, strong bases, copper, copper alloys, halogenated agents, hydrazine, organic peroxides, zinc, ketones (e.g. acetone, acetophenone, MEK, MIBK), epoxides (e.g. butyl glycidyl ether), lead, moisture, organic materials.
Hazardous Decomposition Products: Irritating and toxic fumes and gases, sulfur oxides (SOx), including sulfur oxide and sulfur dioxide.
Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:
CAS# 74-93-1: PB4375000
LD50/LC50:
CAS# 74-93-1:
Inhalation, mouse: LC50 = 6530 ug/m3/2H;
Inhalation, rat: LC50 = 675 ppm;
.
Inhalation, rat:

Carcinogenicity:
CAS# 74-93-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: Mutagenic effects have occurred in experimental animals.
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: Terrestrial: Will adsorb strongly to the soil and may oxidize. Aquatic: Will be rapidily lost through volatilization. Atmospheric: Will be oxidized by photochemically generated hydroxyl radicals. The half-life for this reaction is 11.6 hours. Will biodegrade but not expected to bioconcentrate.
Physical: No information available.
Other: 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:
CAS# 74-93-1: waste number U153 (Ignitable waste, Toxic waste).

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 74-93-1 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
CAS# 74-93-1: Testing required by manufacturers, processors; soil adsorption testing for Chemi cal Fate
Section 12b
CAS# 74-93-1: Section 4
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
CAS# 74-93-1: 100 lb final RQ; 45.4 kg final RQ
SARA Section 302 Extremely Hazardous Substances
CAS# 74-93-1: 500 lb TPQ
SARA Codes
CAS # 74-93-1: immediate, fire.
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 depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
CAS# 74-93-1 is listed as a Hazardous Substance 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:
CAS# 74-93-1 is considered highly hazardous by OSHA.
STATE
CAS# 74-93-1 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+
Risk Phrases:
R 12 Extremely flammable.
R 20 Harmful by inhalation.

Safety Phrases:
S 16 Keep away from sources of ignition - No smoking.
S 25 Avoid contact with eyes.

WGK (Water Danger/Protection)
CAS# 74-93-1: 3
Canada - DSL/NDSL
CAS# 74-93-1 is listed on Canada's DSL List.
Canada - WHMIS
WHMIS: Not available.
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# 74-93-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 4/08/1999
Revision #4 Date: 10/03/2005