

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATHESON TRI-GAS, INC.
150 Allen Road Suite 302
Basking Ridge, New Jersey 07920
Information: 1-800-416-2505

Emergency Contact:
CHEMTREC 1-800-424-9300
Calls Originating Outside the US:
703-527-3887 (Collect Calls Accepted)

SUBSTANCE: VINYL METHYL ETHER

TRADE NAMES/SYNONYMS:

MTG MSDS 135; METHYL VINYL ETHER; METHOXYETHYLENE; ETHYLENE, METHOXY-;
MVE; VINYL METHYL ETHER, INHIBITED; ETHENE, METHOXY-; METHOXYETHENE; ETHER,
METHYL VINYL; 1-METHOXYETHYLENE; STCC 4905795; UN1087; C3H6O; MAT25010; RTECS
KO2300000

CHEMICAL FAMILY: ethers, aliphatic

CREATION DATE: Jan 24 1989

REVISION DATE: Dec 11 2008

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: VINYL METHYL ETHER
CAS NUMBER: 107-25-5
PERCENTAGE: 100.0

COMPONENT: INHIBITORS
CAS NUMBER: Not assigned.
PERCENTAGE: <0.1

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=0 FIRE=4 REACTIVITY=2

EMERGENCY OVERVIEW:

COLOR: colorless

PHYSICAL FORM: compressed gas

ODOR: sweet odor, pleasant odor

MAJOR HEALTH HAZARDS: No significant target effects reported.



PHYSICAL HAZARDS: Flammable gas. May cause flash fire. May polymerize. Containers may rupture or explode. May form peroxides during prolonged storage.

POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: irritation, headache, dizziness, blurred vision, convulsions

LONG TERM EXPOSURE: no information on significant adverse effects

SKIN CONTACT:

SHORT TERM EXPOSURE: frostbite

LONG TERM EXPOSURE: no information on significant adverse effects

EYE CONTACT:

SHORT TERM EXPOSURE: frostbite, blurred vision

LONG TERM EXPOSURE: no information on significant adverse effects

INGESTION:

SHORT TERM EXPOSURE: frostbite, nausea, vomiting, diarrhea

LONG TERM EXPOSURE: no information on significant adverse effects

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

SKIN CONTACT: If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

EYE CONTACT: Flush eyes with plenty of water.

INGESTION: If a large amount is swallowed, get medical attention.

NOTE TO PHYSICIAN: For inhalation, consider oxygen.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Severe fire hazard. Vapor/air mixtures are explosive above flash point. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.

EXTINGUISHING MEDIA: carbon dioxide, regular dry chemical

Large fires: Use regular foam or flood with fine water spray.

FIRE FIGHTING: Move container from fire area if it can be done without risk. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If

this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Stop leak if possible without personal risk. Let burn unless leak can be stopped immediately. For smaller tanks or cylinders, extinguish and isolate from other flammables. Evacuation radius: 800 meters (1/2 mile). Do not attempt to extinguish fire unless flow of material can be stopped first. Flood with fine water spray. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Evacuate if fire gets out of control or containers are directly exposed to fire. Evacuation radius: 500 meters (1/3 mile). Consider downwind evacuation if material is leaking. Stop flow of gas.

FLASH POINT: -69 F (-56 C) (OC)

LOWER FLAMMABLE LIMIT: 2.6%

UPPER FLAMMABLE LIMIT: 39%

AUTOIGNITION: 549 F (287 C)

6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:

Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Keep unnecessary people away, isolate hazard area and deny entry. Remove sources of ignition. Ventilate closed spaces before entering.

7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Grounding and bonding required. Store in a well-ventilated area. Avoid contact with light. Store in a tightly closed container. Keep separated from incompatible substances.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

VINYL METHYL ETHER:

No occupational exposure limits established.

VENTILATION: Provide local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

EYE PROTECTION: For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear insulated gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any chemical cartridge respirator with organic vapor cartridge(s).

Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).

Any air-purifying respirator with a full facepiece and an organic vapor canister.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: gas

COLOR: colorless

PHYSICAL FORM: compressed gas

ODOR: sweet odor, pleasant odor

MOLECULAR WEIGHT: 58.09

MOLECULAR FORMULA: C-H₃-O-C-H-C-H₂

BOILING POINT: 43 F (6 C)

FREEZING POINT: -188 F (-122 C)

VAPOR PRESSURE: 1052 mmHg @ 20 C

VAPOR DENSITY (air=1): 2.0

SPECIFIC GRAVITY (water=1): 0.7725 @ 0 C

WATER SOLUBILITY: 0.82% @ 25 C

PH: Not applicable

VOLATILITY: 100%

ODOR THRESHOLD: Not available

EVAPORATION RATE: 84.4 (butyl acetate=1)

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable

SOLVENT SOLUBILITY:

Soluble: alcohol, ether, acetone, benzene, organic solvents

Slightly Soluble: polyhydroxy organic compounds

Insoluble: glycerol

10. STABILITY AND REACTIVITY

REACTIVITY: Polymerizes with evolution of heat. Avoid contact with light. May form explosive peroxides. Avoid prolonged storage or contact with air, light or storage and use above room temperature.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.

INCOMPATIBILITIES: acids, halogens, metal salts, oxidizing materials, combustible materials, reducing agents

HAZARDOUS DECOMPOSITION:

Thermal decomposition products: miscellaneous decomposition products

POLYMERIZATION: Polymerizes with evolution of heat. Avoid contact with heat, air, light or moisture and monitor inhibitor content.

11. TOXICOLOGICAL INFORMATION

VINYL METHYL ETHER:

TOXICITY DATA: >64000 ppm inhalation-rat LC50; >8 gm/kg skin-rabbit LD50; 4900 mg/kg oral-rat LD50

ACUTE TOXICITY LEVEL:

Moderately Toxic: ingestion

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: skin disorders and allergies

REPRODUCTIVE EFFECTS DATA: Available.

12. ECOLOGICAL INFORMATION

Not available

13. DISPOSAL CONSIDERATIONS

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. D003. Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:

PROPER SHIPPING NAME: Vinyl methyl ether, stabilized

ID NUMBER: UN1087

HAZARD CLASS OR DIVISION: 2.1

LABELING REQUIREMENTS: 2.1

QUANTITY LIMITATIONS:



PASSENGER AIRCRAFT OR RAILCAR: Forbidden
CARGO AIRCRAFT ONLY: 150 kg

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:
SHIPPING NAME: Vinyl methyl ether, stabilized
UN NUMBER: UN1087
CLASS: 2.1

15. REGULATORY INFORMATION

U.S. REGULATIONS:

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): Not regulated.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 Subpart B): Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 Subpart C): Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370 Subparts B and C):

ACUTE: Yes

CHRONIC: No

FIRE: Yes

REACTIVE: Yes

SUDDEN RELEASE: Yes

SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (29 CFR 1910.119): Not regulated.

STATE REGULATIONS:

California Proposition 65: Not regulated.

CANADIAN REGULATIONS:

WHMIS CLASSIFICATION: AB

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): Listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDL): Not determined.

16. OTHER INFORMATION

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