

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: METHYL SILANE

TRADE NAMES/SYNONYMS:
MTG MSDS 250; 00227393

CHEMICAL FAMILY: silanes

CREATION DATE: Oct 26 2001
REVISION DATE: Dec 11 2008

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: METHYL SILANE
CAS NUMBER: 992-94-9
PERCENTAGE: 100

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=4 REACTIVITY=2



EMERGENCY OVERVIEW:

COLOR: colorless

PHYSICAL FORM: compressed, liquefied gas

ODOR: irritating odor

MAJOR HEALTH HAZARDS: respiratory tract burns, skin burns, eye burns

PHYSICAL HAZARDS: Flammable gas. May cause flash fire. Flash back hazard. Extremely flammable. May ignite spontaneously on exposure to air. May react on contact with water.

POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: burns, cough, dizziness, nausea, headache, chest pain, difficulty breathing

LONG TERM EXPOSURE: same as effects reported in short term exposure

SKIN CONTACT:

SHORT TERM EXPOSURE: burns

LONG TERM EXPOSURE: same as effects reported in short term exposure

EYE CONTACT:

SHORT TERM EXPOSURE: burns

LONG TERM EXPOSURE: same as effects reported in short term exposure

INGESTION:

SHORT TERM EXPOSURE: ingestion of a gas is unlikely

LONG TERM EXPOSURE: same as effects reported in short term exposure

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: Contact with liquid: Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

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. Containers may rupture or explode if exposed to heat. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Vapor/air mixtures are explosive.

EXTINGUISHING MEDIA: carbon dioxide, regular dry chemical

Large fires: Flood with fine water spray.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. 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.

FLASH POINT: <-40 F (<-40 C)

AUTOIGNITION: 266 F (130 C)

HAZARDOUS COMBUSTION PRODUCTS:

Thermal decomposition or combustion products: oxides of carbon, oxides of silicon, hydrogen, organic acids

6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:

Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. 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. Store below 55 C. Protect from physical damage. Store in a tightly closed container. May ignite on exposure to air. Avoid contact with water or moisture. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

METHYL SILANE:

No occupational exposure limits established.

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

EYE PROTECTION: Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

PROTECTIVE MATERIAL TYPES: rubber, neoprene, nitrile butadiene rubber (NBR)

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.

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, liquefied gas

ODOR: irritating odor

MOLECULAR WEIGHT: 46.14

MOLECULAR FORMULA: H₃-C-Si-H₃

BOILING POINT: -72 to -71 F (-57.5 to -57 C)

FREEZING POINT: -251 to -249.5 F (-157 to -156.4 C)

DECOMPOSITION POINT: >932 F (>500 C)

VAPOR PRESSURE: 1425 kPa @ 20 C

VAPOR DENSITY (air=1): >1

SPECIFIC GRAVITY (water=1): 0.628-0.63 @ -58 C

WATER SOLUBILITY: reacts

PH: Not applicable

VOLATILITY: 100%

ODOR THRESHOLD: Not available

EVAPORATION RATE: Not applicable

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable

10. STABILITY AND REACTIVITY

REACTIVITY: May react on contact with water. Releases flammable gases. May ignite on exposure to air.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat. Avoid contact with water or moisture.

INCOMPATIBILITIES: oxidizing materials, halogens, metals, acids, bases, alcohols

HAZARDOUS DECOMPOSITION:

Thermal decomposition or combustion products: oxides of carbon, oxides of silicon, hydrogen, organic acids

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

METHYL SILANE:

LOCAL EFFECTS:

Corrosive: inhalation, skin, eye

12. ECOLOGICAL INFORMATION

Not available

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:

PROPER SHIPPING NAME: Compressed gas, flammable, n.o.s. (METHYL SILANE)

ID NUMBER: UN1954

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: Compressed gas, flammable, n.o.s. (METHYL SILANE)

UN NUMBER: UN1954

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: Not determined.

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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