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: TETRAETHYLENE GLYCOL DIMETHYL ETHER

TRADE NAMES/SYNONYMS:
2,5,8,11,14-PENTAOXAPENTADECANE; DIMETHOXYTETRAETHYLENE GLYCOL; BIS (2-(2-METHOXYETHOXY)ETHYL) ETHER; DIMETHOXYTETRAGLYCOL; TETRAGLYME; C10H22O5; MAT22965; RTECS SB0400000

CHEMICAL FAMILY: glycol ethers

CREATION DATE: Mar 30 1989
REVISION DATE: Dec 11 2008

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: TETRAETHYLENE GLYCOL DIMETHYL ETHER
CAS NUMBER: 143-24-8
PERCENTAGE: >99.9

COMPONENT: BUTYLATED HYDROXYANISOLE
CAS NUMBER: 25013-16-5
PERCENTAGE: <0.1

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=1 FIRE=1 REACTIVITY=1

EMERGENCY OVERVIEW:
COLOR: colorless
PHYSICAL FORM: liquid
MAJOR HEALTH HAZARDS: No significant target effects reported.
PHYSICAL HAZARDS: May form peroxides during prolonged storage.
POTENTIAL HEALTH EFFECTS:

INHALATION:
SHORT TERM EXPOSURE: irritation, itching, nausea, weakness, vomiting, diarrhea, headache, drowsiness, symptoms of drunkenness, blurred vision, lung congestion, kidney damage, liver damage
LONG TERM EXPOSURE: same as effects reported in short term exposure, fatigue

SKIN CONTACT:
SHORT TERM EXPOSURE: mild irritation
LONG TERM EXPOSURE: irritation, headache, weakness, drowsiness, symptoms of drunkenness, blurred vision, lung congestion, kidney damage, liver damage

EYE CONTACT:
SHORT TERM EXPOSURE: no information on significant adverse effects
LONG TERM EXPOSURE: no information is available

INGESTION:
SHORT TERM EXPOSURE: irritation, headache, drowsiness, symptoms of drunkenness, blurred vision
LONG TERM EXPOSURE: same as effects reported in short term exposure, kidney damage, liver damage, reproductive effects

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: 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.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Slight fire hazard.

EXTINGUISHING MEDIA: carbon dioxide, regular dry chemical, regular foam, water

FIRE FIGHTING: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

FLASH POINT: 286 F (141 C)
FLAMMABILITY CLASS (OSHA): III B
6. ACCIDENTAL RELEASE MEASURES

WATER RELEASE:
Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

OCCUPATIONAL RELEASE:
Stop leak if possible without personal risk. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. May form peroxides during prolonged storage. Store in a tightly closed container. Avoid contact with light. Store in a cool, dry place. Check peroxide content before use. Do not evaporate or distill to dryness. See original container for storage recommendations. Keep separated from incompatible substances.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:
TETRAETHYLENE GLYCOL DIMETHYL ETHER:
No occupational exposure limits established.

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. 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.

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 particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100 or P100. Any air-purifying full-facepiece respirator equipped with an N95, R95, or P95 filter. The following filters may also be used: N99, R99, P99, N100, R100 or P100. Any powered, air-purifying respirator with a high-efficiency particulate filter. Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter.
Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode.

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: liquid
APPEARANCE: clear
COLOR: colorless
ODOR: Not available
MOLECULAR WEIGHT: 222.29
MOLECULAR FORMULA: C-H3-O-C-H2-(C-H2-O-C-H2)3-C-H2-O-C-H3
BOILING POINT: 529 F (276 C)
FREEZING POINT: -22 F (-30 C)
VAPOR PRESSURE: <0.01 mmHg @ 20 C
VAPOR DENSITY: Not available
SPECIFIC GRAVITY (water=1): 1.0132
BULK DENSITY: 8.4 lbs/gal @ 20 C
WATER SOLUBILITY: soluble
PH: Not available
VOLATILITY: Not available
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not available
VISCOSITY: 4.05 cP @ 20 C
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available
SOLVENT SOLUBILITY:
Soluble: alcohol, ether, hydrocarbons

10. STABILITY AND REACTIVITY

REACTIVITY: 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. Avoid contact with incompatible materials.

INCOMPATIBILITIES: oxidizing materials

HAZARDOUS DECOMPOSITION:
Thermal decomposition products: oxides of carbon

**POLYMERIZATION:** Will not polymerize.

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**11. TOXICOLOGICAL INFORMATION**

**TETRAETHYLENE GLYCOL DIMETHYL ETHER:**
**IRRITATION DATA:** 500 mg eyes-rabbit mild
**TOXICITY DATA:** 5140 mg/kg oral-rat LD50
**ACUTE TOXICITY LEVEL:**
Slightly Toxic: ingestion
**REPRODUCTIVE EFFECTS DATA:** Available.

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**12. ECOLOGICAL INFORMATION**

Not available

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**13. DISPOSAL CONSIDERATIONS**

Dispose in accordance with all applicable regulations.

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**14. TRANSPORT INFORMATION**

**U.S. DEPARTMENT OF TRANSPORTATION:** No classification assigned.

**CANADIAN TRANSPORTATION OF DANGEROUS GOODS:** No classification assigned.

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**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: No
CHRONIC: No
FIRE: No
REACTIVE: No
SUDDEN RELEASE: No


STATE REGULATIONS:
California Proposition 65:
Known to the state of California to cause the following:
Butylated hydroxyanisole
Cancer (Jan 01, 1990)

CANADIAN REGULATIONS:
WHMIS CLASSIFICATION: Not a Controlled Product under Canada's Workplace Hazardous Material Information System.

NATIONAL INVENTORY STATUS:
U.S. INVENTORY (TSCA): All components of this product are in compliance.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDSL): All of the components of this product are listed on the DSL.

16. OTHER INFORMATION

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