TRIETHYLENE GLYCOL ETHYL ETHER

TGE

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Triethylene glycol monoethyl ether Triglycol monoethyl ether	Liquid	Colorless	Odorless
	Sinks and mixes with water.		

Call fire department.
Notify local health and pollution control agencies.
Protect water intakes.

Fire	Combustible. Extinguish with dry chemical, alcohol foam, or carbon dioxide. Water and foam may be ineffective on fire. Cool exposed containers with water.
Exposure	Not harmful.
Water Pollution	Effect of low concentrations on aquatic life is unknown. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS
Stop discharge

2. CHEMICAL DESIGNATIONS
2.1 **CG Compatibility Group:** 40; Glycol ethers
2.2 **Formula:** $C_2H_5O(CH_2)_2O(CH_2)_2OCH_2CH_2OH$
2.3 **IMO/UN Designation:** Not listed.
2.4 **DOT ID No.:** Not listed.
2.5 **CAS Registry No.:** 112-50-5
2.6 **NAERG Guide No.:** Not listed
2.7 **Standard Industrial Trade Classification:** 51616

3. HEALTH HAZARDS
3.1 **Personal Protective Equipment:** Chemical safety goggles and adequate protective clothing.
3.2 **Symptoms Following Exposure:** No appreciable hazard in ordinary handling or use.
3.3 **Treatment of Exposure:** Wash affected parts with water.
3.4 **TLV-TWA:** Not pertinent.
3.5 **TLV-STEL:** Not pertinent.
3.6 **TLV-Ceiling:** Not listed.
3.7 **Toxicity by Ingestion:** Grade 1; LD_{50} = 10.61 g/kg (rat)
3.8 **Toxicity by Inhalation:** Currently not available.
3.9 **Chronic Toxicity:** Currently not available
3.10 **Vapor (Gas) Irritant Characteristics:** Vapors are nonirritating to the eyes and throat.
3.11 **Liquid or Solid Characteristics:** No appreciable hazard. Practically harmless to the skin.
3.12 **Odor Threshold:** Odorless
3.13 **IDLH Value:** Not listed.
3.14 **OSHA PEL-TWA:** Not listed.
3.15 **OSHA PEL-STEL:** Not listed.
3.16 **OSHA PEL-Ceiling:** Not listed.
3.17 **EPA AEGL:** Not listed

4. FIRE HAZARDS
4.1 **Flash Point:** 275°F O.C.
4.2 **Flammable Limits in Air:** Not pertinent.
4.3 **Fire Extinguishing Agents:** Dry chemical, carbon dioxide, or alcohol foam.
4.4 **Fire Extinguishing Agents Not to Be Used:** Water or foam may cause frothing.
4.5 **Special Hazards of Combustion Products:** Currently not available
4.6 **Behavior in Fire:** Currently not available
4.7 **Auto Ignition Temperature:** Currently not available
4.8 **Electrical Hazards:** Not listed.
4.9 **Burning Rate:** Currently not available
4.10 **Adiabatic Flame Temperature:** Currently not available
4.11 **Stoichometric Air to Fuel Ratio:** 50.0 (calc.)
4.12 **Flame Temperature:** Currently not available
4.13 **Combustion Molar Ratio (Reactant to Product):** 17.0 (calc.)
4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

5. CHEMICAL REACTIVITY
5.1 **Reactivity with Water:** No reaction.
5.2 **Reactivity with Common Materials:** No reaction.
5.3 **Stability During Transport:** Stable.
5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent.
5.5 **Polymerization:** Will not polymerize.
5.6 **Inhibitor of Polymerization:** Not pertinent.

6. WATER POLLUTION
6.1 **Aquatic Toxicity:** Currently not available
6.2 **Waterfowl Toxicity:** Currently not available
6.3 **Biological Oxygen Demand (BOD):** Currently not available
6.4 **Food Chain Concentration Potential:** None.
6.5 **GESAMP Hazard Profile:**
Bioaccumulation: 0
Damage to living resources: 0
Human Oral hazard: 0
Human Contact hazard: 0
Reduction of amenities: 0

7. SHIPPING INFORMATION
7.1 **Grades of Purity:** Currently not available
7.2 **Storage Temperature:** Ambient.
7.3 **Inert Atmosphere:** No requirement.
7.4 **Venting:** Not listed.
7.5 **IMO Pollution Category:** D
7.6 **Ship Type:** Data not avaialable
7.7 **Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS
8.1 **49 CFR Category:** Not listed.
8.2 **49 CFR Class:** Not pertinent.
8.3 **49 CFR Package Group:** Not listed.
8.4 **Marine Pollutant:** No
8.5 **NFPA Hazard Classification:**

Category	Classification
Health Hazard (Blue)	0
Flammability (Red)	1
Instability (Yellow)	0

8.6 **EPA Reportable Quantity:** Not listed.
8.7 **EPA Pollution Category:** Not listed.
8.8 **RCRA Waste Number:** Not listed
8.9 **EPA FWPCA List:** Not listed

9. PHYSICAL & CHEMICAL PROPERTIES
9.1 **Physical State at 15° C and 1 atm:** Liquid
9.2 **Molecular Weight:** 178.26
9.3 **Boiling Point at 1 atm:** 493°F = 256°C = 529°K
9.4 **Freezing Point:** −1.7°F = −18.7°C = 254.5°K
9.5 **Critical Temperature:** Currently not available
9.6 **Critical Pressure:** Currently not available
9.7 **Specific Gravity:** 1.020 at 20°C (liquid)
9.8 **Liquid Surface Tension:** Currently not available
9.9 **Liquid Water Interfacial Tension:** Currently not available
9.10 **Vapor (Gas) Specific Gravity:** Currently not available
9.11 **Ratio of Specific Heats of Vapor (Gas):** 1.033
9.12 **Latent Heat of Vaporization:** (est.) 125 Btu/lb = 69 cal/g = 2.9 X 10^5 J/kg
9.13 **Heat of Combustion:** (est.) =−11,000 Btu/lb= −6,170 cal/g = −258 X 10^5 J/kg
9.14 **Heat of Decomposition:** Currently not available
9.15 **Heat of Solution:** Currently not available
9.16 **Heat of Polymerization:** Not pertinent.
9.17 **Heat of Fusion:** Currently not available
9.18 **Limiting Value:** Currently not available
9.19 **Reid Vapor Pressure:** Very low.

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
68	8.510		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE