

# TRIPROPYLENE GLYCOL

TGC

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b>	Liquid	Colorless	Characteristic odor
	May float or sink and mix with water.		
<p>Call fire department.                  Notify local health and pollution control agencies.                  Protect water intakes.</p>			
<b>Fire</b>	Combustible. Extinguish with dry chemicals, alcohol foam, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.		
<b>Exposure</b>	LIQUID Not harmful.		
<b>Water Pollution</b>	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.		

<b>1. CORRECTIVE RESPONSE ACTIONS</b> Dilute and disperse Stop discharge	<b>2. CHEMICAL DESIGNATIONS</b> 2.1 <b>CG Compatibility Group:</b> 40; Glycol ether 2.2 <b>Formula:</b> HO(C <sub>3</sub> H <sub>6</sub> O) <sub>2</sub> C <sub>3</sub> H <sub>6</sub> OH 2.3 <b>IMO/UN Designation:</b> Not listed 2.4 <b>DOT ID No.:</b> Not listed 2.5 <b>CAS Registry No.:</b> 24800-44-0 2.6 <b>NAERG Guide No.:</b> Not listed 2.7 <b>Standard Industrial Trade Classification:</b> 51229
<b>3. HEALTH HAZARDS</b> 3.1 <b>Personal Protective Equipment:</b> Plastic gloves; safety glasses or face shield 3.2 <b>Symptoms Following Exposure:</b> Non-irritating; no symptoms observed by any exposure route. 3.3 <b>Treatment of Exposure:</b> INGESTION: if large amounts are swallowed, induce vomiting; treat symptomatically. EYES or SKIN: flush with water; get medical attention if ill effects develop. 3.4 <b>TLV-TWA:</b> Currently not available 3.5 <b>TLV-STEL:</b> Not listed. 3.6 <b>TLV-Ceiling:</b> Not listed. 3.7 <b>Toxicity by Ingestion:</b> Grade 2; oral LD <sub>50</sub> = 3,000 mg/kg (rat) 3.8 <b>Toxicity by Inhalation:</b> Currently not available. 3.9 <b>Chronic Toxicity:</b> Currently not available 3.10 <b>Vapor (Gas) Irritant Characteristics:</b> Vapors are nonirritating to eyes and throat. 3.11 <b>Liquid or Solid Characteristics:</b> No appreciable hazard. Practically harmless to the skin. 3.12 <b>Odor Threshold:</b> Odorless 3.13 <b>IDLH Value:</b> Not listed. 3.14 <b>OSHA PEL-TWA:</b> Not listed. 3.15 <b>OSHA PEL-STEL:</b> Not listed. 3.16 <b>OSHA PEL-Ceiling:</b> Not listed. 3.17 <b>EPA AEGL:</b> Not listed	

## 4. FIRE HAZARDS

- 4.1 **Flash Point:** 285°F O.C.
- 4.2 **Flammable Limits in Air:** 0.8%-5.0% (est.)
- 4.3 **Fire Extinguishing Agents:** "Alcohol" foam, dry chemical, carbon dioxide
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Water may be ineffective
- 4.5 **Special Hazards of Combustion Products:** Acid fumes of acids and aldehydes may form in fires.
- 4.6 **Behavior in Fire:** Currently not available
- 4.7 **Auto Ignition Temperature:** Currently not available
- 4.8 **Electrical Hazards:** Currently not available
- 4.9 **Burning Rate:** Currently not available
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** 57.1 (calc.)
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** 19.0 (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:** May attack some forms of plastics
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
- 5.5 **Polymerization:** Not pertinent
- 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:** Commercial, 99%
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** No requirement
- 7.4 **Venting:** Open (flame arrester)
- 7.5 **IMO Pollution Category:** Currently not available
- 7.6 **Ship Type:** Currently not available
- 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:** 192.26
- 9.3 **Boiling Point at 1 atm:** 523°F = 273°C = 546°K
- 9.4 **Freezing Point:** (sets to glass) -49°F = -45°C = 228°K
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 1.022 at 20°C (liquid)
- 9.8 **Liquid Surface Tension:** Currently not available
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent
- 9.12 **Latent Heat of Vaporization:** Currently not available
- 9.13 **Heat of Combustion:** (est.) -13,700 Btu/lb = -7,610 cal/g = -318 X 10<sup>5</sup> J/kg
- 9.14 **Heat of Decomposition:** Not pertinent
- 9.15 **Heat of Solution:** Not pertinent
- 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:** 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
34	64.849		N		N		N
36	64.780		O		O		O
38	64.709		T		T		T
40	64.639						
42	64.570		P		P		P
44	64.500		E		E		E
46	64.429		R		R		R
48	64.360		T		T		T
50	64.290		I		I		I
52	64.230		N		N		N
54	64.160		E		E		E
56	64.089		N		N		N
58	64.020		T		T		T
60	63.950						
62	63.880						
64	63.810						
66	63.740						
68	63.670						
70	63.600						
72	63.530						
74	63.460						
76	63.390						
78	63.320						
80	63.250						
82	63.190						
84	63.120						

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
	M I S C I B L E		N O T  P E R T I N E N T		N O T  P E R T I N E N T		N O T  P E R T I N E N T