

TRIPROPYLENE GLYCOL METHYL ETHER

TGM

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION								
Common Synonyms Dowanol TPM Propanol, 3-(3-methoxy propoxy)propoxy)-	Liquid	Colorless	Mild odor	<p>4.1 Flash Point: 232°F C.C.</p> <p>4.2 Flammable Limits in Air: Currently not available</p> <p>4.3 Fire Extinguishing Agents: Water fog, alcohol foam, carbon dioxide, dry chemical.</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Currently not available</p> <p>4.5 Special Hazards of Combustion Products: Currently not available</p> <p>4.6 Behavior in Fire: Currently not available</p> <p>4.7 Auto Ignition Temperature: Currently not available</p> <p>4.8 Electrical Hazards: Currently not available</p> <p>4.9 Burning Rate: Currently not available</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: 64.3 (calc.)</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): 21.0 (calc.)</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: Currently not available</p> <p>7.2 Storage Temperature: Ambient.</p> <p>7.3 Inert Atmosphere: Currently not available</p> <p>7.4 Venting: Currently not available</p> <p>7.5 IMO Pollution Category: D</p> <p>7.6 Ship Type: Data not available</p> <p>7.7 Barge Hull Type: Currently not available</p>								
Fire Call fire department. Avoid contact with liquid. Notify local health and pollution control agencies. Protect water intakes.	 Combustible. Extinguish with dry chemical, alcohol foam, or CO ₂ . Cool exposed containers with water. Wear self contained breathing apparatus.				8. HAZARD CLASSIFICATIONS								
Exposure CALL FOR MEDICAL AID. LIQUID May be irritating to skin and eyes. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink 2 glasses of water and immediately induce vomiting.					<p>8.1 49 CFR Category: Not listed.</p> <p>8.2 49 CFR Class: Not pertinent.</p> <p>8.3 49 CFR Package Group: Not listed.</p> <p>8.4 Marine Pollutant: No</p> <p>8.5 NFPA Hazard Classification:</p> <table> <tr> <th>Category</th> <th>Classification</th> </tr> <tr> <td>Health Hazard (Blue)</td> <td>0</td> </tr> <tr> <td>Flammability (Red)</td> <td>1</td> </tr> <tr> <td>Instability (Yellow)</td> <td>0</td> </tr> </table> <p>8.6 EPA Reportable Quantity: Not listed.</p> <p>8.7 EPA Pollution Category: Not listed.</p> <p>8.8 RCRA Waste Number: Not listed</p> <p>8.9 EPA FWCNA List: Not listed</p>	Category	Classification	Health Hazard (Blue)	0	Flammability (Red)	1	Instability (Yellow)	0
Category	Classification												
Health Hazard (Blue)	0												
Flammability (Red)	1												
Instability (Yellow)	0												
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.					9. PHYSICAL & CHEMICAL PROPERTIES								
1. CORRECTIVE RESPONSE ACTIONS Stop discharge	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: 40; Glycol ethers 2.2 Formula: CH ₃ CH ₂ CH(CH ₃)OH 2.3 IMO/UN Designation: Currently not available 2.4 DOT ID No.: Not listed 2.5 CAS Registry No.: 25498-49-1 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51616	3. HEALTH HAZARDS 3.1 Personal Protective Equipment: Chemical goggles, rubber boots and gloves, and self contained breathing apparatus. 3.2 Symptoms Following Exposure: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Prolonged or repeated exposure is not likely to cause significant skin irritation. Repeated prolonged exposure may cause sleepiness. Single prolonged exposure is not likely to result in absorption of harmful amount through skin. Low oral toxicity. Ingestion of large amount may cause injury. Exposure may have anesthetic or narcotic effects. 3.3 Treatment of Exposure: INHALATION: Call for medical aid. Remove to fresh air. If not breathing, give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. INGESTION: If conscious, have victim drink 2 glasses of water and immediately induce vomiting. EYES: Irrigate with water for at least 15 minutes. SKIN: Wash off in flowing water or shower. 3.4 TLV-TWA: Not listed. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 2; LD ₅₀ = 3.3g/kg (rat) 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Prolonged and repeated exposure to high concentration may cause kidney and neural dysfunction. 3.10 Vapor (Gas) Irritant Characteristics: Vapors are non-irritating to eyes and throat. 3.11 Liquid or Solid Characteristics: No appreciable hazard. Practically harmless to the skin. 3.12 Odor Threshold: Currently not available 3.13IDLH 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	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: Currently not available 5.5 Polymerization: Will not occur. 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: Currently not available 6.5 GESAMP Hazard Profile: Not listed	<p>9.1 Physical State at 15° C and 1 atm: Liquid</p> <p>9.2 Molecular Weight: 206.3</p> <p>9.3 Boiling Point at 1 atm: 468°F = 242.4°C = 515.2°K</p> <p>9.4 Freezing Point: -110°F = -78.89°C = 194.3°K</p> <p>9.5 Critical Temperature: Currently not available</p> <p>9.6 Critical Pressure: Currently not available</p> <p>9.7 Specific Gravity: 0.965</p> <p>9.8 Liquid Surface Tension: 30 dynes/cm = 0.030 N/m</p> <p>9.9 Liquid Water Interfacial Tension: Currently not available</p> <p>9.10 Vapor (Gas) Specific Gravity: 7.15</p> <p>9.11 Ratio of Specific Heats of Vapor (Gas): Currently not available</p> <p>9.12 Latent Heat of Vaporization: Currently not available</p> <p>9.13 Heat of Combustion: Currently not available</p> <p>9.14 Heat of Decomposition: Currently not available</p> <p>9.15 Heat of Solution: Currently not available</p> <p>9.16 Heat of Polymerization: Currently not available</p> <p>9.17 Heat of Fusion: Currently not available</p> <p>9.18 Limiting Value: Currently not available</p> <p>9.19 Reid Vapor Pressure: Currently not available</p>								
					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
77	60.070		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E

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	77	0.000		C U R R E N T L Y N O T A V A I L A B L E	0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400 425 450 475 500 525 550 575 600	0.308 0.321 0.333 0.345 0.357 0.368 0.380 0.391 0.402 0.413 0.423 0.434 0.444 0.454 0.463 0.473 0.482 0.492 0.501 0.510 0.518 0.527 0.535 0.543 0.551