

# DIETHYLENE GLYCOL DIMETHYL ETHER

DGD

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b>		Watery liquid	Colorless	Pleasant odor
Diglyme Bis-(2-Methoxyethyl)-ether Poly solv		Floats and mixes with water.		
<p>Call fire department.                  Notify local health and pollution control agencies.                  Protect water intakes.</p>				
<b>Fire</b>	Combustible. Extinguish with dry chemical, foam, or carbon dioxide. Cool exposed containers with water.			
<b>Exposure</b>	CALL FOR MEDICAL AID.  LIQUID If swallowed, will cause nausea, vomiting, or loss of consciousness. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.			
<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.			

<p><b>1. CORRECTIVE RESPONSE ACTIONS</b>                  Dilute and disperse                  Stop discharge</p>	<p><b>2. CHEMICAL DESIGNATIONS</b>                  2.1 <b>CG Compatibility Group:</b> Not listed.                  2.2 <b>Formula:</b> (CH<sub>3</sub>OCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>O                  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> Currently not available                  2.6 <b>NAERG Guide No.:</b> Not listed                  2.7 <b>Standard Industrial Trade Classification:</b> 51616</p>
<p><b>3. HEALTH HAZARDS</b></p> <p>3.1 <b>Personal Protective Equipment:</b> Vinyl (not rubber) gloves; safety goggles.                  3.2 <b>Symptoms Following Exposure:</b> INGESTION (severe cases): nausea, vomiting, abdominal cramps, weakness progressing to coma.                  3.3 <b>Treatment of Exposure:</b> INGESTION: give water and induce vomiting; oxygen and artificial respiration as needed.                  3.4 <b>TLV-TWA:</b> Not listed.                  3.5 <b>TLV-STEL:</b> Not listed.                  3.6 <b>TLV-Ceiling:</b> Not listed.                  3.7 <b>Toxicity by Ingestion:</b> Currently not available                  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> None                  3.11 <b>Liquid or Solid Characteristics:</b> None                  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</p>	

## 4. FIRE HAZARDS

- 4.1 **Flash Point:** 158°F O.C.
- 4.2 **Flammable Limits in Air:** Currently not available
- 4.3 **Fire Extinguishing Agents:** Dry chemical, foam, carbon dioxide
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
- 4.5 **Special Hazards of Combustion Products:** Not pertinent
- 4.6 **Behavior in Fire:** Not pertinent
- 4.7 **Auto Ignition Temperature:** Currently not available
- 4.8 **Electrical Hazards:** Not pertinent
- 4.9 **Burning Rate:** Currently not available
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** 38.1 (calc.)
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** 13.0 (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:** 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:** Not listed

## 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Technical
- 7.2 **Storage Temperature:** Currently not available
- 7.3 **Inert Atmosphere:** Currently not available
- 7.4 **Venting:** Currently not available
- 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).....	1
Flammability (Red).....	2
Instability (Yellow).....	1
- 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:** 134.12
- 9.3 **Boiling Point at 1 atm:** 324°F = 162°C = 435°K
- 9.4 **Freezing Point:** -94°F = -70°C = 203°K
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 0.945 at 20°C (liquid)
- 9.8 **Liquid Surface Tension:** Not pertinent
- 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:** 130 Btu/lb = 74 cal/g = 3.1 X 10<sup>5</sup> J/kg
- 9.13 **Heat of Combustion:** (est.) -11,300 Btu/lb = -6,260 cal/g = -262 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:** Currently not available

## 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
52	59.540	85	0.498		N		N
54	59.480	90	0.502		O		O
56	59.410	95	0.506		T		T
58	59.340	100	0.510				
60	59.270	105	0.514		P		P
62	59.200	110	0.518		E		E
64	59.130	115	0.522		R		R
66	59.060	120	0.526		T		T
68	58.990	125	0.530		I		I
70	58.920	130	0.534		N		N
72	58.850	135	0.538		E		E
74	58.780	140	0.542		N		N
76	58.710	145	0.546		T		T
78	58.640	150	0.550				
80	58.570						
82	58.500						
84	58.430						
86	58.370						

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	70	0.041	70	0.00098		N
	I	80	0.058	80	0.00134		O
	S	90	0.080	90	0.00182		T
	C	100	0.109	100	0.00244		
	I	110	0.148	110	0.00324		P
	B	120	0.198	120	0.00426		E
	L	130	0.262	130	0.00555		R
	E	140	0.344	140	0.00717		T
		150	0.447	150	0.00917		I
		160	0.577	160	0.01163		N
		170	0.738	170	0.01465		E
		180	0.937	180	0.01831		R
		190	1.181	190	0.02272		T
		200	1.478	200	0.02800		I
		210	1.837	210	0.03429		N
		220	2.269	220	0.04173		E
		230	2.785	230	0.05048		R
		240	3.400	240	0.06073		T
		250	4.126	250	0.07266		I
		260	4.980	260	0.08650		N
		270	5.981	270	0.10240		E
		280	7.147	280	0.12080		R
		290	8.500	290	0.14170		T
		300	10.060	300	0.16560		I
		310	11.860	310	0.19260		N
		320	13.920	320	0.22320		E