ETHOXY TRIGLYCOL

ETG

CAUTIONARY RESPONSE INFORMATION

Common Synonyms
Dowanol TE
Ethoxytriethylene glycol
Triethylene glycol monoethyl ether
Triglycol monoethyl ether

Liquid Colorless Odorless

Sinks and mixes with water.

Keep people away.
Shut off ignitions sources and 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

Dilute and disperse
Stop discharge
Collection Systems: Dredge

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: 40; Glycol ether
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 listed.
3.5 TLV-STEL: Not listed.
3.6 TLV-Ceiling: Not listed.
3.7 Toxicity by Ingestion: Grade 1; LD_{50} = 5 to 15 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: 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 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: 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: Currently not available
7.2 Storage Temperature: Ambient
7.3 Inert Atmosphere: No requirement
7.4 Venting: Open (flame arrester)
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
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: Not pertinent
9.6 Critical Pressure: Not pertinent
9.7 Specific Gravity: 1.020 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): 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: 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: 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
34	64.849		CURRENTLY NOT AVAILABLE		NOT PERTINENT		NOT PERTINENT
36	64.780						
38	64.709						
40	64.639						
42	64.570						
44	64.500						
46	64.429						
48	64.360						
50	64.299						
52	64.230						
54	64.160						
56	64.089						
58	64.020						
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	63.260						
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
	MISCIBLE	140	0.002	140	0.00006	90	0.224
		160	0.005	160	0.00014	100	0.224
		180	0.012	180	0.00031	110	0.224
		200	0.025	200	0.00064	120	0.224
		220	0.050	220	0.00122	130	0.224
		240	0.094	240	0.00222	140	0.224
		260	0.167	260	0.00385	150	0.224
		280	0.285	280	0.00639	160	0.224
		300	0.469	300	0.01024	170	0.224
		320	0.746	320	0.01586	180	0.224
		340	1.149	340	0.02383	190	0.224
		360	1.723	360	0.03485	200	0.224
		380	2.518	380	0.04973	210	0.224
		400	3.598	400	0.06940	220	0.224
		420	5.035	420	0.09490	230	0.224
		440	6.911	440	0.12740	240	0.224
		460	9.322	460	0.16810	250	0.224
		480	12.370	480	0.21840	260	0.224
		500	16.180	500	0.27960		
		520	20.880	520	0.35330		
		540	26.590	540	0.44100		
		560	33.470	560	0.54430		