ETHYLENE GLYCOL DIMETHYL ETHER

EGD

CAUTIONARY RESPONSE INFORMATION

Common Synonyms
Ansul ether 12'
Ansul ether 121
1,2-Dimethoxyethane
Dimethyl cellosolve
Monoglyme

Liquid Colorless Fragrant odor

Floats and mixes with water. Irritating vapor is produced.

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

Fire

Combustible.
Extinguish with dry chemical, alcohol foam, or carbon dioxide.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID.

VAPOR
If inhaled, will cause dizziness or difficult breathing.
Move to fresh air.
If breathing has stopped, give artificial respiration.
If breathing is difficult, give oxygen.

LIQUID
Not irritating to skin.
If swallowed, will cause nausea, vomiting or loss of consciousness.
IF SWALLOWED and victim is CONSCIOUS, have victim drinkwater or milk.
IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.

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

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.
2.2 Formula: $CH_3OCH_2CH_2OCH_3$
2.3 IMO/UN Designation: Not listed
2.4 DOT ID No.: Not listed
2.5 CAS Registry No.: Currently not available
2.6 NAERG Guide No.: Not listed
2.7 Standard Industrial Trade Classification: 51616

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Vinyl (not rubber) protective gloves; safety glasses or goggles.
3.2 Symptoms Following Exposure: If ingested causes nausea, vomiting, cramps, weakness, coma.
3.3 Treatment of Exposure: INHALATION: oxygen and artificial respiration as needed. INGESTION gastric lavage with water-mineral oil.
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 (adult albino rat)
3.8 Toxicity by Inhalation: Currently not available.
3.9 Chronic Toxicity: Currently not available
3.10 Vapor (Gas) Irritant Characteristics: None
3.11 Liquid or Solid Characteristics: None
3.12 Odor Threshold: Currently not available
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: 29°F C.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: Containers may explode in fires.
4.7 Auto Ignition Temperature: 395°F
4.8 Electrical Hazards: Not pertinent
4.9 Burning Rate: 4.9 mm/min.
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichometric Air to Fuel Ratio: 26.2 (calc.)
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 9.0 (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:
Bioaccumulation: 0
Damage to living resources: -
Human Oral hazard: 1
Human Contact hazard: I
Reduction of amenities: X

7. SHIPPING INFORMATION

7.1 Grades of Purity: Commercial
7.2 Storage Temperature: Ambient
7.3 Inert Atmosphere: No requirement
7.4 Venting: Pressure-vacuum
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).....	2
Flammability (Red).....	2
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: 90.12
9.3 Boiling Point at 1 atm: 185.4°F = 85.2°C = 358.4°K
9.4 Freezing Point: –92°F = –69°C = 204°K
9.5 Critical Temperature: 505.4°F = 263°C = 536.2°K
9.6 Critical Pressure: 561 psia = 38.2 atm = 3.87 MN/m^2
9.7 Specific Gravity: 0.868 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: 3.1
9.11 Ratio of Specific Heats of Vapor (Gas): 1.071
9.12 Latent Heat of Vaporization: 134 Btu/lb = 74.6 cal/g = 3.12 X 10^5 J/kg
9.13 Heat of Combustion: –12,020 Btu/lb = –6680 cal/g = –279.7 X 10^5 J/kg
9.14 Heat of Decomposition: Not pertinent
9.15 Heat of Solution: (est.) –9 Btu/lb = –5 cal/g = –0.2 X 10^5 J/kg
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
35	55.440	15	0.428		N		N
40	55.250	20	0.431		O		O
45	55.060	25	0.434		T		T
50	54.860	30	0.437				
55	54.670	35	0.440		P		P
60	54.480	40	0.442		E		E
65	54.290	45	0.445		R		R
70	54.090	50	0.448		T		T
75	53.900	55	0.451		I		I
80	53.710	60	0.453		N		N
85	53.520	65	0.456		E		E
90	53.320	70	0.459		N		N
95	53.130	75	0.462		T		T
100	52.940	80	0.465				
105	52.750	85	0.467				
110	52.550						
115	52.360						
120	52.170						
125	51.980						
130	51.780						
135	51.590						
140	51.400						
145	51.210						
150	51.010						
155	50.820						
160	50.630						

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	0	0.118	0	0.00216	0	0.304
	I	5	0.141	5	0.00255	25	0.315
	S	10	0.168	10	0.00301	50	0.325
	C	15	0.200	15	0.00353	75	0.336
	I	20	0.236	20	0.00413	100	0.346
	B	25	0.278	25	0.00482	125	0.356
	L	30	0.326	30	0.00560	150	0.366
	E	35	0.382	35	0.00648	175	0.376
		40	0.446	40	0.00749	200	0.385
		45	0.518	45	0.00862	225	0.395
		50	0.601	50	0.00990	250	0.404
		55	0.695	55	0.01134	275	0.414
		60	0.801	60	0.01295	300	0.423
		65	0.921	65	0.01475	325	0.432
		70	1.057	70	0.01675	350	0.441
		75	1.209	75	0.01898	375	0.450
		80	1.380	80	0.02146	400	0.459
		85	1.570	85	0.02420	425	0.467
		90	1.783	90	0.02724	450	0.476
		95	2.021	95	0.03058	475	0.484
		100	2.284	100	0.03427	500	0.492
		105	2.577	105	0.03831	525	0.500
		110	2.901	110	0.04275	550	0.508
		115	3.258	115	0.04760	575	0.516
		120	3.653	120	0.05291	600	0.524
		125	4.087	125	0.05869		