CAUTIONARY RESPONSE INFORMATION

Common Synonyms
Downwind EM
Glycol monomethyl ether
Methyl cellosolve
2-Methoxyethanol
Poly-ol EM

Poly-solv EM

Methyl cellosolve

2-Methoxyethanol

Glycol monomethyl ether

Dowanol EM

3.14 OSHA PEL-TWA:
3.13 IDLH Value:
3.12 Odor Threshold:
3.11 Liquid or Solid Characteristics:
3.10 Vapor (Gas) Irritant Characteristics:
3.09 Chronic Toxicity:
3.08 Toxicity by Inhalation:
3.07 Toxicity by Ingestion:
3.06 Stability during Transport:
3.05 Reactivity with Common Materials:
3.04 Reactivity with Water:
3.03 Reactivity with Metals:
3.02 Reactivity with Acids and Bases:
3.01 Personal Protective Equipment:

CALL FOR MEDICAL AID.

1. CORRECTIVE RESPONSE ACTIONS
Dilute and disperse
Stop discharge

2. CHEMICAL DESIGNATIONS
2.1 CAS Compatibility Group: 40, glycol ether
2.2 Formula: CH2OCH2CH3
2.3 IMO/UN Designation: 3.3/1188
2.4 DOT No.: 1168
2.5 CAS Registry No.: 109-86-4
2.6 NAERG Guide No.: 127
2.7 Standard Industrial Trade Classification: 51616

3. HEALTH HAZARDS
3.1 Personal Protective Equipment: Chemical safety goggles; protective clothing; supplied-air respirator for high concentrations; safety shower and eyewash.
3.2 Symptoms Following Exposure: Irritation of skin and eyes. Chronic exposure may also cause weakness, sleeplessness, headache, gastrointestinal upset, weight loss, change of personality.
3.3 Treatment of Exposure: Skin: Wash affected area with water for 15 min.
3.4 TLV-TWA: 5 ppm
3.5 TLV-STEL: Not listed
3.6 TLV-ceil: Not listed
3.7 Toxicity by Ingestion: Grade 2; LD50 = 5.0 to 50 mg/kg (rat, rabbit, guinea pig)
3.8 Toxicity by Inhalation: Currently not available
3.9 Chronic Toxicity: Causes blood disorders and damage to central nervous system in humans.
3.10 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
3.11 Liquid or Solid Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
3.12 Odor Threshold: 0.9 ppm
3.13 IDLH Value: 200 ppm
3.14 OSHA PEL-TWA: 25 ppm
3.15 OSHA PEL-STEL: Not listed
3.16 OSHA PEL-Ceiling: Not listed
3.17 EPA AEL: Not listed

4. FIRE HAZARDS
4.1 Flash Point: 120°F C.C. 107°F C.C.
4.2 Flammable Limits in Air: 2.5%–19.8%
4.3 Fire Extinguishing Agents: Dry chemical, carbon dioxide or alcohol foam
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: 551°F
4.8 Electrical Hazards: Not pertinent
4.9 Burning Rate: 1.8 mm/min.
4.10 Abnormal Flame Temperature: Currently not available
4.11 Stoichiometric Air to Fuel Ratio: 19.0 (calc.)
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 7.0 (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: None
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): 15% (theor.), 10 days
6.4 Food Chain Concentration Potential: None
6.5 GESAMP Hazard Profile: Bioaccumulation: 0 Damage to living resources: 0 Human Oral hazard: 1 Human Contact hazard: 1 Reduction of amenities: XXX

7. SHIPPING INFORMATION
7.1 Grades of Purity: Commercial
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: 3
7.7 Barge Hull Type: 3

8. HAZARD CLASSIFICATIONS
8.1 CB CCR Category: Flammable liquid
8.2 CB CCR Class: 3
8.3 CB CCR Group: 3
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 RORA Waste Number: Not listed
8.9 EPA PWWCA List: Not listed

9. PHYSICAL & CHEMICAL PROPERTIES
9.1 Physical State at 15° C and 1 atm: Liquid
9.2 Molecular Weight: 76.10
9.3 Boiling Point at 1 atm: 256.1°F = 124.5°C = 397.7°F
9.4 Freezing Point: -121.2°F = -85.1°C = 188.1°F
9.5 Critical Temperature: 557.6°F = 292°C = 565.2K
9.6 Critical Pressure: 735 psia = 50 atm = 5.1 MPa
9.7 Specific Gravity: 0.966 at 20°C (liquid)
9.8 Liquid Surface Tension: 33 dynes/cm = 0.033 N/m at 20°C
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): 1.079
9.12 Latent Heat of Vaporization: 223 Btu/lb = 124.5 kJ/kg
9.13 Heat of Combustion: -4460 Btu/lb = -2505 kJ/kg
9.14 Heat of Decomposition: Not pertinent
9.15 Heat of Solution: Currently not available
9.16 Heat of Polymerization: Not pertinent
9.17 Heat of Fusion: Currently not available
9.18 Limiting Values: Currently not available
9.19 Reid Vapor Pressure: 0.39 psi

NOTES

JUNE 1999
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