2-ETHOXYETHYL ACETATE

EEA

CAUTIONARY RESPONSE INFORMATION

Common Synonyms			
Cellosolve acetate Ethylene glycol monoethyl ether acetate Glycol monoethyl ether acetate Poly-solv EE acetate	Liquid	Colorless	Mild ester-like odor
	Floats and mixes slowly with water.		

Call fire department.
Avoid contact with liquid.
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.

LIQUID
Irritating to skin and eyes.
Harmful if swallowed.
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 water or milk.

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

Stop discharge
Dilute and disperse

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: 34; Esters
2.2 Formula: $CH_3COOCH_2CH_2OC_2H_5$
2.3 IMO/UN Designation: 3.3/1172
2.4 DOT ID No.: Not listed.
2.5 CAS Registry No.: 111-15-9
2.6 NAERG Guide No.: Not listed.
2.7 Standard Industrial Trade Classification: 51372

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Chemical safety goggles, apron, and approved respirator.
3.2 Symptoms Following Exposure: Vapors irritate nose and eyes in high concentrations. Liquid irritates skin in prolonged or repeated contact.
3.3 Treatment of Exposure: INHALATION: if victim is overcome, remove him to fresh air and call physician. EYES: flush with large amounts of water. SKIN: wash exposed areas.
3.4 TLV-TWA: 5 ppm.
3.5 TLV-STEL: Not listed.
3.6 TLV-Ceiling: Not listed.
3.7 Toxicity by Ingestion: Grade 2; LD_{50} = 0.5 to 5 g/kg (rabbit).
3.8 Toxicity by Inhalation: Currently not available.
3.9 Chronic Toxicity: Causes kidney damage in laboratory animals. Effects unknown in humans.
3.10 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes and 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: 0.056 ppm.
3.13 IDLH Value: 500 ppm.
3.14 OSHA PEL-TWA: 100 ppm
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: 130°F C.C.
4.2 Flammable Limits in Air: LEL: 1.2% @ 199.4°F; UEL: 12.7% @ 275°F
4.3 Fire Extinguishing Agents: Alcohol foam, dry chemical or carbon dioxide.
4.4 Fire Extinguishing Agents Not to Be Used: Water.
4.5 Special Hazards of Combustion Products: Not pertinent.
4.6 Behavior in Fire: Toxic gases, such as carbon monoxide, may be produced in fire.
4.7 Auto Ignition Temperature: 720°F
4.8 Electrical Hazards: Not listed.
4.9 Burning Rate: Currently not available
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichometric Air to Fuel Ratio: 35.7 (calc.)
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 12.0 (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: Incompatible with oxidizing materials.
5.3 Stability During Transport: Stable.
5.4 Neutralizing Agents for Acids and Caustics: Not pertinent.
5.5 Polymerization: Will not polymerize.
5.6 Inhibitor of Polymerization: Not pertinent.

6. WATER POLLUTION

6.1 Aquatic Toxicity: 4000 ppm/24 hr/brine shrimp/TL_m
6.2 Waterfowl Toxicity: Currently not available
6.3 Biological Oxygen Demand (BOD): 36% of theoretical in 5 days, freshwater.
6.4 Food Chain Concentration Potential: None.
6.5 GESAMP Hazard Profile: Not listed

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 valve.
7.5 IMO Pollution Category: C
7.6 Ship Type: 3
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).....	-

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: 132.16
9.3 Boiling Point at 1 atm: 313°F = 156°C = 429°K
9.4 Freezing Point: –79.1°F = –61.7°C = 211.5°K
9.5 Critical Temperature: 633.2°F = 334°C = 607.2°K
9.6 Critical Pressure: 440 psia = 30 atm = 3.0 MN/m^2
9.7 Specific Gravity: 0.974 at 20°C (liquid)
9.8 Liquid Surface Tension: Currently not available
9.9 Liquid Water Interfacial Tension: Currently not available
9.10 Vapor (Gas) Specific Gravity: 4.7
9.11 Ratio of Specific Heats of Vapor (Gas): 1.054
9.12 Latent Heat of Vaporization: 130 Btu/lb = 74 cal/g = 3.1 X 10^5 J/kg
9.13 Heat of Combustion: (est.) –10,700 Btu/lb = –6,000 cal/g = –250 X 10^5 J/kg
9.14 Heat of Decomposition: Currently not available
9.15 Heat of Solution: Currently not available
9.16 Heat of Polymerization: Currently not available
9.17 Heat of Fusion: Currently not available
9.18 Limiting Value: Currently not available
9.19 Reid Vapor Pressure: 0.1 psia.

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
68	8.130		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE

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
68	23.000	68	0.023	68	0.00054		CURRENTLY NOT AVAILABLE