ETYL ACETOACETATE

CAUTIONARY RESPONSE INFORMATION

Common Synonyms
Acetoacetic acid, ethyl ester
Acetoacetic ester
Diacetic ether
EAA
Ethyl 3-oxobutanoate

Liquid
Colorless
Pleasant fruity odor
Mixes with water.

Keep people away. Shut off ignition sources and call fire department. Notify local health and pollution control agencies. Protect water intake.

Fire
Extinguish with dry chemicals, alcohol foam, or carbon dioxide.

Exposure
Call for medical aid. To the eyes: Hold eyelids open and flush with plenty of water. Notify local health and wildlife officials. May be dangerous if it enters water intakes. Notify operators of nearby water intakes. Harmful if swallowed. Irritating to eyes. IRRITATING TO EYES. Call for medical aid.

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

1.1 Personal Protective Equipment: Goggles or face shield; rubber gloves.
1.2 Symptoms Following Exposure: Liquid may cause mild irritation of eyes.
1.3 Treatment of Exposure: EYES: Flush with water for 15 min.
1.4 TLV-TWA: Not listed.
1.5 TLV-STEL: Not listed.
1.6 TLV-CEILING: Not listed.
1.7 Toxicity by Ingestion: Grade 2; oral LD50 = 3,980 mg/kg (rat).
1.8 Toxicity by Inhalation: Currently not available.
1.9 Chronic Toxicity: Currently not available
1.10 Vapor (Gas) Irritant Characteristics: Currently not available
1.11 Liquid or Solid Characteristics: Currently not available
1.12 Odor Threshold: Currently not available
1.13 IDLH Value: Not listed.
1.14 OSHA PEL-TWA: Not listed.
1.15 OSHA PEL-STEL: Not listed.
1.16 OSHA PEL-Ceiling: Not listed.
1.17 EPA AEGLE: Not listed

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed
2.2 Formula: C4H8O4
2.3 IMC Designtation: Not listed
2.4 DOT ID No: Not listed
2.5 CAS Registry No.: 51372
2.6 NAERG Guide No.: Not listed
2.7 Standard Industrial Trade Classification: 51372

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Goggles or face shield; rubber gloves.
3.2 Symptoms Following Exposure: Liquid may cause mild irritation of eyes.
3.3 Treatment of Exposure: EYES: Flush with water for 15 min.
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3.17 EPA AEGLE: Not listed

4. FIRE HAZARDS

4.1 Flash Point: 176°F O.C. 135°F C.C.
4.2 Flammable Limits in Air: 1.4% - 9.5%
4.3 Fire Extinguishing Agents: Dry chemical, alcohol foam, carbon dioxide
4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective.
4.5 Special Hazards of Combustion: Products: Not pertinent
4.6 Behavior in Fire: Not pertinent
4.7 Auto Ignition Temperature: 569°F
4.8 Electrical Hazards: Currently not available
4.9 Burning Rate: 24 mm/min.
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichiometric Air to Fuel Ratio: 33.3
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 11.9
4.14 Minimum Oxygen Concentration for Combustion (MOC): 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: O
6.6 Human Contact Hazard: 1
6.7 Reduction of Amenities: X

7. SHIPPING INFORMATION

7.1 Grades of Purity: 98%+
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 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 Group: Not listed
8.4 Marine Pollutant: Yes
8.5 NFPA Hazard Classification:

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Physical State at 15°C and 1 atm: Liquid
9.2 Molecular Weight: 130.1
9.3 Boiling Point at 1 atm: 160°F (71°C) = 757°F K.
9.4 Freezing Point: < –112°F (-80°C) = –185°F K.
9.5 Critical Temperature: Not pertinent
9.6 Critical Pressure: Not pertinent
9.7 Specific Gravity: 1.028 at 20°C (liquid)
9.8 Liquid Surface Tension: 32.5 dynes/cm
9.9 Liquid Water Interfacial Tension: Not pertinent
9.10 Vapor (Gas) Specific Gravity: 4.48
9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent
9.12 Latent Heat of Vaporization: 160 Btu/lb = 91. cal/g = 5.8 X 103 J/kg
9.13 Heat of Combustion: –9,349 Btu/lb = –41,349 kJ/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 Values: Currently not available
9.19 Reid Vapor Pressure: Currently not available

NOTES

JUNE 1999
### Saturation LIQUID DENSITY

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### SOLUBILITY IN WATER

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