

2-ETHYLHEXYLAMINE

EHM

CAUTIONARY RESPONSE INFORMATION

Common Synonyms 1-Amino-2-ethylhexane 2-Ethyl-1-hexylamine beta-Ethylhexylamine		Liquid	Colorless	Musky ammonia
Floats on water.				
<p>Keep people away. Avoid contact with liquid. Wear goggles, self-contained breathing apparatus and rubber overclothing (including gloves). Shut off ignition sources and call fire department. Notify local health and pollution control agencies.</p>				
Fire	<p>Combustible. POISONOUS GASES MAY BE PRODUCED IN FIRE. Wear goggles, self-contained breathing apparatus and rubber overclothing (including gloves). Extinguish with alcohol foam, CO₂, dry powder or water spray. Dilution with water will reduce intensity of flame.</p>			
Exposure	<p>CALL FOR MEDICAL AID.</p> <p>VAPOR Irritating to eyes, nose and throat. Harmful if inhaled. Move victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p>LIQUID Harmful if swallowed. Will burn skin and eyes. 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. DO NOT INDUCE VOMITING.</p>			
Water Pollution	<p>HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.</p>			

1. CORRECTIVE RESPONSE ACTIONS

Dilute and disperse
Stop discharge
Collection Systems: Dredge
Do not burn

2. CHEMICAL DESIGNATIONS

- 2.1 **CG Compatibility Group:** 7; Aliphatic amine
2.2 **Formula:** C₈H₁₇CH(C₂H₅)CH₂NH₂
2.3 **IMO/UN Designation:** 8/2276
2.4 **DOT ID No.:** 2276
2.5 **CAS Registry No.:** Currently not available
2.6 **NAERG Guide No.:** 132
2.7 **Standard Industrial Trade Classification:** 51451

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Air supplied or cartridge respirator, impermeable gloves, apron, and boots if condition warrants. Face shield or splash proof goggles and other protective equipment as necessary to prevent skin contact.
- 3.2 **Symptoms Following Exposure:** INHALATION: High concentration of vapor will produce irritation of the respiratory tract and the lungs. Prolonged exposure may cause systemic effects. EYES: Contact with liquid may result in severe eye irritation. Exposure to concentrated vapor may result in corneal edema. SKIN: Contact with liquid may result in severe skin irritation, burns and possible skin absorption. INGESTION: May cause systemic poisoning.
- 3.3 **Treatment of Exposure:** Get medical attention. INHALATION: Remove to fresh air. Aid breathing if necessary. EYES: Immediately flush with water for at least 15 minutes. SKIN: Immediately flush areas of contact with water for at least 15 minutes while removing contaminated clothing and shoes. INGESTION: Drink water, lemon juice, milk or demulcents. Do not induce vomiting.
- 3.4 **TLV-TWA:** Not listed.
3.5 **TLV-STEL:** Not listed.
3.6 **TLV-Ceiling:** Not listed.
3.7 **Toxicity by Ingestion:** Grade 3; LD₅₀ = 50-500 mg/kg
3.8 **Toxicity by Inhalation:** Currently not available.
3.9 **Chronic Toxicity:** Prolonged exposure to vapor can result in systemic toxic effects.
3.10 **Vapor (Gas) Irritant Characteristics:** Vapors are moderately irritating such that personnel will not usually tolerate moderate or high concentrations.
3.11 **Liquid or Solid Characteristics:** Fairly severe skin irritant. May cause pain and second-degree burns after a few minutes of contact.
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:** 140°F O.C. 138.0°F C.C.
4.2 **Flammable Limits in Air:** Currently not available
4.3 **Fire Extinguishing Agents:** Alcohol foam, carbon dioxide, dry powder or water spray.
4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
4.5 **Special Hazards of Combustion Products:** Carbon monoxide and/or carbon dioxide and toxic oxides of nitrogen may be produced.
4.6 **Behavior in Fire:** Can react vigorously with oxidizing materials.
4.7 **Auto Ignition Temperature:** 563°F
4.8 **Electrical Hazards:** Currently not available
4.9 **Burning Rate:** Currently not available
4.10 **Adiabatic Flame Temperature:** Currently not available
4.11 **Stoichiometric Air to Fuel Ratio:** 65.5 (calc.)
4.12 **Flame Temperature:** Currently not available
4.13 **Combustion Molar Ratio (Reactant to Product):** 18.5 (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 acids and oxidizing materials.
5.3 **Stability During Transport:** Stable
5.4 **Neutralizing Agents for Acids and Caustics:** Cover with a 90:10 mixture of sand/soda ash. Place in container. Flush area with water.
5.5 **Polymerization:** Does not occur.
5.6 **Inhibitor of Polymerization:** Not pertinent

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**
Pseudomonas putida (badena): 82 mg/l
Scenedesmas quadricauda (green algae): 0.36 mg/l
Entosiphon sulcatum (protazoa): 12 mg/l
6.2 **Waterfowl Toxicity:** Currently not available
6.3 **Biological Oxygen Demand (BOD):** Currently not available
6.4 **Food Chain Concentration Potential:** Currently not available
6.5 **GESAMP Hazard Profile:** Not listed

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 98%-99%
7.2 **Storage Temperature:** Ambient
7.3 **Inert Atmosphere:** Currently not available
7.4 **Venting:** Currently not available
7.5 **IMO Pollution Category:** B
7.6 **Ship Type:** 2
7.7 **Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Flammable liquid
8.2 **49 CFR Class:** 3
8.3 **49 CFR Package Group:** III
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:** 129.25
9.3 **Boiling Point at 1 atm:** 337°F = 169°C = 442.2°K
9.4 **Freezing Point:** <-94°F = <-70°C = <203.2°K
9.5 **Critical Temperature:** 620.6°F = 327.0°C = 600.2°K
9.6 **Critical Pressure:** 375 psia = 25.51 atm = 2.58 MN/m²
9.7 **Specific Gravity:** 0.79 at 20°C
9.8 **Liquid Surface Tension:** 27.85 dynes/cm = 0.02785 N/m at 20°C
9.9 **Liquid Water Interfacial Tension:** (est) 45.15 dynes/cm = 0.04515 N/m at 20°C
9.10 **Vapor (Gas) Specific Gravity:** 4.45 - 4.5
9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available
9.12 **Latent Heat of Vaporization:** Currently not available
9.13 **Heat of Combustion:** Currently not available
9.14 **Heat of Decomposition:** Currently not available
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 Value:** Currently not available
9.19 **Reid Vapor Pressure:** Currently not available

NOTES

2-ETHYLHEXYLAMINE

EHM

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
	C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E	77	0.968

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	0.250	68	0.023		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E