

2-PROPANOLAMINE

PAM

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION
Common Synonyms Alaninol 2-Amino-1-propanol 1-Methyl-2-hydroxyethylamine 1-Propanol, 2-amino-	Liquid Liquid floats and mixes with water.	Colorless to pale yellow Fishy odor		<p>4.1 Flash Point: 145°F C.C.</p> <p>4.2 Flammable Limits in Air: Currently not available</p> <p>4.3 Fire Extinguishing Agents: Small fires: Dry chemical, CO₂, water spray or alcohol foam. Large fires: Water spray, fog or alcohol foam.</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent</p> <p>4.5 Special Hazards of Combustion Products: Toxic oxides of nitrogen may form in fire.</p> <p>4.6 Behavior in Fire: May produce toxic oxides of nitrogen.</p> <p>4.7 Auto Ignition Temperature: Currently not available</p> <p>4.8 Electrical Hazards: Currently not available</p> <p>4.9 Burning Rate: Currently not available</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: 27.4 (calc.)</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): 8.5 (calc.)</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: 98%</p> <p>7.2 Storage Temperature: Currently not available</p> <p>7.3 Inert Atmosphere: Currently not available</p> <p>7.4 Venting: Currently not available</p> <p>7.5 IMO Pollution Category: C</p> <p>7.6 Ship Type: 3</p> <p>7.7 Barge Hull Type: Currently not available</p>
	Keep people away. Avoid contact with liquid or vapor. Wear self-contained breathing apparatus and full protective clothing for emergency action. Shut off ignition sources and call fire department. Notify local health and pollution control agencies. Protect water intakes.				8. HAZARD CLASSIFICATIONS
Fire	Combustible TOXIC FUMES PRODUCED AT DECOMPOSITION TEMPERATURE. Wear self-contained breathing apparatus and full protective clothing. Small fires: Dry chemical, CO ₂ , water spray, or foam. Large fires: Water spray, fog, or foam. Cool exposed containers with water until well after fire is out.				<p>8.1 49 CFR Category: Not listed</p> <p>8.2 49 CFR Class: Not pertinent</p> <p>8.3 49 CFR Package Group: Not listed</p> <p>8.4 Marine Pollutant: No</p> <p>8.5 NFPA Hazard Classification: Not listed</p> <p>8.6 EPA Reportable Quantity: Not listed</p> <p>8.7 EPA Pollution Category: Not listed</p> <p>8.8 RCRA Waste Number: Not listed</p> <p>8.9 EPA FWPCA List: Not listed</p>
Exposure	Call for medical aid. LIQUID Irritating to eyes and skin. May cause burns. Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Remove and isolate contaminated clothing and shoes. IF IN EYES, hold eyelids open and flush with plenty of running water for at least 15 minutes. Flush other affected areas for at least 15 minutes with plenty of running water. Keep victim quiet and maintain normal body temperature. VAPOR May be harmful if inhaled.				9. PHYSICAL & CHEMICAL PROPERTIES
Water Pollution	Effect of low concentration 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.				<p>9.1 Physical State at 15°C and 1 atm: Liquid</p> <p>9.2 Molecular Weight: 75.11</p> <p>9.3 Boiling Point at 1 atm: 311-317°F = 173-176°C = 446-449K</p> <p>9.4 Freezing Point: Currently not available</p> <p>9.5 Critical Temperature: Currently not available</p> <p>9.6 Critical Pressure: Currently not available</p> <p>9.7 Specific Gravity: 0.943 at 20°C (dl mixture)</p> <p>9.8 Liquid Surface Tension: Currently not available</p> <p>9.9 Liquid Water Interfacial Tension: Currently not available</p> <p>9.10 Vapor (Gas) Specific Gravity: 2.59 (approximated)</p> <p>9.11 Ratio of Specific Heats of Vapor (Gas): Currently not available</p> <p>9.12 Latent Heat of Vaporization: Currently not available</p> <p>9.13 Heat of Combustion: Currently not available</p> <p>9.14 Heat of Decomposition: Currently not available</p> <p>9.15 Heat of Solution: Currently not available</p> <p>9.16 Heat of Polymerization: Not pertinent</p> <p>9.17 Heat of Fusion: Currently not available</p> <p>9.18 Limiting Value: Currently not available</p> <p>9.19 Reid Vapor Pressure: Currently not available</p>
1. CORRECTIVE RESPONSE ACTIONS	2. CHEMICAL DESIGNATIONS	3. HEALTH HAZARDS	4. FIRE HAZARDS	5. CHEMICAL REACTIVITY	6. WATER POLLUTION
Dilute and disperse Stop discharge Collection Systems: Dredge	<p>2.1 CG Compatibility Group: 8: Alkanolamines</p> <p>2.2 Formula: CH₃CH(NH₂)CH₂OH</p> <p>2.3 IMO/UN Designation: Not listed</p> <p>2.4 DOT ID No.: Not listed</p> <p>2.5 CAS Registry No.: 78-91-1</p> <p>2.6 NAERG Guide No.: Not listed</p> <p>2.7 Standard Industrial Trade Classification: 51461</p>	<p>3.1 Personal Protective Equipment: Wear butyl rubber gloves and face shield or all-purpose canister respirator for spills. Wear self-contained breathing apparatus and full protective clothing for fires.</p> <p>3.2 Symptoms Following Exposure: If inhaled may be harmful. Contact may cause burns to skin and eyes. (Organic base.)</p> <p>3.3 Treatment of Exposure: INHALATION: Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. SKIN AND EYES: Immediately flush skin or eyes with running water for at least 15 minutes; hold eyelids open if necessary. Remove and isolate contaminated clothing and shoes. Maintain normal body temperature.</p> <p>3.4 TLV-TWA: Not listed.</p> <p>3.5 TLV-STEL: Not listed.</p> <p>3.6 TLV-Ceiling: Not listed.</p> <p>3.7 Toxicity by Ingestion: Currently not available</p> <p>3.8 Toxicity by Inhalation: Currently not available.</p> <p>3.9 Chronic Toxicity: Currently not available</p> <p>3.10 Vapor (Gas) Irritant Characteristics: May burn skin and eyes.</p> <p>3.11 Liquor or Solid Characteristics: Liquid may burn skin and eyes.</p> <p>3.12 Odor Threshold: Currently not available</p> <p>3.13 IDLH Value: Not listed.</p> <p>3.14 OSHA PEL-TWA: Not listed.</p> <p>3.15 OSHA PEL-STEL: Not listed.</p> <p>3.16 OSHA PEL-Ceiling: Not listed.</p> <p>3.17 EPA A EGL: Not listed</p>		<p>5.1 Reactivity with Water: No reaction</p> <p>5.2 Reactivity with Common Materials: Currently not available</p> <p>5.3 Stability During Transport: Currently not available</p> <p>5.4 Neutralizing Agents for Acids and Caustics: Cover spilled material with sodium bisulfate. Flush with water.</p> <p>5.5 Polymerization: Not pertinent</p> <p>5.6 Inhibitor of Polymerization: Not pertinent</p>	<p>6.1 Aquatic Toxicity: Currently not available</p> <p>6.2 Waterfowl Toxicity: Currently not available</p> <p>6.3 Biological Oxygen Demand (BOD): Currently not available</p> <p>6.4 Food Chain Concentration Potential: Currently not available</p> <p>6.5 GESAMP Hazard Profile: Not listed</p>
				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
CURRENTLY NOT AVAILABLE			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
VERY SOLUBLE			CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE