

# BENZYLAMINE

BZM

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION
Common Synonyms alpha-Aminotoluene Phenylmethyl amine	Liquid  Floats and mixes with water.	Colorless to light yellow  Strong ammonia odor		<p>4.1 Flash Point: 168°F O.C.</p> <p>4.2 Flammable Limits in Air: Currently not available</p> <p>4.3 Fire Extinguishing Agents: Alcohol foam, dry chemical, carbon dioxide</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective.</p> <p>4.5 Special Hazards of Combustion Products: Toxic nitrogen oxides may form in a fire.</p> <p>4.6 Behavior in Fire: Currently not available</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: 4.13 mm/min.</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: 48.8 (calc.)</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): 12.5 (calc.)</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: Commercial, 98.5+%</p> <p>7.2 Storage Temperature: Ambient</p> <p>7.3 Inert Atmosphere: Ventilated (natural)</p> <p>7.4 Venting: Open (flame arrester)</p> <p>7.5 IMO Pollution Category: Currently not available</p> <p>7.6 Ship Type: Currently not available</p> <p>7.7 Barge Hull Type: Currently not available</p>
Fire	Combustible  POISONOUS GASES MAY BE PRODUCED IN FIRE. Wear goggles and self-contained breathing apparatus. Extinguish with dry chemicals, alcohol foam, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.				8. HAZARD CLASSIFICATIONS
Exposure	CALL FOR MEDICAL AID.  VAPOR Irritating to eyes, nose and throat. If inhaled will cause dizziness, headache, or difficult breathing. If in eyes, hold eyelids open and flush with plenty of water. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.  LIQUID Will burn 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. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.			<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>	
Water Pollution	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.				9. PHYSICAL & CHEMICAL PROPERTIES
1. CORRECTIVE RESPONSE ACTIONS Dilute and disperse Stop discharge	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: <chem>C6H5CH2NH2</chem> 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: Not listed 2.5 CAS Registry No.: Currently not available 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51454				<p>9.1 Physical State at 15°C and 1 atm: Liquid</p> <p>9.2 Molecular Weight: 107.16</p> <p>9.3 Boiling Point at 1 atm: 364.1°F = 184.5°C = 457.7K</p> <p>9.4 Freezing Point: (approx.) -51°F = -46°C = 227K</p> <p>9.5 Critical Temperature: Not pertinent</p> <p>9.6 Critical Pressure: Not pertinent</p> <p>9.7 Specific Gravity: 0.98 at 20°C (liquid)</p> <p>9.8 Liquid Surface Tension: 39.5 dynes/cm = 0.0395 N/m at 20°C</p> <p>9.9 Liquid Water Interfacial Tension: Not pertinent</p> <p>9.10 Vapor (Gas) Specific Gravity: 3.70</p> <p>9.11 Ratio of Specific Heats of Vapor (Gas): (est.) 1.070</p> <p>9.12 Latent Heat of Vaporization: 164 Btu/lb = 91 cal/g = 3.8 X 10<sup>5</sup> J/kg</p> <p>9.13 Heat of Combustion: -16,260 Btu/lb = -9,040 cal/g = -378 X 10<sup>5</sup> J/kg</p> <p>9.14 Heat of Decomposition: Not pertinent</p> <p>9.15 Heat of Solution: -43 Btu/lb = -24 cal/g = -1.0 X 10<sup>5</sup> J/kg</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>
3.1 Personal Protective Equipment: Self-contained breathing apparatus; goggles or face shield; rubber gloves	3. HEALTH HAZARDS				NOTES
3.2 Symptoms Following Exposure: Inhalation of vapor causes irritation of the mucous membranes of the nose and throat, and lung irritation with respiratory distress and cough. Headache, nausea, faintness, and anxiety can occur. Exposure to vapor produces eye irritation with lacrimation, conjunctivitis, and corneal edema resulting in halos around lights. Direct local contact with liquid is known to produce severe and sometimes permanent eye damage and skin burns. Vapors may also produce primary skin irritation and dermatitis.					
3.3 Treatment of Exposure: INHALATION: remove victim from exposure; if breathing is difficult, administer oxygen; if breathing has stopped, begin artificial respiration. EYES or SKIN: wash with copious amounts of water for 15 min.					
3.4 TLV-TWA: Not listed.					
3.5 TLV-STEL: Not listed.					
3.6 TLV-Ceiling: Not listed.					
3.7 Toxicity by Ingestion: Currently not available					
3.8 Toxicity by Inhalation: Currently not available.					
3.9 Chronic Toxicity: Currently not available					
3.10 Vapor (Gas) Irritant Characteristics: Currently not available					
3.11 Liquid or Solid Characteristics: Currently not available					
3.12 Odor Threshold: Currently not available					
3.13IDLH 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					

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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
35	62.210	51	0.450	51	1.048	34	1.256
40	62.070	52	0.450	52	1.048	36	1.245
45	61.930	53	0.450	53	1.048	38	1.234
50	61.790	54	0.450	54	1.048	40	1.223
55	61.640	55	0.450	55	1.048	42	1.213
60	61.500	56	0.450	56	1.048	44	1.202
65	61.360	57	0.450	57	1.048	46	1.192
70	61.220	58	0.450	58	1.048	48	1.182
75	61.070	59	0.450	59	1.048	50	1.172
80	60.930	60	0.450	60	1.048	52	1.163
85	60.790	61	0.450	61	1.048	54	1.153
90	60.650	62	0.450	62	1.048	56	1.144
95	60.510	63	0.450	63	1.048	58	1.135
100	60.360	64	0.450	64	1.048	60	1.126
		65	0.450	65	1.048	62	1.117
		66	0.450	66	1.048	64	1.108
		67	0.450	67	1.048	66	1.099
		68	0.450	68	1.048	68	1.091
						70	1.082
						72	1.074
						74	1.066
						76	1.058
						78	1.050
						80	1.042
						82	1.034
						84	1.027

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
M I S C I B L E			N O T P E R T I N E N T		N O T P E R T I N E N T	0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440	0.249 0.260 0.270 0.280 0.291 0.301 0.310 0.320 0.329 0.339 0.348 0.357 0.366 0.375 0.383 0.392 0.400 0.408 0.416 0.424 0.432 0.440 0.447