

BENZYL ALCOHOL

BAL

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Benzenecarbinol alpha-Hydroxytoluene Phenylcarbinol Phenylmethanol Phenylmethyl alcohol	Liquid Colorless Mild, pleasant odor	May float or sink in water.
<p>Restrict access. AVOID CONTACT WITH LIQUID AND VAPOR. Wear rubber overclothing (including gloves). Call fire department. Notify local health and pollution control agencies. Protect water intakes.</p>		
Fire	Combustible. Extinguish with dry chemicals or carbon dioxide. Water or foam may be ineffective on fire. Cool exposed containers with water.	
Exposure	CALL FOR MEDICAL AID. VAPOR Irritating to eyes, nose and throat. If inhaled will cause headache, coughing, 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 Irritating to skin and eyes. If swallowed will cause nausea or vomiting. MAY BE READILY ABSORBED THROUGH THE SKIN. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and have victim induce vomiting. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.	
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 Dilute and disperse Stop discharge	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: C ₆ H ₅ CH ₂ OH 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: Not listed 2.5 CAS Registry No.: 100-51-6 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51235
3. HEALTH HAZARDS 3.1 Personal Protective Equipment: Neoprene gloves; chemical safety goggles 3.2 Symptoms Following Exposure: Inhalation of vapor may cause irritation of upper respiratory tract. Prolonged or excessive inhalation may result in headache, nausea, vomiting, and diarrhea. In severe cases, respiratory stimulation followed by respiratory and muscular paralysis, convulsions, narcosis and death may result. Ingestion may produce severe irritation of the gastrointestinal tract, followed by nausea, vomiting, cramps and diarrhea; tissue ulceration may result. Contact with eyes causes local irritation. Material can be absorbed through skin with anesthetic or irritant effect. 3.3 Treatment of Exposure: INHALATION: remove victim from contaminated atmosphere; call physician immediately. INGESTION: induce vomiting and contact a physician. EYES: flush with plenty of water for 15 min. and contact a physician. SKIN: flush with water, wash with soap and water; obtain medical attention in case of irritation or central nervous system depression. 3.4 TLV-TWA: Not listed. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 2; oral rat LD ₅₀ = 1,230 mg/kg 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: 5.5 ppm 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: 220°F O.C. 213°F C.C. 4.2 Flammable Limits in Air: Currently not available 4.3 Fire Extinguishing Agents: "Alcohol" foam, dry chemical, carbon dioxide 4.4 Fire Extinguishing Agents Not to Be Used: Water or foam may cause frothing. 4.5 Special Hazards of Combustion Products: Currently not available 4.6 Behavior in Fire: Currently not available 4.7 Auto Ignition Temperature: 817°F 4.8 Electrical Hazards: Currently not available 4.9 Burning Rate: 3.74 mm/min. 4.10 Adiabatic Flame Temperature: Currently not available 4.11 Stoichiometric Air to Fuel Ratio: 40.5 (calc.) 4.12 Flame Temperature: Currently not available 4.13 Combustion Molar Ratio (Reactant to Product): 11.0 (calc.) 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed	7. SHIPPING INFORMATION 7.1 Grades of Purity: NF; Photographic; Technical; Textile 7.2 Storage Temperature: Ambient 7.3 Inert Atmosphere: No requirement 7.4 Venting: Open 7.5 IMO Pollution Category: C 7.6 Ship Type: 3 7.7 Barge Hull Type: Currently not available								
5. CHEMICAL REACTIVITY 5.1 Reactivity with Water: No reaction 5.2 Reactivity with Common Materials: Avoid contact with strong acids and oxidizers. Will attack some plastics. 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	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: <table border="1"> <tr> <th>Category</th> <th>Classification</th> </tr> <tr> <td>Health Hazard (Blue).....</td> <td>2</td> </tr> <tr> <td>Flammability (Red).....</td> <td>1</td> </tr> <tr> <td>Instability (Yellow).....</td> <td>0</td> </tr> </table> 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	Category	Classification	Health Hazard (Blue).....	2	Flammability (Red).....	1	Instability (Yellow).....	0
Category	Classification								
Health Hazard (Blue).....	2								
Flammability (Red).....	1								
Instability (Yellow).....	0								
6. WATER POLLUTION 6.1 Aquatic Toxicity: 360 ppm/48 hr/daphnia magna/TL _m /* *Water type not specified. 6.2 Waterfowl Toxicity: Currently not available 6.3 Biological Oxygen Demand (BOD): 155%, 5 days 6.4 Food Chain Concentration Potential: None 6.5 GESAMP Hazard Profile: Bioaccumulation: 0 Damage to living resources: 2/BOD Human Oral hazard: 1 Human Contact hazard: 1 Reduction of amenities: 1	9. PHYSICAL & CHEMICAL PROPERTIES 9.1 Physical State at 15° C and 1 atm: Liquid 9.2 Molecular Weight: 108.13 9.3 Boiling Point at 1 atm: 401°F = 205°C = 478°K 9.4 Freezing Point: 4.5°F = -15.3°C = 257.9°K 9.5 Critical Temperature: 757.4°F = 403°C = 676.2°K 9.6 Critical Pressure: 663 psia = 45.0 atm = 4.57 MN/m ² 9.7 Specific Gravity: 1.050 at 15/15°C (liquid) 9.8 Liquid Surface Tension: 39.0 dynes/cm = 0.0390 N/m at 20°C 9.9 Liquid Water Interfacial Tension: Not pertinent 9.10 Vapor (Gas) Specific Gravity: 3.73 9.11 Ratio of Specific Heats of Vapor (Gas): 1.070 9.12 Latent Heat of Vaporization: 193 Btu/lb = 107 cal/g = 4.48 X 10 ⁵ J/kg 9.13 Heat of Combustion: -14,850 Btu/lb = -8,260 cal/g = -345 X 10 ³ J/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: 19.83 cal/g 9.18 Limiting Value: Currently not available 9.19 Reid Vapor Pressure: Currently not available								

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
34	66.410	34	0.520	34	1.088	60	9.245
36	66.339	36	0.520	36	1.088	70	7.678
38	66.270	38	0.520	38	1.088	80	6.420
40	66.200	40	0.520	40	1.088	90	5.404
42	66.129	42	0.520	42	1.088	100	4.577
44	66.059	44	0.520	44	1.088	110	3.899
46	65.990	46	0.520	46	1.088	120	3.340
48	65.919	48	0.520	48	1.088	130	2.876
50	65.860	50	0.520	50	1.088	140	2.489
52	65.790	52	0.520	52	1.088	150	2.164
54	65.719	54	0.520	54	1.088	160	1.890
56	65.650	56	0.520	56	1.088	170	1.658
58	65.580	58	0.520	58	1.088	180	1.460
60	65.509	60	0.520	60	1.088	190	1.291
62	65.440	62	0.520	62	1.088	200	1.146
64	65.370	64	0.520	64	1.088	210	1.021
66	65.299	66	0.520	66	1.088		
68	65.230	68	0.520	68	1.088		
70	65.160			70	1.088		
72	65.089			72	1.088		
74	65.020			74	1.088		
76	64.950			76	1.088		
78	64.879						
80	64.809						
82	64.750						
84	64.679						

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
34	2.555	180	0.102	180	0.00161	0	0.247
36	2.611	190	0.138	190	0.00213	20	0.257
38	2.667	200	0.184	200	0.00281	40	0.266
40	2.722	210	0.243	210	0.00366	60	0.276
42	2.778	220	0.319	220	0.00473	80	0.285
44	2.833	230	0.416	230	0.00607	100	0.294
46	2.889	240	0.537	240	0.00773	120	0.302
48	2.944	250	0.689	250	0.00978	140	0.311
50	3.000	260	0.878	260	0.01229	160	0.320
52	3.055	270	1.111	270	0.01534	180	0.328
54	3.111	280	1.398	280	0.01903	200	0.336
56	3.167	290	1.747	290	0.02347	220	0.344
58	3.222	300	2.171	300	0.02879	240	0.352
60	3.278	310	2.683	310	0.03511	260	0.360
62	3.333	320	3.297	320	0.04259	280	0.368
64	3.389	330	4.030	330	0.05141	300	0.375
66	3.444	340	4.903	340	0.06176	320	0.383
68	3.500	350	5.935	350	0.07384	340	0.390
70	3.555	360	7.151	360	0.08788	360	0.397
72	3.611	370	8.578	370	0.10410	380	0.404
74	3.667	380	10.250	380	0.12290	400	0.411
76	3.722	390	12.190	390	0.14450	420	0.418
78	3.778	400	14.430	400	0.16910	440	0.425
80	3.833	410	17.030	410	0.19730		
82	3.889						
84	3.944						