

BUTYL LACTATE

BLE

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Butyl a-hydroxypropionate	Liquid	Clear	Mild, characteristic odor
<p>AVOID CONTACT WITH LIQUID AND VAPOR. Restrict access. Wear rubber over clothing (including gloves) and safety glasses. Shut off ignition sources. Call fire department. Notify local health and pollution control agencies. Protect water intakes.</p>			
Fire	COMBUSTIBLE. Extinguish with dry chemical, CO ₂ , or alcohol foam. Use water spray to "knock down" vapors and cool exposed containers.		
Exposure	CALL FOR MEDICAL AID. Move victim to fresh air. Remove contaminated clothing and shoes. Flush affected areas with plenty of soap and water. IF IN EYES, hold eyelids open and flush with plenty of water.		
Water Pollution	Effects 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.		

<p>1. CORRECTIVE RESPONSE ACTIONS Stop discharge Contain Collection Systems: Skim Clean shore line Salvage waterfowl Dilute and disperse</p>	<p>2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: CH₃CH(OH)COO(CH₂)₃CH₃ 2.3 IMO/UN Designation: Not listed. 2.4 DOT ID No.: Not listed. 2.5 CAS Registry No.: 138-22-7 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51391</p>
<p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Protective gloves; chemical splash goggles; respiratory protection in accordance with NIOSH.</p> <p>3.2 Symptoms Following Exposure: Irritation to the skin and eyes, headache, coughing, possible sleepiness, nausea or vomiting, dizziness.</p> <p>3.3 Treatment of Exposure: CALL FOR MEDICAL AID. SKIN: Wash skin with soap and water for 15 minutes. EYES: Flush eyes with copious amounts of water for 15 minutes, occasionally lifting lids with fingers.</p> <p>3.4 TLV-TWA: 5 ppm.</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: Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary.</p> <p>3.11 Liquid or Solid Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.</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 AEGL: Not listed</p>	

<p>4. FIRE HAZARDS</p> <p>4.1 Flash Point: 160°F O.C.</p> <p>4.2 Flammable Limits in Air: Currently not available</p> <p>4.3 Fire Extinguishing Agents: Dry chemical, carbon dioxide, or alcohol foam.</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Water.</p> <p>4.5 Special Hazards of Combustion Products: Not pertinent.</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: Currently not available</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: 42.8 (calc.)</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): 14.0 (calc.)</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7. SHIPPING INFORMATION</p> <p>7.1 Grades of Purity: Technical grades.</p> <p>7.2 Storage Temperature: Ambient.</p> <p>7.3 Inert Atmosphere: No requirement.</p> <p>7.4 Venting: Not listed.</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>								
<p>5. CHEMICAL REACTIVITY</p> <p>5.1 Reactivity with Water: No reaction.</p> <p>5.2 Reactivity with Common Materials: Avoid contact with strong oxidizing agents and strong bases.</p> <p>5.3 Stability During Transport: Stable.</p> <p>5.4 Neutralizing Agents for Acids and Caustics: Not pertinent.</p> <p>5.5 Polymerization: Will not polymerize.</p> <p>5.6 Inhibitor of Polymerization: Not pertinent.</p>	<p>8. HAZARD CLASSIFICATIONS</p> <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:</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Classification</th> </tr> </thead> <tbody> <tr> <td>Health Hazard (Blue).....</td> <td>1</td> </tr> <tr> <td>Flammability (Red).....</td> <td>2</td> </tr> <tr> <td>Instability (Yellow).....</td> <td>0</td> </tr> </tbody> </table> <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>	Category	Classification	Health Hazard (Blue).....	1	Flammability (Red).....	2	Instability (Yellow).....	0
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Flammability (Red).....	2								
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<p>6. WATER POLLUTION</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: Bioaccumulation: 0 Damage to living resources: 1 Human Oral hazard: 2 Human Contact hazard: II Reduction of amenities: X</p>	<p>9. PHYSICAL & CHEMICAL PROPERTIES</p> <p>9.1 Physical State at 15° C and 1 atm: Liquid</p> <p>9.2 Molecular Weight: 146.19</p> <p>9.3 Boiling Point at 1 atm: 370.4°F = 188°C = 461°K</p> <p>9.4 Freezing Point: 18.4°F = -28°C = 245°K</p> <p>9.5 Critical Temperature: Currently not available</p> <p>9.6 Critical Pressure: Currently not available</p> <p>9.7 Specific Gravity: 0.98</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: 5.04</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>								
<p>NOTES</p>									

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

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	4.360	68	0.008	68	0.00020		C U R R E N T L Y N O T A V A I L A B L E