

# ETHYL BUTYL KETONE

EBK

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION								
Common Synonyms Butyl ethyl ketone 3-Heptanone	Liquid	Colorless	Mild, fruity odor	<p><b>4.1 Flash Point:</b> 115°F O.C.</p> <p><b>4.2 Flammable Limits in Air:</b> LEL: 1.4%; UEL: 8.8%</p> <p><b>4.3 Fire Extinguishing Agents:</b> Dry chemical, alcohol foam, or carbon dioxide.</p> <p><b>4.4 Fire Extinguishing Agents Not to Be Used:</b> Water.</p> <p><b>4.5 Special Hazards of Combustion:</b> Products: Irritating vapors and toxic gases, such as carbon dioxide and carbon monoxide, may be formed when involved in fire.</p> <p><b>4.6 Behavior in Fire:</b> Currently not available</p> <p><b>4.7 Auto Ignition Temperature:</b> Currently not available</p> <p><b>4.8 Electrical Hazards:</b> Will attack some plastics, rubber, and coatings (insulators).</p> <p><b>4.9 Burning Rate:</b> Currently not available</p> <p><b>4.10 Adiabatic Flame Temperature:</b> Currently not available</p> <p><b>4.11 Stoichiometric Air to Fuel Ratio:</b> 47.6 (calc.)</p> <p><b>4.12 Flame Temperature:</b> Currently not available</p> <p><b>4.13 Combustion Molar Ratio (Reactant to Product):</b> 14.0 (calc.)</p> <p><b>4.14 Minimum Oxygen Concentration for Combustion (MOCC):</b> Not listed</p>	<p><b>7.1 Grades of Purity:</b> CP; technical grades.</p> <p><b>7.2 Storage Temperature:</b> Ambient.</p> <p><b>7.3 Inert Atmosphere:</b> No requirement.</p> <p><b>7.4 Venting:</b> Not listed.</p> <p><b>7.5 IMO Pollution Category:</b> Currently not available</p> <p><b>7.6 Ship Type:</b> Currently not available</p> <p><b>7.7 Barge Hull Type:</b> Currently not available</p>								
<p>Keep people away. Avoid contact with liquid and vapor. Avoid inhalation. 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. Protect water intakes.</p>				<p><b>8. HAZARD CLASSIFICATIONS</b></p> <p><b>8.1 49 CFR Category:</b> Not listed.</p> <p><b>8.2 49 CFR Class:</b> Not pertinent.</p> <p><b>8.3 49 CFR Package Group:</b> Not listed.</p> <p><b>8.4 Marine Pollutant:</b> No</p> <p><b>8.5 NFPA Hazard Classification:</b></p> <table> <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><b>8.6 EPA Reportable Quantity:</b> Not listed.</p> <p><b>8.7 EPA Pollution Category:</b> Not listed.</p> <p><b>8.8 RCRA Waste Number:</b> Not listed</p> <p><b>8.9 EPA FWCNA List:</b> Not listed</p>		Category	Classification	Health Hazard (Blue)	1	Flammability (Red)	2	Instability (Yellow)	0
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Health Hazard (Blue)	1												
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<p><b>Fire</b> Combustible. Vapors can flow to distant ignition source and flash back. Wear full protective clothing with self-contained breathing apparatus. Extinguish fire with dry chemical, alcohol foam, or carbon dioxide. Use water spray to cool exposed containers.</p>				<p><b>9. PHYSICAL &amp; CHEMICAL PROPERTIES</b></p> <p><b>9.1 Physical State at 15°C and 1 atm:</b> Liquid</p> <p><b>9.2 Molecular Weight:</b> 114.19</p> <p><b>9.3 Boiling Point at 1 atm:</b> 297°F = 147°C = 420°K</p> <p><b>9.4 Freezing Point:</b> -38°F = -39°C = 234°K</p> <p><b>9.5 Critical Temperature:</b> Currently not available</p> <p><b>9.6 Critical Pressure:</b> Currently not available</p> <p><b>9.7 Specific Gravity:</b> 0.818</p> <p><b>9.8 Liquid Surface Tension:</b> Currently not available</p> <p><b>9.9 Liquid Water Interfacial Tension:</b> Currently not available</p> <p><b>9.10 Vapor (Gas) Specific Gravity:</b> 3.93</p> <p><b>9.11 Ratio of Specific Heats of Vapor (Gas):</b> Currently not available</p> <p><b>9.12 Latent Heat of Vaporization:</b> Currently not available</p> <p><b>9.13 Heat of Combustion:</b> Currently not available</p> <p><b>9.14 Heat of Decomposition:</b> Currently not available</p> <p><b>9.15 Heat of Solution:</b> Currently not available</p> <p><b>9.16 Heat of Polymerization:</b> Not pertinent.</p> <p><b>9.17 Heat of Fusion:</b> Currently not available</p> <p><b>9.18 Limiting Value:</b> Currently not available</p> <p><b>9.19 Reid Vapor Pressure:</b> Currently not available</p>									
<p><b>Exposure</b> CALL FOR MEDICAL AID.  VAPOR Move victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.  LIQUID Remove contaminated clothing and shoes. Wash affected areas with soap and water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink 1-2 glasses of water and induce vomiting.</p>				<p><b>5. CHEMICAL REACTIVITY</b></p> <p><b>5.1 Reactivity with Water:</b> No reaction.</p> <p><b>5.2 Reactivity with Common Materials:</b> Contact with oxidizers can cause fires and explosions.</p> <p><b>5.3 Stability During Transport:</b> Stable.</p> <p><b>5.4 Neutralizing Agents for Acids and Caustics:</b> Not pertinent.</p> <p><b>5.5 Polymerization:</b> Will not polymerize.</p> <p><b>5.6 Inhibitor of Polymerization:</b> Not pertinent.</p>									
<p><b>Water Pollution</b> 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.</p>				<p><b>6. WATER POLLUTION</b></p> <p><b>6.1 Aquatic Toxicity:</b> Currently not available</p> <p><b>6.2 Waterfowl Toxicity:</b> Currently not available</p> <p><b>6.3 Biological Oxygen Demand (BOD):</b> Currently not available</p> <p><b>6.4 Food Chain Concentration Potential:</b> Currently not available</p> <p><b>6.5 GESAMP Hazard Profile:</b></p> <ul style="list-style-type: none"> <li>Bioaccumulation: T</li> <li>Damage to living resources: 2</li> <li>Human Oral hazard: 1</li> <li>Human Contact hazard: I</li> <li>Reduction of amenities: X</li> </ul>									
<p><b>1. CORRECTIVE RESPONSE ACTIONS</b></p> <p>Stop discharge Contain Collection Systems: Skim</p> <p><b>2. CHEMICAL DESIGNATIONS</b></p> <p>2.1 CG Compatibility Group: Not listed. 2.2 Formula: C<sub>6</sub>H<sub>12</sub>COCH<sub>3</sub> 2.3 IMO/UN Designation: Currently not available 2.4 DOT ID No.: Not listed. 2.5 CAS Registry No.: 106-35-4 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51625</p> <p><b>3. HEALTH HAZARDS</b></p> <p>3.1 <b>Personal Protective Equipment:</b> Impervious clothing, gloves, face shield, and other appropriate protective clothing to prevent repeated or prolonged skin contact with liquid material. Use splash proof safety goggles where liquid may contact eyes. Use respiratory protection (approved respirator or self-contained breathing apparatus) where vapors may be encountered.</p> <p>3.2 <b>Symptoms Following Exposure:</b> Short term exposure can cause irritation of eyes, nose, throat and lungs. High concentrations may cause headache, dizziness or unconsciousness.</p> <p>3.3 <b>Treatment of Exposure:</b> Get medical attention. INHALATION: Remove to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. EYES: Flush with water for at least 15 min., lifting lids occasionally. SKIN: Remove contaminated clothing and shoes. Wash with soap and water. INGESTION: Give 1 to 2 glasses of water and induce vomiting.</p> <p>3.4 TLV-TWA: 50 ppm 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 <b>Toxicity by Ingestion:</b> Currently not available 3.8 <b>Toxicity by Inhalation:</b> Currently not available. 3.9 <b>Chronic Toxicity:</b> Chemical is a defatting agent and can cause dermatitis on prolonged exposure. May exacerbate previously existing respiratory, liver, or skin ailments. 3.10 <b>Vapor (Gas) Irritant Characteristics:</b> Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary. 3.11 <b>Liquid or Solid Characteristics:</b> Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin. 3.12 <b>Odor Threshold:</b> Currently not available 3.13 IDLH Value: 1,000 ppm 3.14 OSHA PEL-TWA: 50 ppm 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed</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
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
68	0.430	68	0.077	68	0.00156		CURRENTLY NOT AVAILABLE