

METHYL BUTYNOL

MBY

CAUTIONARY RESPONSE INFORMATION			4. FIRE HAZARDS	7. SHIPPING INFORMATION								
Common Synonyms 2-Hydroxy-2-methyl-3-butyne 2-Methyl-3-buty-2-ol	Liquid	Colorless to straw yellow	<p>4.1 Flash Point: 77°F C.C.</p> <p>4.2 Flammable Limits in Air: Currently not available</p> <p>4.3 Fire Extinguishing Agents: Dry chemical, alcohol foam or carbon dioxide.</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Water.</p> <p>4.5 Special Hazards of Combustion Products: Irritating and toxic gases, such as carbon dioxide and carbon monoxide, may be produced in 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: Not listed.</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: 30.9 (calc.)</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): 9.0 (calc.)</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: Varying concentrations available.</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: D</p> <p>7.6 Ship Type: Data not available</p> <p>7.7 Barge Hull Type: Currently not available</p>								
<p>Wear full impervious protective clothing and approved respirator. Shut off ignition sources and call the fire department. Notify local health and pollution control agencies.</p>			8. HAZARD CLASSIFICATIONS									
Fire	Flammable. Wear full chemical protective clothing and self-contained breathing apparatus. Extinguish fire with dry chemical, alcohol foam, or carbon dioxide.	Exposure	<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> <thead> <tr> <th>Category</th> <th>Classification</th> </tr> </thead> <tbody> <tr> <td>Health Hazard (Blue)</td> <td>2</td> </tr> <tr> <td>Flammability (Red)</td> <td>3</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)	2	Flammability (Red)	3	Instability (Yellow)	0	9. PHYSICAL & CHEMICAL PROPERTIES
Category	Classification											
Health Hazard (Blue)	2											
Flammability (Red)	3											
Instability (Yellow)	0											
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.	5. CHEMICAL REACTIVITY	<p>9.1 Physical State at 15° C and 1 atm: Liquid</p> <p>9.2 Molecular Weight: 84.12</p> <p>9.3 Boiling Point at 1 atm: 219.2 - 221°F = 104 - 105°C = 377 - 378°K</p> <p>9.4 Freezing Point: 36.7°F = 2.6°C = 275.6°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: 0.8672</p> <p>9.8 Liquid Surface Tension: 23.8 dynes/cm @ 25°C.</p> <p>9.9 Liquid Water Interfacial Tension: Currently not available</p> <p>9.10 Vapor (Gas) Specific Gravity: Currently not available</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>	NOTES								
1. CORRECTIVE RESPONSE ACTIONS Stop discharge	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: 20; Alcohols, glycols 2.2 Formula: (CH ₃) ₂ C(OH)CCH 2.3 IMO/UN Designation: Currently not available 2.4 DOT ID No.: Not listed. 2.5 CAS Registry No.: 115-19-5 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51219	3. HEALTH HAZARDS	6. WATER POLLUTION									
3.1 Personal Protective Equipment: Wear full impervious protective clothing and approved respirator. Where splashing is possible wear full face shield or chemical safety goggles. Use approved respirator to protect against vapors.	3.2 Symptoms Following Exposure: Contact will cause eye and skin irritation. Vapor exposure may cause eye and respiratory tract irritation.	3.3 Treatment of Exposure: Get medical attention. INHALATION: Remove to fresh air. If breathing is difficult, give oxygen. EYES: Flush with water for at least 15 min., lifting lids occasionally. SKIN: Remove contaminated clothing and shoes. Flush with water.	6.1 Aquatic Toxicity: Currently not available									
3.4 TLV-TWA: Not listed.	3.5 TLV-STEL: Not listed.	3.6 TLV-Ceiling: Not listed.	6.2 Waterfowl Toxicity: Currently not available									
3.7 Toxicity by Ingestion: Grade 2; LD ₅₀ = 3.6 g/kg (mouse)	3.8 Toxicity by Inhalation: Currently not available.	3.9 Chronic Toxicity: Currently not available	6.3 Biological Oxygen Demand (BOD): Currently not available									
3.10 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.	3.11 Liquid or Solid Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.	3.12 Odor Threshold: Currently not available.	6.4 Food Chain Concentration Potential: Currently not available									
3.13 IDLH Value: Not listed.	3.14 OSHA PEL-TWA: Not listed.	3.15 OSHA PEL-STEL: Not listed.	6.5 GESAMP Hazard Profile: Bioaccumulation: 0 Damage to living resources: 1 Human Oral hazard: 1 Human Contact hazard: I Reduction of amenities: 0									
3.16 OSHA PEL-Ceiling: Not listed.	3.17 EPA A EGL: 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
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
CURRENTLY NOT AVAILABLE			CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE