

3-METHOXYBUTYL ACETATE

MOA

CAUTIONARY RESPONSE INFORMATION			4. FIRE HAZARDS	7. SHIPPING INFORMATION								
Common Synonyms Acetic acid, 3-methoxybutyl ester 1-Butanol, 3-methoxyacetate Butoxyl Methyl-1,3-butylene glycol acetate UN 2708 (DOT)	Liquid	Acrid odor	<p>4.1 Flash Point: 170°F C.C.</p> <p>4.2 Flammable Limits in Air: Currently not available</p> <p>4.3 Fire Extinguishing Agents: Alcohol foam, carbon dioxide, dry chemicals</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Currently not available</p> <p>4.5 Special Hazards of Combustion Products: When heated to decomposition, emits acrid smoke and irritating fumes.</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>7.1 Grades of Purity: Currently not available</p> <p>7.2 Storage Temperature: Currently not available</p> <p>7.3 Inert Atmosphere: Currently not available</p> <p>7.4 Venting: Currently not available</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>								
Call fire department. Avoid contact with liquid. Notify local health and pollution control agencies.			8. HAZARD CLASSIFICATIONS									
Fire Combustible. Water may be ineffective on fire. Wear self-contained breathing apparatus. Extinguish with dry chemical, alcohol foam, or CO ₂ . Cool exposed containers with water.			<p>8.1 49 CFR Category: Flammable liquid.</p> <p>8.2 49 CFR Class: 3</p> <p>8.3 49 CFR Package Group: III</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>1</td> </tr> <tr> <td>Flammability (Red).....</td> <td>2</td> </tr> <tr> <td>Instability (Yellow).....</td> <td>0</td> </tr> </tbody> </table>		Category	Classification	Health Hazard (Blue).....	1	Flammability (Red).....	2	Instability (Yellow).....	0
Category	Classification											
Health Hazard (Blue).....	1											
Flammability (Red).....	2											
Instability (Yellow).....	0											
Exposure CALL FOR MEDICAL AID. VAPOR May be harmful. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. LIQUID Irritating to skin and eyes. 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, immediately induce vomiting.			9. PHYSICAL & CHEMICAL PROPERTIES									
Water Pollution Effect of low concentrations on aquatic life is unknown. Fouling to shoreline. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.			<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: 275°F = 135°C = 408.2°K</p> <p>9.4 Freezing Point: Currently not available</p> <p>9.5 Critical Temperature: Currently not available</p> <p>9.6 Critical Pressure: Currently not available</p> <p>9.7 Specific Gravity: 0.96</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: 5.05</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: Currently not available</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>									
1. CORRECTIVE RESPONSE ACTIONS Stop discharge	2. CHEMICAL DESIGNATIONS		NOTES									
<p>2.1 CG Compatibility Group: 34: Esters</p> <p>2.2 Formula: C₆H₁₀O₃</p> <p>2.3 IMO/UN Designation: 3.3/2708</p> <p>2.4 DOT ID No.: 2708</p> <p>2.5 CAS Registry No.: 4435-53-4</p> <p>2.6 NAERG Guide No.: 127</p> <p>2.7 Standard Industrial Trade Classification: 51372</p>	<p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Self-contained breathing apparatus, rubber boots and heavy rubber gloves.</p> <p>3.2 Symptoms Following Exposure: Causes eye and skin irritation. Mildly toxic by ingestion.</p> <p>3.3 Treatment of Exposure: INHALATION: Call for medical aid. Remove the victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. INGESTION: Immediately induce vomiting. EYES - OR - SKIN: Flush with copious amounts of water for at least 15 minutes.</p> <p>3.4 TLV-TWA: Not listed.</p> <p>3.5 TLV-STEL: Not listed.</p> <p>3.6 TLV-Ceiling: Not listed.</p> <p>3.7 Toxicity by Ingestion: Grade 2; LD₅₀ = 4.2 g/kg</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 a slight smarting of the eyes or respiratory system if present in high concentrations. 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 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 A EGL: Not listed</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
CURRENTLY NOT AVAILABLE			CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE	0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400 425 450 475 500 525 550 575 600	0.268 0.279 0.290 0.301 0.312 0.322 0.333 0.343 0.353 0.363 0.373 0.382 0.392 0.401 0.410 0.419 0.428 0.436 0.445 0.453 0.461 0.469 0.477 0.485 0.492