

METHYL CHLORIDE

MTC

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION								
Common Synonyms Artic Chloromethane	Gas Colorless Odorless or sweet odor Floats and boils on water. Flammable, visible vapor cloud is formed.			<p>4.1 Flash Point: <32°F C.C.</p> <p>4.2 Flammable Limits in Air: 8.1%-17.2%</p> <p>4.3 Fire Extinguishing Agents: Dry chemical or carbon dioxide. Stop flow of gas.</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent</p> <p>4.5 Special Hazards of Combustion Products: Toxic and irritating gases are generated in fires.</p> <p>4.6 Behavior in Fire: Containers may explode</p> <p>4.7 Auto Ignition Temperature: 1170°F</p> <p>4.8 Electrical Hazards: Not pertinent</p> <p>4.9 Burning Rate: 2.2 mm/min.</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: 7.1 (calc.)</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): 3.0 (calc.)</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: Technical grade; "Artic" refrigerant grade</p> <p>7.2 Storage Temperature: Ambient</p> <p>7.3 Inert Atmosphere: No requirement</p> <p>7.4 Venting: Safety relief</p> <p>7.5 IMO Pollution Category: Currently not available</p> <p>7.6 Ship Type: 2</p> <p>7.7 Barge Hull Type: 2</p>								
Fire	FLAMMABLE. POISONOUS GASES ARE PRODUCED IN FIRE. Flashback along vapor trail may occur. Vapor may explode if ignited in an enclosed area. Wear goggles and self-contained breathing apparatus. Stop discharge if possible. Cool exposed containers and protect men effecting shutoff with water. Let fire burn.				8. HAZARD CLASSIFICATIONS								
Exposure	CALL FOR MEDICAL AID. VAPOR Not irritating to eyes, nose or throat. If inhaled will cause nausea, vomiting, headache, difficult breathing, or loss of consciousness. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. LIQUID Will cause frostbite. Flush affected areas with plenty of water. DO NOT RUB AFFECTED AREAS.				<p>8.1 49 CFR Category: Flammable gas</p> <p>8.2 49 CFR Class: 2.1</p> <p>8.3 49 CFR Package Group: Not pertinent</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>4</td> </tr> <tr> <td>Instability (Yellow)</td> <td>0</td> </tr> </tbody> </table> <p>8.6 EPA Reportable Quantity: 100 pounds</p> <p>8.7 EPA Pollution Category: B</p> <p>8.8 RCRA Waste Number: U045</p> <p>8.9 EPA FWPCA List: Not listed</p>	Category	Classification	Health Hazard (Blue)	2	Flammability (Red)	4	Instability (Yellow)	0
Category	Classification												
Health Hazard (Blue)	2												
Flammability (Red)	4												
Instability (Yellow)	0												
Water Pollution	Not harmful to aquatic life.				9. PHYSICAL & CHEMICAL PROPERTIES								
1. CORRECTIVE RESPONSE ACTIONS Dilute and disperse Stop discharge	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: 36; Halogenated hydrocarbon 2.2 Formula: CH ₃ Cl 2.3 IMO/UN Designation: 2.0/1063 2.4 DOT ID No.: 1063 2.5 CAS Registry No.: 74-87-3 2.6 NAERG Guide No.: 115 2.7 Standard Industrial Trade Classification: 51134				<p>9.1 Physical State at 15° C and 1 atm: Gas</p> <p>9.2 Molecular Weight: 50.49</p> <p>9.3 Boiling Point at 1 atm: -11.6°F = -24.2°C = 249°K</p> <p>9.4 Freezing Point: -143.9°F = 97.7°C = 175.5°K</p> <p>9.5 Critical Temperature: 290.5°F = 143.6°C = 416.8°K</p> <p>9.6 Critical Pressure: 969 psia = 65.9 atm = 6.68 MN/m²</p> <p>9.7 Specific Gravity: 0.997 at -24°C (liquid)</p> <p>9.8 Liquid Surface Tension: 16.2 dynes/cm = 0.0162 N/m at 20°C</p> <p>9.9 Liquid Water Interfacial Tension: (est.) 50 dynes/cm = 0.05 N/m at -24°C</p> <p>9.10 Vapor (Gas) Specific Gravity: 1.7</p> <p>9.11 Ratio of Specific Heats of Vapor (Gas): 1.259</p> <p>9.12 Latent Heat of Vaporization: 182.3 Btu/lb = 101.3 cal/g = 4.241 X 10⁵ J/kg</p> <p>9.13 Heat of Combustion: -5290 Btu/lb = -2939 cal/g = -123.1 X 10⁵ J/kg</p> <p>9.14 Heat of Decomposition: Not pertinent</p> <p>9.15 Heat of Solution: Not pertinent</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: 116.7 psia</p>								
3. HEALTH HAZARDS					NOTES								
3.1 Personal Protective Equipment: Approved canister mask; leather or vinyl gloves; goggles or face shield.													
3.2 Symptoms Following Exposure: Inhalation causes nausea, vomiting, weakness, headache, emotional disturbances; high concentrations cause mental confusion, eye disturbances, muscular tremors, cyanosis, convulsions. Contact of liquid with skin may cause frostbite.													
3.3 Treatment of Exposure: Remove to fresh air. Call a doctor and have patient hospitalized for observation of slowly developing symptoms.													
3.4 TLV-TWA: 50 ppm													
3.5 TLV-STEL: Not listed.													
3.6 TLV-Ceiling: 100 ppm													
3.7 Toxicity by Ingestion: Not pertinent													
3.8 Toxicity by Inhalation: Currently not available.													
3.9 Chronic Toxicity: None													
3.10 Vapor (Gas) Irritant Characteristics: Vapors are nonirritating to the eyes and throat.													
3.11 Liquid or Solid Characteristics: No appreciable hazard. Practically harmless to the skin because it evaporates quickly. May cause frostbite.													
3.12 Odor Threshold: Currently not available													
3.13IDLH Value: 2,000 ppm													
3.14 OSHA PEL-TWA: 100 ppm													
3.15 OSHA PEL-STEL: 300 ppm, 5 minute peak in any 3 hours.													
3.16 OSHA PEL-Ceiling: 200 ppm.													
3.17 EPA AEGL: 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
-20 -15	62.170 61.860	-50 -40 -30 -20	0.354 0.357 0.359 0.362		C U R R E N T L Y N O T A V A I L A B L E	-30 -20	0.332 0.320

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	0.600	-55 -50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45 50 55 60 65	4.590 5.298 6.095 6.987 7.985 9.096 10.330 11.700 13.210 14.880 16.720 18.730 20.940 23.350 25.980 28.840 31.950 35.320 38.960 42.890 47.140 51.700 56.610 61.880 67.520	-55 -50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45 50 55 60 65	0.05335 0.06083 0.06913 0.07831 0.08843 0.09957 0.11180 0.12520 0.13980 0.15570 0.17300 0.19170 0.21200 0.23390 0.25740 0.28280 0.31000 0.33920 0.37040 0.40380 0.43930 0.47720 0.51740 0.56000 0.60530	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	0.177 0.182 0.187 0.192 0.197 0.202 0.207 0.212 0.217 0.221 0.226 0.231 0.236 0.240 0.245 0.249 0.254 0.258 0.263 0.267 0.272 0.276 0.281 0.285 0.289