

PROPIONITRILE

PCN

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Liquid Cyanoethane Ether cyanatus Ethylcyanide Hydrocyanic ether Propanenitrile Propionic nitrile	Colorless Floats on water.	Ethereal odor
KEEP PEOPLE AWAY. AVOID CONTACT WITH LIQUID OR VAPOR. EVACUATE AREA. Shut off all sources of ignition, call fire department. Wear positive pressure breathing apparatus and special protective clothing. Notify local health and pollution control agencies. Protect water intakes.			
Fire FLAMMABLE. Vapors may travel to a source of ignition and flash back. Container may explode in heat of fire. Vapor explosion and poison hazard indoors, outdoors or in sewers. Extinguish fires with dry chemical, CO ₂ , foam, or water spray. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire.			
Exposure CALL FOR MEDICAL AID. VAPOR Irritating to eyes, nose, and throat. Harmful if inhaled. IF INHALED: Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. LIQUID Irritating to the skin and eyes. Harmful if swallowed or skin exposed. Remove and isolate contaminated clothing and shoes at the site. Flush affected areas immediately with plenty of water. IF IN EYES: hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS: have victim drink water or milk and victim induce vomiting. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS: do nothing except keep victim warm. Effects may be delayed; keep victim under observation.			
Water Pollution HARMFUL TO AQUATIC LIFE AT LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Fouling to shoreline. Notify local health and wildlife officials. Notify operators of local water intakes.			

1. CORRECTIVE RESPONSE ACTIONS	2. CHEMICAL DESIGNATIONS
Stop discharge Dilute and disperse Contain Collection Systems: Skim Do not burn Clean shore line Salvage waterfowl	2.1 CG Compatibility Group: 37; Nitriles 2.2 Formula: C ₂ H ₃ CN 2.3 IMO/UN Designation: 3.2/2404 2.4 DOT ID No.: 2404 2.5 CAS Registry No.: 107-12-0 2.6 NAERG Guide No.: 131 2.7 Standard Industrial Trade Classification: 51484
3. HEALTH HAZARDS	
3.1 Personal Protective Equipment: Wear appropriate approved respirator, chemical resistant gloves, rubber boots, safety goggles, and full protective clothing.	
3.2 Symptoms Following Exposure: Dizziness, rapid respirations, headache, drowsiness, drop in blood pressure, and pulse, delayed symptoms. May cause cyanosis (blue-grey coloration of skin and lips caused by lack of oxygen).	
3.3 Treatment of Exposure: INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing difficult, give oxygen. EYES: Hold eyelids open and flush with water for 15 minutes. INGESTION: If victim is conscious, have victim drink water or milk and have victim induce vomiting. If victim is unconscious, do nothing except keep victim warm. Call for medical aid. SKIN: Remove contaminated clothes and shoes. Wash affected areas with plenty of water.	
3.4 TLV-TWA: Not listed. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 4; LD ₅₀ = 36 mg/kg (mouse) 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Currently not available 3.10 Vapor (Gas) Irritant Characteristics: Vapors cause sever irritation of eyes and throat and can cause eye and lung injury. They cannot be tolerated even at low concentrations.	3.11 Liquid or Solid Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of skin. 3.12 Odor Threshold: Currently not available 3.13 IDLH Value: Not listed. 3.14 OSHA PEL-TWA: Not listed. 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed

4. FIRE HAZARDS	7. SHIPPING INFORMATION								
4.1 Flash Point: 36°F C.C. 4.2 Flammable Limits in Air: LEL 3.1% 4.3 Fire Extinguishing Agents: Water spray or mist, foam, CO ₂ , dry chemical. 4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent 4.5 Special Hazards of Combustion Products: Toxic fumes of CN and NO _x 4.6 Behavior in Fire: Currently not available 4.7 Auto Ignition Temperature: Currently not available 4.8 Electrical Hazards: Currently not available 4.9 Burning Rate: Currently not available 4.10 Adiabatic Flame Temperature: Currently not available 4.11 Stoichiometric Air to Fuel Ratio: 25.0 (calc.) 4.12 Flame Temperature: Currently not available 4.13 Combustion Molar Ratio (Reactant to Product): 6.5 (calc.) 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed	7.1 Grades of Purity: Currently not available 7.2 Storage Temperature: Currently not available 7.3 Inert Atmosphere: Currently not available 7.4 Venting: Currently not available 7.5 IMO Pollution Category: C 7.6 Ship Type: 2 7.7 Barge Hull Type: Currently not available								
	8. HAZARD CLASSIFICATIONS								
	8.1 49 CFR Category: Flammable Liquid 8.2 49 CFR Class: 3 8.3 49 CFR Package Group: II 8.4 Marine Pollutant: No 8.5 NFPA Hazard Classification: <table border="0"> <tr> <td style="text-align: right;">Category</td> <td style="text-align: center;">Classification</td> </tr> <tr> <td style="text-align: right;">Health Hazard (Blue).....</td> <td style="text-align: center;">4</td> </tr> <tr> <td style="text-align: right;">Flammability (Red).....</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="text-align: right;">Instability (Yellow).....</td> <td style="text-align: center;">1</td> </tr> </table>	Category	Classification	Health Hazard (Blue).....	4	Flammability (Red).....	3	Instability (Yellow).....	1
Category	Classification								
Health Hazard (Blue).....	4								
Flammability (Red).....	3								
Instability (Yellow).....	1								
	8.6 EPA Reportable Quantity: 100 pounds 8.7 EPA Pollution Category: B 8.8 RCRA Waste Number: P101 8.9 EPA FWCNA List: Not listed								
	9. PHYSICAL & CHEMICAL PROPERTIES								
	9.1 Physical State at 15°C and 1 atm: Liquid 9.2 Molecular Weight: 55.08 9.3 Boiling Point at 1 atm: 207.1°F = 97.3°C = 370.5°K 9.4 Freezing Point: -135°F = -92.8°C = 180°K 9.5 Critical Temperature: 555.4°F = 290.8°C = 564°K 9.6 Critical Pressure: 607.1 psia = 41.3 atm = 4.2 MN/m ² 9.7 Specific Gravity: 0.702 at 20°C 9.8 Liquid Surface Tension: 27.2 dyne/cm at 20°C 9.9 Liquid Water Interfacial Tension: Currently not available 9.10 Vapor (Gas) Specific Gravity: 1.9 9.11 Ratio of Specific Heats of Vapor (Gas): Currently not available 9.12 Latent Heat of Vaporization: 241.7 Btu/lb = 134.3 cal/g = 5.6 x 10 ⁵ J/kg 9.13 Heat of Combustion: -1,491.5 Btu/lb = -82.86 cal/g = -347 x 10 ⁵ J/kg 9.14 Heat of Decomposition: Currently not available 9.15 Heat of Solution: Currently not available 9.16 Heat of Polymerization: Currently not available 9.17 Heat of Fusion: Currently not available 9.18 Limiting Value: Currently not available 9.19 Reid Vapor Pressure: 1.7 psia								

NOTES

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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
68	48.810		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
	C U R R E N T L Y N O T A V A I L A B L E	-30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200	0.025 0.033 0.043 0.056 0.073 0.095 0.123 0.160 0.209 0.272 0.354 0.461 0.600 0.781 1.016 1.323 1.722 2.241 2.917 3.797 4.942 6.433 8.373 10.899		C U R R E N T L Y N O T A V A I L A B L E	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	0.314 0.321 0.328 0.334 0.342 0.349 0.356 0.363 0.371 0.379 0.387 0.395 0.403 0.412 0.420 0.429 0.438 0.447 0.457 0.466 0.476 0.486 0.496 0.507 0.517