

LACTONITRILE SOLUTION (80% OR LESS)

LNI

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Acetocyanohydrin 2-Hydroxypropionitrile		Liquid	Straw colored
<p>Wear full impervious protective clothing and approved respirator. Notify local health and pollution control agencies.</p>			
Fire	May be combustible, depending upon concentration. Wear full protective clothing with self-contained breathing apparatus. Extinguish fire with dry chemical, alcohol foam, carbon dioxide. Use water spray to cool exposed containers.		
Exposure	CALL FOR MEDICAL AID. POISON. 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. Flush affected areas with water. IF IN EYES, hold eyelids open and flush with plenty of water.		
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.		

1. CORRECTIVE RESPONSE ACTIONS Stop discharge	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: 37; Nitriles 2.2 Formula: CH ₃ CH(OH)CN 2.3 IMO/UN Designation: Currently not available 2.4 DOT ID No.: Not listed. 2.5 CAS Registry No.: 78-97-7 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51484
3. HEALTH HAZARDS	
3.1 Personal Protective Equipment: Full impervious protective clothing, including boots and gloves. Where splashing is possible wear full face shield or chemical safety goggles. Use approved respirator to protect against vapors. 3.2 Symptoms Following Exposure: Poison. Toxic by inhalation, ingestion, or skin absorption. 3.3 Treatment of Exposure: 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. Flush with 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 3; oral rat LD ₅₀ = 87 mg/kg. 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Currently not available 3.10 Vapor (Gas) Irritant Characteristics: Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary. 3.11 Liquid or Solid Characteristics: Causes smarting of the skin and first-degree burns on short exposure; may cause second-degree burns on long exposure. 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

- 4.1 **Flash Point:**
Currently not available
- 4.2 **Flammable Limits in Air:** Currently not available
- 4.3 **Fire Extinguishing Agents:** Dry chemical, alcohol foam, or carbon dioxide.
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Water.
- 4.5 **Special Hazards of Combustion**
Products: Irritating vapors and toxic gases, such as nitrogen oxides and carbon monoxide, may be formed when involved in fire.
- 4.6 **Behavior in Fire:** Currently not available
- 4.7 **Auto Ignition Temperature:** Currently not available
- 4.8 **Electrical Hazards:** Not listed.
- 4.9 **Burning Rate:** Currently not available
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** 22.6 (calc. for pure material)
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** 6.5 (calc. for pure material)
- 4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction.
- 5.2 **Reactivity with Common Materials:**
Evolves hydrocyanic acid in presence of alkali.
- 5.3 **Stability During Transport:** Stable.
- 5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent.
- 5.5 **Polymerization:** Will not polymerize.
- 5.6 **Inhibitor of Polymerization:** Not pertinent.

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**
Currently not available
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):**
Currently not available
- 6.4 **Food Chain Concentration Potential:**
Currently not available
- 6.5 **GESAMP Hazard Profile:**
 Bioaccumulation: 0
 Damage to living resources: 2
 Human Oral hazard: 2
 Human Contact hazard: II
 Reduction of amenities: XX

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Technical grades.
- 7.2 **Storage Temperature:** Ambient.
- 7.3 **Inert Atmosphere:** No requirement.
- 7.4 **Venting:** Pressure vacuum valve.
- 7.5 **IMO Pollution Category:** B
- 7.6 **Ship Type:** 2
- 7.7 **Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Not listed.
- 8.2 **49 CFR Class:** Not pertinent.
- 8.3 **49 CFR Package Group:** Not listed.
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:**

Category	Classification
Health Hazard (Blue).....	4
Flammability (Red).....	2
Instability (Yellow).....	1
- 8.6 **EPA Reportable Quantity:** Not listed.
- 8.7 **EPA Pollution Category:** Not listed.
- 8.8 **RCRA Waste Number:** Not listed
- 8.9 **EPA FWPCA List:** Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid
- 9.2 **Molecular Weight:** 71.09
- 9.3 **Boiling Point at 1 atm:** Currently not available
- 9.4 **Freezing Point:** Currently not available
- 9.5 **Critical Temperature:** Currently not available
- 9.6 **Critical Pressure:** Currently not available
- 9.7 **Specific Gravity:** Currently not available
- 9.8 **Liquid Surface Tension:** Currently not available
- 9.9 **Liquid Water Interfacial Tension:** Currently not available
- 9.10 **Vapor (Gas) Specific Gravity:** Currently not available
- 9.11 **Ratio of Specific Heats of Vapor (Gas):**
Currently not available
- 9.12 **Latent Heat of Vaporization:** Currently not available
- 9.13 **Heat of Combustion:** Currently not available
- 9.14 **Heat of Decomposition:** Currently not available
- 9.15 **Heat of Solution:** Currently not available
- 9.16 **Heat of Polymerization:** Not pertinent.
- 9.17 **Heat of Fusion:** Currently not available
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** Currently not available

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
	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		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		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