

METHACRYLONITRILE

MET

CAUTIONARY RESPONSE INFORMATION

Common Synonyms 2-Cyanopropene-1 Isopropene cyanide Isopropenylnitrile 2-Propenenitrile, 2-methyl RCRA waste number U152 USAF ST40	Liquid	Colorless
Keep people away. Avoid contact with liquid and vapor. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves). Shut off ignition sources. Call fire department. Evacuate area. Stay upwind and use water spray to "knock down" vapor. Notify local health and pollution control agencies.		
Fire	FLAMMABLE Containers may explode in fire. Flashback along vapor trail may occur. Vapor may explode if ignited in an enclosed area. Water may be ineffective on fire. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves). Combat fires from safe distance or protected location. Extinguish with dry chemical, alcohol foam, or CO ₂ . Cool exposed containers with water.	
Exposure	CALL FOR MEDICAL AID VAPOR Irritating to eyes, nose and throat. If inhaled, will cause headache or nausea. Move to fresh air. If breathing has stopped, give artificial respiration If breathing is difficult, give oxygen. LIQUID Will burn skin and eyes Harmful if swallowed. Remove contaminated clothing and shoes Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water.	
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.	

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge

2. CHEMICAL DESIGNATIONS

- 2.1 **CG Compatibility Group:** 15; Substituted allyls
- 2.2 **Formula:** H₂C=C(CH₃)CN
- 2.3 **IMO/UN Designation:** Currently not available
- 2.4 **DOT ID No.:** Not listed
- 2.5 **CAS Registry No.:** 126-98-7
- 2.6 **NAERG Guide No.:** Not listed.
- 2.7 **Standard Industrial Trade Classification:** 51484

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Self contained breathing apparatus, rubber boots and heavy rubber gloves.
- 3.2 **Symptoms Following Exposure:** May be fatal if inhaled, swallowed or absorbed through skin. Causes severe irritation. High concentrations are extremely destructive to tissues of mucous membranes and upper respiratory tract, eyes and skin. Symptoms of exposure may include burning sensation, coughing, headache, nausea and vomiting. May cause cyanosis (blue-gray coloring of the skin and lips caused by lack of oxygen).
- 3.3 **Treatment of Exposure:** INHALATION: Call a physician. Remove the victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. EYES OR SKIN: Immediately flush with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes. Ensure adequate flushing of the eyes by holding the eyelids open with the fingers.
- 3.4 **TLV-TWA:** 1 ppm
- 3.5 **TLV-STEL:** Not listed.
- 3.6 **TLV-Ceiling:** Not listed.
- 3.7 **Toxicity by Ingestion:** Grade 4; LD₅₀ = 16mg/kg (rabbit)
- 3.8 **Toxicity by Inhalation:** Currently not available.
- 3.9 **Chronic Toxicity:** Currently not available
- 3.10 **Vapor (Gas) Irritant Characteristics:** Vapors cause severe 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:** Severe skin irritant. Causes second and third degree burns on short contact and is very injurious to the eyes.
- 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:** 54°F C.C.
- 4.2 **Flammable Limits in Air:** Currently not available
- 4.3 **Fire Extinguishing Agents:** Water spray, carbon dioxide, dry chemical, alcohol foam.
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Currently not available
- 4.5 **Special Hazards of Combustion Products:** Vapor may travel considerable distance to a source of ignition and flash back. Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions.
- 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:** 29.8 (calc.)
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** 7.5 (calc.)
- 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:** No reaction
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
- 5.5 **Polymerization:** Auto polymerization can occur.
- 5.6 **Inhibitor of Polymerization:** Stabilized with 50 ppm Hydroquinone monomethyl ether.

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:** Not listed

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Currently not available
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** Currently not available
- 7.4 **Venting:** Currently not available
- 7.5 **IMO Pollution Category:** D
- 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:** Not listed
- 8.6 **EPA Reportable Quantity:** 1000 pounds
- 8.7 **EPA Pollution Category:** C
- 8.8 **RCRA Waste Number:** U152
- 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:** 67.09
- 9.3 **Boiling Point at 1 atm:** 194-197.6°F = 90-92°C = 365.2-365.2°C
- 9.4 **Freezing Point:** -32.4°F = -35.8°C = 237.4°K
- 9.5 **Critical Temperature:** Currently not available
- 9.6 **Critical Pressure:** Currently not available
- 9.7 **Specific Gravity:** 0.800
- 9.8 **Liquid Surface Tension:** 24.45 dynes/cm = 0.024 N/m at 20°C
- 9.9 **Liquid Water Interfacial Tension:** Currently not available
- 9.10 **Vapor (Gas) Specific Gravity:** 2.31
- 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:** Currently not available
- 9.17 **Heat of Fusion:** Currently not available
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** 2.449 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
	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	68	0.392

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
68 122	2.570 2.690	-48 -10 10 31 55 68 91 122 131 159 195	0.019 0.097 0.193 0.387 0.774 1.238 1.934 3.807 4.390 7.735 14.696		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	0.289 0.299 0.309 0.319 0.328 0.338 0.347 0.356 0.365 0.374 0.383 0.391 0.400 0.408 0.416 0.424 0.431 0.439 0.446 0.454 0.461 0.468 0.474 0.481 0.487