ACETONE CYANOHYDRIN

1. CORRECTIVE RESPONSE ACTIONS
   Dilute and disperse
   Shop discharge
   Contain
   Collection Systems: Skim
   Salvage water/foam
   Do not burn

2. CHEMICAL DESIGNATIONS
   2.1 CG Compatibility Group: Not listed
   2.2 Formula: (CH\textsubscript{3})\textsubscript{2}C(OH)CN
   2.3 IMDG Designation: 6.1, I, 1541
   2.4 DOT ID No.: 1541
   2.5 CAS Registry No.: 75-86-5
   2.6 NAERG Guide No.: 155
   2.7 Standard Industrial Trade Classification: 51484

3. HEALTH HAZARDS
   3.1 Personal Protective Equipment: Air-supplied mask with canister approved for use with acrylonitrile in less than 2% concentrations; rubber or plastic gloves; cover goggles or face mask; rubber boots; slicker suit; safety helmet.
   3.2 Symptoms Following Exposure: At low dosages the earliest symptoms may be weakness, headaches, confusion and occasionally nausea and vomiting. Respiratory rate and depth will usually be increased at the beginning and at later stages become slow and gasping.
   3.3 Treatment of Exposure: Call a physician for all cases of exposure. INHALATION: remove victim to fresh air. (Rescue should wear suitable mask). INGESTION: If victim is conscious, induce vomiting by having him drink strong salt water. SKIN: remove contaminated clothing and wash affected skin thoroughly with soap and water. EYES: hold eyelids apart and wash with continuous, gentle stream of water for at least 15 min. If breathing has stopped, give artificial respiration until physician arrives. If victim is unconscious, administer amphylob by crushing an ampule in a cloth and holding it under his nose for 15 seconds in every minute. Do not interrupt artificial respiration during this procedure. Replace ampule when its strength is spent; continue treatment until victim's condition improves or physician arrives.
   3.4 TLV-TWA: Not listed.
   3.5 TLV-STEL: Not listed.
   3.6 TLV-Ceiling: 4.7 ppm as CN
   3.7 Toxicity by Ingestion: Grade 4; LD\textsubscript{50} below 50 mg/kg (mice); LD\textsubscript{50} = 17 mg/kg (rats)
   3.8 Toxicity by Inhalation: Currently not available.
   3.9 Chronic Toxicity: Causes liver damage in rats.
   3.10 Vapor (Gas) Irritant Characteristics: Vapors irritate the eyes and respiratory system if present in high concentrations. The effect is temporary.
   3.11 Liquid or Solid Characteristics: Causes SMARTING of the skin and first-degree burns on short 
exposure and may cause secondary 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: 165°F C.C.
   4.2 Flammable Limits in Air: 2.2%-12%
   4.3 Fire Extinguishing Agents: Water spray, dry chemical, alcohol foam, carbon dioxide
   4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent
   4.5 Special Hazards of Combustion Products: Toxic hydrogen cyanide is generated when heated
   4.6 Behavior in Fire: Not pertinent
   4.7 Auto Ignition Temperature: 1270°F
   4.8 Electrical Hazards: 1 D
   4.9 Burning Rate: Currently not available
   4.10 Explosion Flash Point: Currently not available
   4.11 Stoichiometric Reactor to Fuel Ratio: Currently not available
   4.12 Flame Temperature: Currently not available
   4.13 Combustion Molar Ratio: Reactant to Product: Currently not available
   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 Cauticants: Not pertinent
   5.5 Polymerization: Not pertinent
   5.6 Inhibitor of Polymerization: Not pertinent

6. WATER POLLUTION
   6.1 Aquatic Toxicity: 0.57 mg/L; 96 hr LC\textsubscript{50} (bluegill sunfish)
   6.2 Waterfowl Toxicity: Not pertinent
   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
   6.6 Damage to living resources: 4
   6.7 Human Oral hazard: 3
   6.8 Human Contact hazard: 2
   6.9 Reduction of amenities: XX

7. SHIPPING INFORMATION
   7.1 Grades of Purity: 98-99%
   7.2 Storage Temperature: Ambient
   7.3 Inert Atmosphere: No requirement
   7.4 Venting: Pressure-vacuum
   7.5 IMDO Pollution Category: A
   7.6 Ship Type: 2
   7.7 Barge Hull Type: 1

8. HAZARD CLASSIFICATIONS
   8.1 49 CFR Category: Poison
   8.2 49 CFR Class: 6.1
   8.3 49 CFR Package Group: I
   8.4 Marine Pollutant: No
   8.5 NFPA/Hazard Classification:
      Category Classification
      Health Hazard (Blue)............ 4
      Flammability (Red)............ 2
      Reactivity (Yellow)........... 2

9. PHYSICAL & CHEMICAL PROPERTIES
   9.1 Physical State at 15° C and 1 atm: Liquid
   9.2 Molecular Weight: 98.11
   9.3 Boiling Point at 1 atm: Decomposes (74-85°C)
   9.4 Freezing Point: –5.8°F = –21°C = 252°K
   9.5 Critical Temperature: Not pertinent
   9.6 Critical Pressure: Not pertinent
   9.7 Specific Gravity: 0.925 at 25°C (Liquid)
   9.8 Liquid Surface Tension: Not pertinent
   9.9 Liquid Water Interfacial Tension: Not pertinent
   9.10 Vapor (Gas) Specific Gravity: Not pertinent
   9.11 Ratio of Specific Heats of Vapor (Gas): Insol I, 1.874
   9.12 Latent Heat of Vaporization: Currently not available
   9.13 Heat of Combustion: Currently not available
   9.14 Heat of Decomposition: Not pertinent
   9.15 Heat of Solution: Not pertinent
   9.16 Heat of Polymerization: Not pertinent
   9.17 Heat of Fusion: Currently not available
   9.18 Limiting Values: Currently not available
   9.19 Reid Vapor Pressure: 0.3 psia

NOTES

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### ACETONE CYANOHYDRIN

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<th>Temperature (degrees F)</th>
<th>SATURATED LIQUID DENSITY</th>
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<th>LIQUID VISCOSITY</th>
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