1. CORRECTIVE RESPONSE ACTIONS

- Dilute and disperse
- Stop discharge
- Collection Systems: Dredge

2. CHEMICAL DESIGNATIONS

- CG Compatibility Group: Not listed
- Formula: NaCN
- IOM/UN Designation: 6.1/1689
- DOT ID No.: 1689
- CAS Registry No.: 143-33-9
- NAERG Guide No.: 157
- Standard Industrial Trade Classification: 52381

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Protective gloves when handling solid sodium cyanide; rubber gloves when handling cyanide solutions; wash hands and rubber gloves thoroughly with running water after handling cyanides; U.S. Bureau of Mines approved dust respirator; approved chemical safety goggles.

3.2 Symptoms Following Exposure: As little as 180 milligrams is a rapidly fatal poison if ingested. Non-lethal doses may cause toxic symptoms. Strong water solutions, or the solid itself, can be absorbed by the skin and cause deep ulcers which heal slowly.

3.3 Treatment of Exposure: INGESTION: start treatment immediately; call a physician, carry victim to fresh air; have him lie down; keep him quiet and warm until physician arrives. If victim is conscious and breathing: induce vomiting by giving emetic or warm salt water (1 tablespoon salt/cup water); repeat until vomit fluid is clear; then have victim drink one pint of 1% solution of soda thiosulfate, to be repeated in 15 min. If victim has stopped breathing: give artificial respiration until breathing starts. If victim is unconscious but breathing: give oxygen from an inhalator. For all of above conditions, have victim breathe amy/rhina. Break rhina pel in a cloth and hold tightly under victim nose for 15 sec., repeating 5 times at about 15-sec. intervals. If necessary, repeat this procedure every 3 min. with fresh peels until 3 or 4 have been given. (Pears must not be over 2 years old. Avoid breathing amy/rhina while administering it to victim.)

3.4 TLV/TWA: Not listed.
- TLV-STEL: Not listed.
- TLV-Ceiling: 5 mg/m³
- Toxicity by Ingestion: Grade 4; LD₅₀ below 50 mg/kg
- Toxicity by Inhalation: Currently not available.

3.5 Chronic Toxicity: None

3.6 Vapor (Gas) Irritant Characteristics: Non-irritant, but moisture in air can liberate some lethal hydrogen cyanide gas.

3.7 Liquid or Solid Characteristics: Fairly severe skin irritant; may cause pain and second-degree burns after a few minutes’ contact

3.8 Odor Threshold: Currently not available.

3.9 Chronic Toxicity: Not available

3.10 LDH Value: 25 mg/dL (as cyanide)

3.11 OSHA PEL-TWA: 5 mg/m³

3.12 OSHA PEL-STEL: Not listed.

3.13 OSHA PEL-Ceiling: Not listed.

3.14 EPA AEGI: Not listed.

3.15 4.1 Flash Point: Not flammable

3.16 Adiabatic Flame Temperature: Currently not available

3.17 Water Pollution: HAIR to AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

4. FIRE HAZARDS

4.1 Flash Point: Not flammable

4.2 Flammable Limits in Air: Not flammable

4.3 Fire Extinguishing Agents: Not pertinent

4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent

4.5 Special Hazards of Combustion: Products: Not pertinent

4.6 Behavior in Fire: Not pertinent

4.7 Auto Ignition Temperature: Not flammable

5. CHEMICAL REACTIVITY

5.1 Reactivity with Water: When sodium cyanide dissolves in water, a milireaction occurs and some poisonous hydrogen cyanide gas is released. This gas is not hazardous except in an enclosed space. If the water is acidic however, toxic amounts of the gas will form at once.

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: Not pertinent

6. WATER POLLUTION

6.1 Aquatic Toxicity: 0.15 ppm/99 hr/freshwater/L/L/L/fresh water

6.2 Waterfowl Toxicity: Currently not available

6.3 Biological Oxygen Demand (BOD): Theor. 6%, 7 days

6.4 Food Chain Concentration Potential: None

6.5 GESAMP Hazard Profile: Bioaccumulation: 0 Damage to living resources: 4 Human Oral hazard: 3 Human Contact hazard: II Reduction of amenities: XX

7. SHIPPING INFORMATION

7.1 Grades of Purity: 95-99%

7.2 Storage Temperature: Ambient

7.3 Inert Atmosphere: No requirement

7.4 Venting: Sealed containers must be stored in well-ventilated area.

8. HAZARD CLASSIFICATIONS

8.1 DOT Class: 6.1

8.2 DOT Class: 6.1

8.3 DOT Class: 6.1

8.4 Marine Pollution: Yes

8.5 NFPA Hazard Classification: Category Classification Health Hazard (Blue)........... 3 Flammability (Red)......... 0 Instability(Yellow)............. 0

8.6 EPA Reportable Quantity: Not pertinent

8.7 EPA Pollution Category: A

8.8 RCRA Waste Number: P016

8.9 EPA FWPCA List: Yes

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Physical State at 15° C and 1 atm: Solid

9.2 Molecular Weight: 49.01

9.3 Boiling Point at 1 atm: Very high

9.4 Freezing Point: 1047°F = 564°C = 837K

9.5 Critical Temperature: Not pertinent

9.6 Critical Pressure: Not pertinent

9.7 Specific Gravity: 1.60 at 25°C (solid)

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): Not pertinent

9.12 Latent Heat of Vaporization: Not pertinent

9.13 Heat of Combustion: Not pertinent

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: 88.9 cal

9.18 Limiting Value: Currently not available

9.19 Reid Vapor Pressure: Currently not available

NOTES

JUNE 1999
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