

CYANOGEN BROMIDE

CBR

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION								
Common Synonyms	Solid crystals Sinks and mixes with water.	Colorless	Penetrating odor	<p>4.1 Flash Point: Not flammable</p> <p>4.2 Flammable Limits in Air: Not flammable</p> <p>4.3 Fire Extinguishing Agents: Not pertinent</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent</p> <p>4.5 Special Hazards of Combustion Products: Poison gases are produced in fire.</p> <p>4.6 Behavior in Fire: Not pertinent</p> <p>4.7 Auto Ignition Temperature: Not flammable</p> <p>4.8 Electrical Hazards: Not pertinent</p> <p>4.9 Burning Rate: Not flammable</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: Not Pertinent</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): Not Pertinent</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: Currently not available</p> <p>7.2 Storage Temperature: Currently not available</p> <p>7.3 Inert Atmosphere: Currently not available</p> <p>7.4 Venting: Currently not available</p> <p>7.5 IMO Pollution Category: Currently not available</p> <p>7.6 Ship Type: Currently not available</p> <p>7.7 Barge Hull Type: Currently not available</p>								
Fire	<p>Evacuate. Keep people away. AVOID CONTACT WITH SOLID. Wear chemical protective suit with self-contained breathing apparatus. Notify local health and pollution control agencies. Protect water intakes.</p> <p>Not flammable. POISONOUS GASES ARE PRODUCED WHEN HEATED. Wear chemical protective suit with self-contained breathing apparatus. Cool exposed containers with water.</p>				8. HAZARD CLASSIFICATIONS								
Exposure	<p>CALL FOR MEDICAL AID. DUST POISONOUS IF INHALED OR IF SKIN IS EXPOSED. Irritating to eyes. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p>SOLIDS POISONOUS IF SWALLOWED. Will burn skin and eyes. Remove contaminated clothing and shoes. Flush affected areas 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. DO NOT INDUCE VOMITING.</p>				<p>8.1 49 CFR Category: Poison</p> <p>8.2 49 CFR Class: 6.1</p> <p>8.3 49 CFR Package Group: I</p> <p>8.4 Marine Pollutant: Yes</p> <p>8.5 NFPA Hazard Classification:</p> <table> <thead> <tr> <th>Category</th> <th>Classification</th> </tr> </thead> <tbody> <tr> <td>Health Hazard (Blue)</td> <td>3</td> </tr> <tr> <td>Flammability (Red)</td> <td>0</td> </tr> <tr> <td>Instability (Yellow)</td> <td>2</td> </tr> </tbody> </table> <p>8.6 EPA Reportable Quantity: 1000 pounds</p> <p>8.7 EPA Pollution Category: C</p> <p>8.8 RCRA Waste Number: U246</p> <p>8.9 EPA FWCNA List: Not listed</p>	Category	Classification	Health Hazard (Blue)	3	Flammability (Red)	0	Instability (Yellow)	2
Category	Classification												
Health Hazard (Blue)	3												
Flammability (Red)	0												
Instability (Yellow)	2												
Water Pollution	<p>HARMFUL 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.</p>				9. PHYSICAL & CHEMICAL PROPERTIES								
1. CORRECTIVE RESPONSE ACTIONS	<p>Dilute and disperse Stop discharge Do not burn</p>				<p>9.1 Physical State at 15° C and 1 atm: Solid</p> <p>9.2 Molecular Weight: 105.93</p> <p>9.3 Boiling Point at 1 atm: Not pertinent</p> <p>9.4 Freezing Point: 120 to 124°F = 49 to 51°C = 322 to 324°K</p> <p>9.5 Critical Temperature: Not pertinent</p> <p>9.6 Critical Pressure: Not pertinent</p> <p>9.7 Specific Gravity: 2.015 at 20°C (solid)</p> <p>9.8 Liquid Surface Tension: Not pertinent</p> <p>9.9 Liquid Water Interfacial Tension: Not pertinent</p> <p>9.10 Vapor (Gas) Specific Gravity: 3.6</p> <p>9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent</p> <p>9.12 Latent Heat of Vaporization: Not pertinent</p> <p>9.13 Heat of Combustion: Not pertinent</p> <p>9.14 Heat of Decomposition: Not pertinent</p> <p>9.15 Heat of Solution: Not pertinent</p> <p>9.16 Heat of Polymerization: Not pertinent</p> <p>9.17 Heat of Fusion: Currently not available</p> <p>9.18 Limiting Value: Currently not available</p> <p>9.19 Reid Vapor Pressure: Currently not available</p>								
2. CHEMICAL DESIGNATIONS	<p>2.1 CG Compatibility Group: Not listed.</p> <p>2.2 Formula: BrCN</p> <p>2.3 IMO/UN Designation: 6.1/1889</p> <p>2.4 DOT ID No.: 1889</p> <p>2.5 CAS Registry No.: 506-68-3</p> <p>2.6 NAERG Guide No.: 157</p> <p>2.7 Standard Industrial Trade Classification: 52381</p>				6. WATER POLLUTION								
3. HEALTH HAZARDS	<p>3.1 Personal Protective Equipment: Chemical cartridge respirator, goggles, protective clothing, rubber gloves</p> <p>3.2 Symptoms Following Exposure: Same symptoms as hydrogen cyanide. Because it irritates the eyes, throat, and lungs severely, it is unlikely that anyone would voluntarily remain in areas with a high enough concentration to exert a cyanide effect.</p> <p>3.3 Treatment of Exposure: Call a physician. INHALATION: remove victim to fresh air; if he is not breathing, give artificial respiration, preferably mouth-to-mouth; if symptoms of cyanide poisoning are observed, administer amyl nitrite as instructed for HCN. INGESTION: have victim drink water or milk; do NOT induce vomiting.</p> <p>3.4 TLV-TWA: Not listed.</p> <p>3.5 TLV-STEL: Not listed.</p> <p>3.6 TLV-Ceiling: Not listed.</p> <p>3.7 Toxicity by Ingestion: Currently not available</p> <p>3.8 Toxicity by Inhalation: Currently not available.</p> <p>3.9 Chronic Toxicity: Workers exposed to solutions may develop dermatitis.</p> <p>3.10 Vapor (Gas) Irritancy Characteristics: Vapors cause severe irritation of eyes and throat and can cause eye and lung injury. They cannot be tolerated even at low concentrations.</p> <p>3.11 Liquid or Solid Characteristics: Severe skin irritant. Causes second-and third-degree burns on short contact; very injurious to the eyes.</p> <p>3.12 Odor Threshold: Currently not available</p> <p>3.13 IDLH Value: Not listed.</p> <p>3.14 OSHA PEL-TWA: Not listed.</p> <p>3.15 OSHA PEL-STEL: Not listed.</p> <p>3.16 OSHA PEL-Ceiling: Not listed.</p> <p>3.17 EPA AEGL: Not listed</p>				NOTES								

CYANOGEN BROMIDE

CBR

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
NOT PERTINENT			NOT PERTINENT		NOT PERTINENT		NOT PERTINENT

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
VERY SOLUBLE			NOT PERTINENT		NOT PERTINENT		NOT PERTINENT