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MATERIAL SAFETY DATA SHEET

Section 1- PRODUCT IDENTIFICATION

COMPOSITION Ba	PRODUCT NAME Barium
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Section 2- HAZARDOUS INGREDIENTS

Note: Products under normal conditions do not represent an inhalation, ingestion or contact health hazard.

MATERIAL OR COMPONENT	CAS NUMBER	WT%	EXPOSURE LIMITS	
			OSHA PEL (Mg/M3)	ACGIH TLV(MG/M3)
Barium	7440-39-3	0.0-100.0	0.5mg/m³	0.5mg/m³

Section 3- PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS) <input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Gas <input type="checkbox"/> Other	APPEARANCE AND ODOR Yellow-silver, slightly lustrous pieces, no odor
MELTING POINT (BASE METAL) 704° C	SPECIFIC GRAVITY 3.51 @ 20° C

Section 4- FIRE AND EXPLOSION

Flash Point (Method Used) N/A	Flammable Limits N/A	LEL N.A.	UEL N.A.
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EXTINGUISHING MEDIA

Class D or other extinguishing agent. Do not use water or halogenated hydrocarbons

SPECIAL FIRED FIGHTING PROCEDURES

Wear full face, self-contained breathing apparatus with full protective clothing. Isolate run-off to prevent environmental contamination.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Easily oxidizable, has green colored flame. May react with water, ammonia, halogens, oxygen and acids to evolve hydrogen and strongly corrosive caustic Ba(OH)₂.

Section 5- REACTIVITY DATA

STABILITY Unstable	INCOMPATABILITY (MATERIALS TO AVOID) Water, acids C2C13F3, FC13, C2HC13, Oxidizing agents, ammonia, oxygen.
CONDITIONS TO AVOID Water, moisture and air.	
HAZARDOUS DECOMPOSITION PRODUCTS Barium Oxide, Barium Hydroxide and Hydrogen.	

Section 6- HEALTH HAZARD GUIDE

MAJOR EXPOSURE HAZARD <input type="checkbox"/> Inhalation <input type="checkbox"/> Skin <input type="checkbox"/> Skin Absorption <input type="checkbox"/> Eye Contact <input type="checkbox"/> Ingestion
EFFECTS OF OVEREXPOSURE INHALATION: Acute; N/A Chronic; N/ INGESTION: Acute; Chemical burns as it may react with moisture on living tissue. May cause poisoning, vomiting, colic, diarrhea, slow irregular pulse, transient hypertension, convulsions, tremors, muscular paralysis, and acute barium poison. Chronic; May cause chronic barium poisoning. SKIN CONTACT: Acute; Chemical burns as it reacts with moisture and living tissue. Chronic; May cause dermatitis. EYE CONTACT: Acute; May cause chemical burns as it reacts with living tissue. Chronic; May cause corneal opacity and blindness. TARGET ORGANS: May affect upper respiratory system, central nervous system, heart, skin and eyes.
EMERGENCY & FIRST AID PROCEDURES INHALATION: Remove from exposed area to fresh air immediately; keep warm and quiet, give oxygen if breathing is difficult. Seek medical attention. INGESTION: If conscious give 1-2 glasses of milk or water and induce vomiting; seek medical attention. Never give anything by mouth or induce vomiting to an unconscious victim. SKIN CONTACT: Remove contaminated clothing; brush material off skin. Wash affected area with soap or mild detergent and large amounts of water until no evidence of the chemical remains. Seek medical attention. EYE CONTACT: Flush eyes with lukewarm water lifting up the upper and lower lids for at least fifteen minutes. Seek medical attention.

Section 7- SPILL OR LEAK PROCEDURES

SPILL OR LEAK PROCUDRES Wear appropriate respiratory and protective equipment. Isolate the area where the spill occurred and provide ventilation and extinguish. Vacuum up the spill using a high efficiently particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Use non-sparking tools. Take care not to raise dust.
WASTE DISPOSAL METHODS Observe all federal, state and local regulations when storing or disposing.

Section 8- SPECIAL PROTECTION

RESPIRATORY

NIOSH/MSHA Approved respirator

VENTILATION

Local exhaust: Maintain concentration at or below the PEL. Mechanical exhaust: Not recommended.

EYE PROTECTION & PROTECTIVE CLOTHING

Wear vented Safety glasses for eyes. Wear full protective gear suitable to prevent contamination and impervious gloves.

Section 9- SPECIAL PRECAUTIONS

WORK/HYGIENIC/MAINTENANCE PRACTICES

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Some of the chemicals listed herein are research or experimental substances, which may be toxic, as defined by various governmental regulations. In accordance with Environmental Protection Agency regulations and the Toxic Substance Control Act (TSCA), these materials should only be handled by, or under the direct supervision of a "technically qualified individual", as defined in 40 CFR710.2(aa)

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