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MATERIAL SAFETY DATA SHEET

MSDS No.: BB0030 BB0032
Effective Date: January 1, 2007

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	Barium Chloride, Dihydrate	 CHEMTREC 800-424-9300 Day 585-228-6177 NFPA HAZARD RATING MINIMAL SLIGHT MODERATE SERIOUS SEVERE 0 1 2 3 4 HMS*	Health	3
Chemical Synonyms	Barium Dichloride		Fire	0
Formula	BaCl ₂ ·2H ₂ O		Reactivity	0
Unit Size	up to 2.5 Kg.			
C.A.S. No.	10326-27-9			

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Barium chloride, dihydrate	100%	See Section V.

DANGER! POISON! MAY BE FATAL IF SWALLOWED.

CAUSES IRRITATION. MAY BE HARMFUL IF INHALED.

SECTION III PHYSICAL DATA

Melting Point (°F)	Transition 925°C (1696°F)	Specific Gravity (H ₂ O = 1)	3.1 @ 24°C.
Boiling Point (°F)	1560°C (2840°F)	Percent Volatile by Volume (%)	Negligible as solid.
Vapor Pressure (mm Hg)	Negligible as solid.	Evaporation Rate (=1)	Not applicable.
Vapor Density (Air=1)	7.21		
Solubility in Water	31 grams per 100 mL. water @ 32°F (BaCl ₂).		
Appearance & Odor	Fine white crystals or powder; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable.	Flammable Limits in Air % by Volume	N/A	Lower	Upper
Extinguisher Media	Use any media suitable for extinguishing supporting fire.				

SPECIAL FIREFIGHTING PROCEDURES

A NIOSH/MSHA-approved self-contained breathing apparatus should be worn for protection against barium-containing dust, mist or fumes. Wear full protective clothing.

(2004 EMERGENCY RESPONSE GUIDEBOOK, RSPA P. 5800.9, GUIDE PAGE NO.154)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products, as dust or fume.

D.O.T. Barium compounds, n.o.s., (Barium chloride), 6.1, UN1564, PG III

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA

BB0030

Threshold Limited Value TWA: 0.5 mg/m³ as Barium and soluble compounds ACGIH 2001. U.S. H.E.W. Toxic Substance List (1976) gives; orl-hmn TDLo: 80 mg/Kg.; orl-rat LDLo: 335 mg/Kg.

Effects of Overexposure **HARMFUL OR FATAL IF SWALLOWED.** Oral intake may cause weakness, salivation and nausea, followed by vomiting and diarrhea. Patient may become cold and experience varying degrees of paralysis. **INHALATION:** May be harmful, with symptoms similar to those of oral intake. Observe allowable limits. **EYES AND SKIN:** Not usually severe, but may cause irritation to sensitive individuals. Target organs: Cardiovascular and central nervous systems, kidneys.

Emergency and First Aid Procedures **INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person. **EYES:** Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION VI REACTIVITY DATA

Stability	Unstable	Conditions to Avoid	Excessive temperature and heat.
	Stable	X	
Incompatibility (Materials to Avoid)	Bromine Trifluoride and 2-Furan percarboxylic acid, violent reaction.		

Hazardous Decomposition Products Thermal decomposition or burning may produce toxic fumes of chlorine gas, Hydrochloric acid and Barium oxide, Barium dust.

Hazardous Polymerization	Conditions to Avoid
May Occur	Will Not Occur
	X
	Not Applicable.

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled Recover for use if not contaminated. Wearing proper protective clothing and ventilation, sweep up and collect in dry state and place in a suitable container for proper disposal. Flush spill area. Do not get into sewer or waterways. Use U.S.B.M. approved toxic dust respirator.

Waste Disposal Method Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.

Dispose of in accordance with federal, state and local regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)	None should be needed in normal laboratory handling. If dusty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved dust mask or respirator.			
Ventilation	Local Exhaust	Recommended.	Special	No.
	Mechanical (General)	Recommended.	Other	No.
Protective Gloves	Rubber.		Eye Protection	Chemical safety goggles.
Other Protective Equipment	Lab coat or apron, vented hood, proper gloves, eye wash station.			

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing Store in a dry place, away from food products. Wash thoroughly after handling. Keep container tightly closed when not in use.

Other Precautions Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.
Do not breath dust or mist. Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Remove and wash contaminated clothing.

Revision No. 7 | Date 01/01/07 | Approved James A. Bertsch | Chemical Safety Coordinator JAB

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