

# MATERIAL SAFETY DATA SHEET

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NO. 119

BARIUM CARBONATE

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SECTION I. MATERIAL IDENTIFICATION			
MATERIAL NAME: <u>BARIUM CARBONATE</u> OTHER DESIGNATIONS: BaCO <sub>3</sub> , CAS #000 513 779 MANUFACTURER: Available from several suppliers, including:			
Chemical Products Corp. P.O. Box 449 Cartersville, GA 30120 Tel: (404) 382-2144	General Electric Co. Lighting Business Group 1099 Ivanhoe Road Cleveland, OH 44110 Tel: (216) 286-3382	Mallinckrodt, Inc. P.O. Box M Paris, KY 40361 Tel: (606) 387-7000	
SECTION II. INGREDIENTS AND HAZARDS	%	HAZARD DATA	
Barium Carbonate  Strontium Carbonate (MSDS #120) (Uncalcined grades may contain some sulfide).  *Current OSHA PEL and ACGIH (1983)TLV. Suppliers recommend use of this value for Barium Carbonate; even though it is relatively insoluble in water, it is acid soluble.	>97  <2.5	8-hr TWA 0.5 mg/m <sup>3</sup> * (as Ba, soluble cmpds)  Human, Oral LDLo 57 mg/kg Rat, Oral LD <sub>50</sub> 630 mg/kg Dog, Oral LDLo 400 mg/kg	
SECTION III. PHYSICAL DATA			
Boiling point, 1 atm, deg C ----- 1300 (dec) (Decomposes to BaO + CO <sub>2</sub> )	Specific gravity (H <sub>2</sub> O=1) --- ca 4.3 Melting point, deg C ----- 811 @ 90 atm ----- 1740	Vapor pressure, 20C, mm Hg ----- nil Particle size, Avg. in microns ----- <2 Solubility in water, 20C, g/liter - 0.24 Volatiles, % by volume ----- 0 Molecular weight ----- 197.3	
Appearance & Odor: White to greyish-white fine granular powder. Odorless.			
SECTION IV. FIRE AND EXPLOSION DATA		Lower	Upper
Flash Point and Method	Autoignition Temp.	Flammability Limits in Air	
Noncombustible			
Extinguishing media: On surrounding fire use dry chemical, carbon dioxide, alcohol foam, water spray. Do not use a direct water stream as this can disperse dust in air. Not combustible. No special or unusual fire or explosion hazard associated with material. Use water spray to wet down material and to avoid dust problem. Firefighters should wear self-contained breathing apparatus.			
SECTION V. REACTIVITY DATA			
This inorganic salt is a stable material in closed containers at room temperature under normal storage and handling conditions. It does not polymerize. It is acid soluble with emission of carbon dioxide. Thermal degradation will yield barium oxide and carbon dioxide. The barium oxide produced is a strongly alkaline material and exothermic upon contact with water. Hot BaO can react directly with oxygen to give a peroxide (BaO <sub>2</sub> ) which can be a fire and explosion risk with organic materials.			

SECTION VI. HEALTH HAZARD INFORMATION	TLV 0.5 mg/m <sup>3</sup> (as Ba) (Est. See Sect. II)
<p>Barium Carbonate may be poisonous by ingestion or inhalation. Inhalation of dust can cause bronchial irritation. Excessive exposures may produce a benign pneumoconiosis (baritosis). Barium is reported to cause myocardial excitation and is a general muscle stimulant. Eye contact can cause irritation. Skin contact can be irritating with possible dermatitis. Ingestion causes excessive salivation, severe abdominal pain, vomiting, violent diarrhea, muscle twitching progressing to muscular paralysis, gastroenteritis, increased blood pressure, convulsive tremors and hypokalemia.*</p> <p><b>FIRST AID:</b>  <u>Eye Contact:</u> Flush with running water for 15 min. including under eyelids.  <u>Skin Contact:</u> Wash affected area with soap and water.  <u>Inhalation:</u> Remove to fresh air.  <u>Ingestion:</u> Contact physician. Give 2oz of Epsom salt (MgSO<sub>4</sub>) or Glauber's salt (Na<sub>2</sub>SO<sub>4</sub>) solution to drink to precipitate barium as the insoluble sulfate, followed by plenty of milk or water to drink. Induce vomiting. Vomiting may occur spontaneously.  Seek medical assistance for further treatment, observation and support after first aid.  *Physicians note: Acute barium poisoning gives a rapid decrease in blood potassium level. Administration of appropriate potassium salts has been recommended.</p>	
SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES	
<p>Notify safety personnel of spills. Provide adequate ventilation. Clean up personnel should have protective equipment against inhalation of dust. Remove spills by vacuuming or wet sweeping in order to keep airborne dust at a minimum.</p> <p><b>DISPOSAL;</b> Reclaim for salvage or reuse. Unsalvagable waste may be buried in an approved landfill. (Mixing with dry Na<sub>2</sub>SO<sub>4</sub> before burial may be desirable). Follow Federal, State, and Local regulations.</p> <p>EPA Hazardous Waste No. is D005 (as Barium) (EP Toxicity, 40 CFR 261.24)</p>	
SECTION VIII. SPECIAL PROTECTION INFORMATION	
<p>Provide adequate general and local exhaust ventilation in the workplace to keep airborne particulate at a minimum. When dust concentrations exceed the PEL, use a NIOSH approved respirator for inorganic dust.</p> <p>Avoid eye contact by use of chemical safety goggles where dusty conditions occur. Wear rubber gloves and apron where necessary to prevent repeated or prolonged skin contact. Eyewash stations and washing facilities should be accessible to areas of use.</p>	
SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS	
<p>Store in closed containers in a dry, well-ventilated area away from acids &amp; oxidizing agents. Protect containers from physical damage.</p> <p>Use good housekeeping practices to prevent accumulation of dust and follow sound cleaning techniques that will keep airborne particulate at a minimum.</p> <p>Avoid breathing dust. Keep dust off clothing and follow good personal hygiene. Wash hands and face thoroughly before eating, drinking or smoking after handling.</p> <p><b>DO NOT INGEST</b></p> <p>DOT Classification: BARIUM COMPOUNDS N.O.S. I.D. No. UN1564 Label: POISON</p> <p>DATA SOURCE(S) CODE: 1,2,4-7,10,12,14,34</p>	
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