

MATERIAL SAFETY DATA SHEET

GENIUM PUBLISHING CORPORATION
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NO. 119

BARIUM CARBONATE

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SECTION I. MATERIAL IDENTIFICATION																		
<p>MATERIAL NAME: <u>BARIUM CARBONATE</u> OTHER DESIGNATIONS: BaCO₃, CAS #000 513 779 MANUFACTURER: Available from several suppliers, including:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">Chemical Products Corp.</td> <td style="width: 33%;">General Electric Co.</td> <td style="width: 33%;">Mallinckrodt, Inc.</td> </tr> <tr> <td>P.O. Box 449</td> <td>Lighting Business Group</td> <td>P.O. Box M</td> </tr> <tr> <td>Cartersville, GA 30120</td> <td>1099 Ivanhoe Road</td> <td>Paris, KY 40361</td> </tr> <tr> <td>Tel: (404) 382-2144</td> <td>Cleveland, OH 44110</td> <td>Tel: (606) 387-7000</td> </tr> <tr> <td></td> <td>Tel: (216) 286-3382</td> <td></td> </tr> </table>				Chemical Products Corp.	General Electric Co.	Mallinckrodt, Inc.	P.O. Box 449	Lighting Business Group	P.O. Box M	Cartersville, GA 30120	1099 Ivanhoe Road	Paris, KY 40361	Tel: (404) 382-2144	Cleveland, OH 44110	Tel: (606) 387-7000		Tel: (216) 286-3382	
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SECTION II. INGREDIENTS AND HAZARDS		%	HAZARD DATA															
Barium Carbonate		>97	8-hr TWA 0.5 mg/m ³ * (as Ba, soluble cmpds)															
Strontium Carbonate (MSDS #120) (Uncalcined grades may contain some sulfide).		<2.5	Human, Oral LDLo 57 mg/kg Rat, Oral LD ₅₀ 630 mg/kg Dog, Oral LDLo 400 mg/kg															
<p>*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.</p>																		
SECTION III. PHYSICAL DATA																		
Boiling point, 1 atm, deg C	----- 1300 (dec)	Specific gravity (H ₂ O=1)	--- ca 4.3															
(Decomposes to BaO + CO ₂)		Melting point, deg C	----- 811															
Vapor pressure, 20C, mm Hg	----- nil	@ 90 atm	----- 1740															
Particle size, Avg. in microns	----- <2	Volatiles, % by volume	----- 0															
Solubility in water, 20C, g/liter	- 0.24	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																		
<p>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.</p>																		
SECTION V. REACTIVITY DATA																		
<p>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 (BaO₂) which can be a fire and explosion risk with organic materials.</p>																		

SECTION VI. HEALTH HAZARD INFORMATION	TLV 0.5 mg/m ³ (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>FIRST AID:</p> <p><u>Eye Contact:</u> Flush with running water for 15 min. including under eyelids.</p> <p><u>Skin Contact:</u> Wash affected area with soap and water.</p> <p><u>Inhalation:</u> Remove to fresh air.</p> <p><u>Ingestion:</u> Contact physician. Give 2oz of Epsom salt (MgSO₄) or Glauber's salt (Na₂SO₄) 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.</p> <p>Seek medical assistance for further treatment, observation and support after first aid.</p> <p>*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>DISPOSAL; Reclaim for salvage or reuse. Unsalvagable waste may be buried in an approved landfill. (Mixing with dry Na₂SO₄ 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 & 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>DO NOT INGEST</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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