

CHEMICAL PRODUCTS CORPORATION

SDS No. 44

Revision date May 2015

GHS SAFETY DATA SHEET

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1. IDENTIFICATION

Product Name: Barium Carbonate – All Grades - including:
Type FF, Type CFF, AQUA-FLO[®], and MICRO-FLO[®]

SYNONYMS: Precipitated Barium Carbonate
Carbonic Acid, Barium salt

Recommended for industrial use as:

- a component of specialty glasses, ceramic bricks, tiles, and glazes,
- a raw material for the production of industrial coatings and catalysts,
- for soluble sulfate removal from industrial processes and wastewaters,
- a component of articles added to provide x-ray opacity.

Industrial uses advised against: None.

Molecular formula - BaCO₃
CAS No. 513-77-9

MANUFACTURER: Chemical Products Corporation
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TRANSPORTATION EMERGENCY: CHEMTREC, 800-424-9300

2. HAZARD IDENTIFICATION



WARNING

Acute toxicity, Oral (Category 4), H302
HARMFUL IF SWALLOWED

HARMFUL IF INHALED **MAY CAUSE EYE AND SKIN IRRITATION**
Do not eat, drink or smoke when using this product.

Wear protective gloves and eye protection.

Use with adequate ventilation or wear a dust mask if excessive dust is present.

Wash hands and face thoroughly after handling.

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

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Carcinogenicity: NTP.....: No evidence of carcinogenicity.

IARC.....: Not listed.

OSHA.....: Not regulated.

Medical Conditions Aggravated by Exposure: None are known.

3. **COMPOSITION / INFORMATION ON INGREDIENTS**

<u>COMPONENT</u>	<u>CAS #</u>	<u>EXPOSURE LIMITS</u>	<u>% BY WT</u>
Barium Carbonate	513-77-9	OSHA PEL: 0.5 mg/cu m as Ba 0.74 mg/cu m as This Product ACGIH TLV-TWA: Same	ca 97.0

4. **FIRST AID MEASURES**

If medical attention is sought, show this safety data sheet to the doctor in attendance.

If swallowed

Induce vomiting immediately, as directed by medical personnel. Give Epsom salts (magnesium sulfate) or Glauber's Salt (sodium sulfate) dissolved in water. Get medical attention immediately and contact a poison control center.

Never give anything by mouth to an unconscious person.

If inhaled

Move victim into fresh air. If not breathing, give artificial respiration. Get medical attention immediately.

In case of skin contact

Wash off with soap and plenty of water. Wash contaminated clothing before reuse.

In case of eye contact

Flush eyes with water as a precaution with large amounts of water for at least 15 minutes and get medical attention if irritation persists.

Most important symptoms and effects, both acute and delayed

Ingestion causes stomach pain, vomiting, and diarrhea. Muscle stimulation followed by transient paralysis may initiate hours after ingestion.

Acute overexposure will cause severe abdominal pain, violent purging with watery and bloody stools, vomiting, muscle twitching, hypertension, and confusion, followed by transient muscle paralysis including potentially fatal paralysis of the respiratory muscles. Barium is eliminated from the body over several days. Chronic overexposure may lead to varying degrees of paralysis of the extremities; hypertension may also be present. Symptoms of overexposure will disappear over several days as the body eliminates barium in the feces.

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Hypokalemia is usually present in cases of overexposure; potassium should be administered - large doses may be required.

Physician: Administer potassium intravenously to counteract the effect of barium.

5. ***FIRE FIGHTING MEASURES***

Flashpoint: Non-Flammable.

Flammability: Non-Flammable.

Autoignition: Non-Flammable.

General Hazard: No fire hazard. Will decompose releasing carbon dioxide gas at extremely high temperatures. This product is toxic if ingested.

Fire Fighting Instructions: Limit water runoff if it is likely to contain suspended barium carbonate. Add soluble sulfate such as sodium sulfate to the water to make it nonhazardous.

Fire Fighting Equipment: No special equipment is required. Wash away any barium carbonate which may contact the body, clothing, or equipment.

Hazardous Combustion Products: None.

6. ***ACCIDENTAL RELEASE MEASURES***

General: Avoid generating dust. Use appropriate Personnel Protective Equipment (PPE). Spilled product could be a RCRA D005 characteristic hazardous waste because of its soluble barium content. Waste containing more than 0.2% soluble barium is hazardous under the RCRA criteria. Do not dump into sewers, on the ground, or into any body of water. Soluble barium can be rendered nonhazardous by reaction with excess sulfate to form insoluble barium sulfate. Any disposal practice must be in compliance with local, state, and federal laws and regulations. (Contact local or state environmental agency for specific rules).

Small Spill: Carefully shovel up or sweep up spilled material and place in suitable container.

Large Spill: Try to keep material dry and prevent material from entering storm sewers or ditches leading to natural waterways. Mix with excess sulfate to make the material nonhazardous, or dispose of material in an approved hazardous waste landfill.

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7. HANDLING AND STORAGE

Storage Temperature: Ambient.

Storage Pressure: Ambient.

General: This product is not water-soluble, but is soluble in most acids. Keep this material dry. Keep containers closed. Emptied containers may present a toxic hazard; treat or dispose of appropriately.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Control airborne concentrations below the exposure limits. Use only with adequate ventilation.

Respiratory Protection: Use a NIOSH-approved dust mask if excessive dust is present.

Skin Protection: Cover exposed skin areas and wear general-purpose gloves.

Eye Protection: Wear safety glasses. Use chemical goggles if excessive dust is present.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid.

Vapor Pressure: Not applicable.

Specific Gravity: 3.1

Solubility in Water: Insoluble.

pH: 1% suspension in water has a pH of 9

Boiling Point: Decomposes to barium oxide and carbon dioxide at about 1000 Degrees C.

Melting Point: About 1000 Degrees C. - Near decomposition temperature.

Vapor Density: Not applicable.

Evaporation Rate: Not applicable.

Odor: Usually odorless; possibly a very slight rotten-egg odor.

Appearance: White powder or granules.

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10. **STABILITY AND REACTIVITY**

Chemical Stability: Keep away from intense heat which may cause decomposition. Keep away from acids which will cause decomposition and generate carbon dioxide gas.

Incompatibility: Acids will decompose barium carbonate with the liberation of carbon dioxide.

Hazardous Decomposition Products: Barium carbonate may be decomposed to release carbon dioxide gas which is hazardous in confined spaces. Soluble barium compounds which may be produced by dissolution of barium carbonate in acid are toxic if ingested.

Hazardous Polymerization: Does not occur.

11. **TOXICOLOGICAL INFORMATION**

Skin: Contact may be slightly irritating. Barium ion is not expected to pass through intact skin.

Eye: The dust is expected to be slightly to moderately irritating.

Ingestion: The Oral LD50 for rats is about 400 mg/kg of barium chloride (equal to about 379 mg/kg of barium carbonate). A National Toxicology Program study found no decrease in two-year survival for rats consuming 110 mg/kg/day of barium chloride for the entire two year period (lifetime exposure).

Inhalation: No studies. Inhaled dust is expected to exhibit the same systemic toxicity as ingestion because barium carbonate is cleared from the lungs into the bloodstream.

Sub-chronic: Rats and mice exposed to 1,250 ppm of barium chloride dihydrate in their drinking water continuously for two years showed no adverse effects.

Chronic Ingestion: Kidney effects were observed in rats and mice after prolonged exposure to high levels of soluble barium.

Chronic/Carcinogenic: Rats and mice exposed to 2500 ppm of barium chloride dihydrate in drinking water for two years showed no evidence of carcinogenic response.

Teratogenic: Rats exposed to 2000 ppm of barium chloride dihydrate in their drinking water for thirty days exhibited no teratogenic effects, and no fetotoxicity was noted.

Reproductive: No effects were seen on reproductive indices in a mating trial after male rats were exposed to 2000 ppm of barium chloride dihydrate in their drinking water for sixty days and female rats were exposed to 2000 ppm in their drinking water for thirty days..

Mutagenic: Barium chloride dihydrate was not mutagenic in Salmonella typhimurium strains TA 100, TA 1535, TA 1537, TA 97, or TA 98, with or without exogenous metabolic activation (S9). See NTP Technical Report No. 432.

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12. **ECOLOGICAL INFORMATION**

TOXICITY: In turbid water at 20 Deg. C, the 96 hour TLM has been reported as 10,000 mg/l for Mosquito Fish (*Gambusia Affinis*). This would have been suspended rather than dissolved barium carbonate.

DISTRIBUTION: Barium carbonate is not water soluble and occurs in nature as the mineral Witherite. It reacts with sulfate ions in the environment to form barium sulfate. No appreciable bioconcentration is expected in the environment because barium sulfate is naturally present in almost all rocks and soils.

CHEMICAL FATE: Barium carbonate is expected to react with sulfate in the environment to form inert and nontoxic barium sulfate.

13. **WASTE MANAGEMENT INFORMATION - DISPOSAL**

Waste containing more than 0.2% soluble barium is hazardous under the RCRA criteria. If disposed of in its purchased form, this product would be a hazardous waste based on barium solubility in the RCRA TCLP test. Barium compounds can be rendered non-hazardous by reaction with excess sulfate to form insoluble barium sulfate. Any disposal practice must be in compliance with local, state, and federal laws and regulations.

14. **TRANSPORT INFORMATION**

D.O.T. Shipping Name..... : Not Regulated by U.S. DOT
as a hazardous material.

Technical Shipping Name..... : Barium Compound.

D.O.T. Hazard Class..... : None.

U.N./N.A. Number..... : None.

Product R.Q. (lbs)..... : None.

D.O.T. Label..... : None.

D.O.T. Placard..... : None.

Freight Class Bulk..... : Inorganic Chemical.

Freight Class Package..... : Inorganic Chemical.

Product Label..... : Barium Carbonate, Precipitated
Type FF, Type CFF, AQUA-FLO[®],
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15. **REGULATORY INFORMATION**

OSHA Status: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200. It is classified as toxic based on the oral rat LD50.

TSCA Status..... : Listed on TSCA Inventory

CERCLA Reportable Quantity..... : None.

SARA Title III:

Section 302, Extremely Hazardous Substances.... : None.

Section 311/312, Hazard Categories..... : Category 1 (Acute Hazard).

Section 313, Toxics Release Inventory: Barium Compounds, Code N040.

RCRA Status: If discarded in its purchased form, this product would be a hazardous waste by characteristic. Under RCRA, it is the responsibility of the product user to determine, at the time of disposal, whether a waste containing the product, or derived from the product, should be classified as a hazardous waste under 40 CFR 261.20-24.

16. **OTHER INFORMATION**

National Fire Protection Association (NFPA) Ratings: This information is intended solely for the use of individuals trained in the NFPA system.

Health: 2

Flammability: 0

Reactivity: 0

Revision Indicator: This GHS Safety Data Sheet replaces Safety Data Sheet dated August 2014; it contains only minor format changes from the previous Safety Data Sheet.

Disclaimer: The information contained herein is accurate to the best knowledge of Chemical Products Corporation. Chemical Products Corporation makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances.