



Chemical Products Corporation SAFETY DATA SHEET

SDS No. 44A

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Approval date February 15, 2023

1. PRODUCT IDENTIFIER

Barium Carbonate

1.1 Trade Name: Barium Carbonate, Type FF, Type CFF,
AQUA-FLO, and MICRO-FLO®

Synonyms: Precipitated Barium Carbonate; Carbonic Acid, Barium salt

CAS Number: 513-77-9

Molecular formula - BaCO₃

1.2 Relevant identified uses of the substance and uses advised against

Recommended industrial uses:

- 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,
- added as a component of articles to provide x-ray opacity.

Industrial uses advised against: None.

1.3 MANUFACTURER/Supplier of this SDS:

Chemical Products Corporation

102 Old Mill Road SE

Cartersville, Georgia 30120-4127

Telephone: 1-770-382-2144

1.4 EMERGENCY PHONE NUMBER: CHEMTREC, 800-424-9300
(24 hours every day)

2. HAZARD IDENTIFICATION

2.1 Classification in accordance with paragraph (d) of §1910.1200

Acute toxicity, Oral (Category 4), H302

2.2 Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200.



Signal Word

WARNING

Hazard Statements

- H302 Harmful if swallowed.



Precautionary Statements

Prevention

- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.

Response

- P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
- P321 Specific treatment (see supplemental first aid instructions on this label) Physician: Administer potassium intravenously to counteract the effect of barium.

2.3 Other hazards not otherwise classified that have been identified during the classification process

- Harmful if inhaled. May cause slight eye and skin irritation.

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	about 97%

4. FIRST AID MEASURES

4.1 Description of necessary first-aid measures

If swallowed

Rinse mouth with water. Get medical attention immediately and contact a poison control center. Induce vomiting immediately, as directed by medical personnel. Give Epsom salts (magnesium sulfate) or Glauber's Salt (sodium sulfate) dissolved in water. Never give anything by mouth to an unconscious person.

If inhaled

Move person into fresh air. If not breathing, give artificial respiration. Get medical attention immediately and contact a poison control center.

For eye contact

Flush eyes with large amounts of water as a precaution and get medical attention of irritation persists.

For skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician if irritation persists.



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4.2 Most important symptoms and effects, both acute and delayed

In case of 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.

4.3 Indication of any immediate medical attention and special treatment needed, if necessary

- seek medical treatment if you feel unwell after being exposed to this product.
- **Physician:** Administer potassium intravenously to counteract the effects of barium.

5. FIRE FIGHTING MEASURES

5.1 Suitable (and unsuitable) extinguishing media.

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Flashpoint: Non-Flammable.

Flammability: Non-Flammable.

Autoignition: Non-Flammable.

5.2 Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products).

Will decompose releasing carbon dioxide gas at extremely high temperatures. Contact with acid will release carbon dioxide gas. This product is toxic if ingested.

5.3 Special protective equipment and precautions for fire-fighters.

No special equipment is required, but personal protective equipment and self-contained breathing apparatus should be used as a general precaution. Wash away any of this product which may contact the body, clothing, or equipment. Limit water runoff if it is likely to contain this material.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures.

Use personal protective equipment. Avoid dust formation. Evacuate personnel to safe areas. Prevent further leakage or spillage. Ensure adequate ventilation. Avoid breathing dust.



6.2 Methods and materials for containment and cleaning up.

Do not let product enter drains. Sweep up and shovel to transfer released material to properly labeled containers. Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for **disposal**.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling.

Avoid formation of dust and aerosols. The potential for dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures

- **Avoid contact with skin and eyes.**
- Wash hands before breaks and at the end of workday.
- When using do not eat, drink or smoke.
- Eye wash bottles or eye wash stations in compliance with applicable standards

7.2 Conditions for safe storage, including any incompatibilities.

Keep in a dry place. Contact with acids will release Carbon Dioxide gas.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV)

OSHA PEL: 0.5 mg/m³ as Ba equals 0.74 mg/m³ of this product.

ACGIH TLV-TWA is the same as the OSHA PEL.

NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations) is 50 mg Ba/m³ equals 74 mg/m³ of this product.

8.2 Appropriate engineering controls.

Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits.

8.3 Individual protection measures, such as personal protective equipment.

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

Appearance (physical state, color, etc.): Solid; white or tan powder or granules.

Odor: No data available. Expected to be odorless.

Odor Threshold: No data available.

pH: 7 to 9 – 1% aqueous suspension at 25 °C (77 °F)

Melting point/Freezing point: ≥ 900 °C ($\geq 1,652$ °F)

Initial boiling point and boiling range: No data available. Decomposes.

Flash point: No data available. Not flammable.

Evaporation rate: No data available.

Flammability (solid, gas): Not flammable.

Upper/lower flammability or explosive limits: No data available. Not flammable

Vapor pressure: No data available.

Vapor density: No data available.

Relative density – Specific Gravity: 4.3 g/cm³

Solubility: slightly soluble in water: about 20 mg/l at 20 °C (68 °F)

Partition coefficient: n-octanol/water: No data available.

Auto-ignition temperature: No data available.

Decomposition temperatures: Thermal decomposition at 1,380 °C (2,516 °F)

Viscosity: No data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Not reactive with air, water, or alkalies. Decomposed by acids.

10.2 Chemical Stability

Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions

No data available.

10.4 Conditions to avoid (e.g., static discharge, shock, or vibration)

No data available; not sensitive to shock or vibration.

10.5 Incompatible materials

Strong acids.

10.6 Hazardous decomposition products

Hazardous decomposition products may be formed under fire conditions - Carbon oxides, Barium oxide

11. TOXICOLOGICAL INFORMATION

11.1 Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact)

Most likely route of exposure is expected to be skin contact.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Acute dermal toxicity LD₅₀ >2000 mg/kg – Rat

Method: OECD Test Guideline 402

Not classified as hazardous for acute dermal toxicity according to GHS

Eyes - Rabbit

Result: No eye irritation - 1 h

(OECD Test Guideline 405)

Skin corrosion/irritation: Rabbit – no skin irritation.

Respiratory or skin sensitisation: No data available.

Specific target organ toxicity - single exposure: No data available.

Specific target organ toxicity - repeated exposure: No data available.

Aspiration hazard: No data available

11.3 Delayed and immediate effects and also chronic effects from short- and long-term exposure

When ingested, barium carbonate is converted to barium chloride in the stomach.

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).

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/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.

11.4 Numerical measures of toxicity (such as acute toxicity estimates)

When ingested, barium carbonate is converted to barium chloride in the stomach. The oral LD₅₀ for rats is about 400 mg/kg of barium chloride (equal to about 379 mg/kg of barium carbonate).

Inhalation toxicity - No data available.

11.5 Whether the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity (aquatic and terrestrial, where available)

Toxicity to fish LC₅₀ - *Gambusia affinis* (Mosquito fish) - 6,950 mg/l - 96 h

12.2 Persistence and degradability

No data available. 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.

12.3 Bioaccumulative potential

No data available. No appreciable bioconcentration is expected in the environment.

12.4 Mobility in soil

No data available.

12.5 Other adverse effects

No data available.



13. DISPOSAL CONSIDERATIONS

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 comply with local, state, and federal laws and regulations.

14. TRANSPORT INFORMATION

DOT HazMat proper shipping name.....: Not Regulated.
U.N./N.A. Number.....: None.
Technical Shipping Name.....: Barium Compound.
D.O.T. Transport Hazard Class.....: None.
Packing group
Product R.Q. (lbs).....: None.
D.O.T. Label.....: None.
D.O.T. Placard: None.
Environmental hazards: Not a Marine Pollutant
Freight Class Bulk.....: Inorganic Chemical.
Freight Class Package.....: Inorganic Chemical.
Product Label.....: Barium Carbonate.

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 as ACTIVE

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

NFPA Rating (National Fire Protection Association):

Health - 2 (Materials which on intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.)

Fire - 0 (Materials which are nonflammable).

Reactivity - 0 (Materials which in themselves are normally stable even under fire exposure conditions, and which are not reactive with water).

Special - NA

Reason for Issue..... : Review and reapproval.

Prepared by..... : Jerry A. Cook.

Title..... : Technical Director.

Approval Date..... : February 15, 2023

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Disclaimer: The information contained herein is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions; it does not represent any guarantee of the properties of the product. 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. The data on this sheet relates only to the specific material designated herein. Chemical Products Corporation assumes no legal responsibility for use or reliance upon these data.