

Changsha Hecom Chemical Co., Ltd.

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MATERIAL SAFETY DATA SHEET FOR BARIUM CARBONATE

1. **Synonyms:** Carbonic Acid, Barium Salt; Barium Carbonate (1:1)

CAS No. : 513-77-9

Molecular Weight: 197.34

Chemical Formula: BaCO₃

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Barium Carbonate	513-77-9	99 - 100%	Yes

3. Hazards Identification

Emergency Overview

DANGER! MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. AFFECTS MUSCLES (INCLUDING THE HEART), AND CENTRAL NERVOUS SYSTEM.

Health Rating: 3 - Severe (Life)

Flammability Rating: 0 - None

Reactivity Rating: 1 - Slight

Contact Rating: 3 - Severe (Corrosive)

Lab Protective Equip: GOGGLES; LAB COAT; PROPER GLOVES

Storage Color Code: Blue (Health)

Potential Health Effects

Inhalation:

May cause irritation of the respiratory tract. Excessive exposures may produce lung damage.

Ingestion:

May cause excessive salivation, severe abdominal pain, vomiting, violent diarrhea, muscle twitching progressing to muscular paralysis, gastroenteritis and increased blood pressure. Serious cases may result in convulsions and death.

Skin Contact:

May cause irritation with redness and pain.

Eye Contact:

May cause irritation, redness and pain.

Chronic Exposure:

Long term inhalation of dust may lead to deposition in lungs in sufficient quantities to produce baritosis - a benign pneumoconiosis. This produces a radiological picture. Symptoms and abnormal signs may not be present.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

Note to Physician:

Precipitate ingested soluble barium compounds as benign insoluble barium sulfate using an Epsom (MgSO₄) or a Glauber's (Na₂SO₄) salt solution. Dilute copiously with water or milk. Evacuate via nasogastric aspiration or induction of emesis. Monitor electrolytes, especially potassium (treat for hypokalemia), electrocardiogram and rhythm, and acid/base status. Induce brisk diuresis. Calcium gluconate may be helpful for muscle spasms. Provide oxygen by nasal cannula or mask and other supportive treatment for symptoms as clinically indicated.

5. Fire Fighting Measures**Fire:**

Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls /Personal Protection**Airborne Exposure Limits:**

For Soluble Barium Compounds:

OSHA Permissible Exposure Limit (PEL):

0.5 mg (Ba)/m³

ACGIH Threshold Limit Value (TLV):

0.5 mg (Ba)/m³ A4 - not classifiable as a human carcinogen

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a full facepiece particulate respirator (NIOSH type N100 filters) may be worn for up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. === Physical/Chemical Properties ===

Appearance: White powder.

Odor: Odorless.

Solubility: Almost insoluble in water.

Specific Gravity: 4.3

pH: No information found.

% Volatiles by volume @ 21C (70F): 0

Boiling Point: 1300C (2372F) Decomposes.

Melting Point: 811C (1492F)

Vapor Density (Air=1): No information found.

Vapor Pressure (mm Hg): 0 @ 20C (68F) Essentially

Evaporation Rate (BuAc=1): Not applicable.

10. === Stability and Reactivity Data ===

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

May produce oxides of carbon and the contained metal.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Bromine trifluoride, 2-furanpercarboxylic acid. It is acid soluble with release of carbon dioxide.

Conditions to Avoid:

Heat, dusting and incompatibles.

11. === Toxicological Information ===

Oral (Rat) LD50:418 mg/kg Investigated as a reproductive effector.

-----\Cancer Lists\-----

---NTP Carcinogen---

Ingredient Known Anticipated IARC Category

Barium Carbonate (513-77-9) No No None

12. === Ecological Information ===

Environmental Fate:

This material may bioaccumulate to some extent.

Environmental Toxicity:

No information found.

13. === Disposal Considerations ===

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. === MSDS Transport Information ===

Domestic (Land, D. O. T.)

Proper Shipping Name: BARIUM COMPOUND, N. O. S. (BARIUM CARBONATE)

Hazard Class: 6.1

UN/NA: UN1564

Packing Group: III

Information reported for product/size: 225LB

International (Water, I. M. O.)

Proper Shipping Name: BARIUM COMPOUND, N. O. S. (BARIUM CARBONATE)

Hazard Class: 6.1

UN/NA: UN1564

Packing Group: III

Information reported for product/size: 225LB

International (Air, I. C. A. O.)

Proper Shipping Name: BARIUM COMPOUND, N. O. S. (BARIUM CARBONATE)

Hazard Class: 6.1

UN/NA: UN1564

Packing Group: III

Information reported for product/size: 225LB

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient TSCA EC Japan Australia

Barium Carbonate (513-77-9) Yes Yes Yes Yes

-----\Chemical Inventory Status - Part 2\-----

--Canada--

Ingredient Korea DSL NDSL Phil.

Barium Carbonate (513-77-9) Yes Yes No Yes

-----\Federal, State & International Regulations - Part 1\-----

-SARA 302- -----SARA 313-----

Ingredient RQ TPQ List Chemical Catg.

Barium Carbonate (513-77-9) No No No Barium compo

-----\Federal, State & International Regulations - Part 2\-----

-RCRA- -TSCA-

Ingredient CERCLA 261.33 8(d)

Barium Carbonate (513-77-9) No No No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No

Reactivity: No (Pure / Solid)

16. Other Information

NFPA Ratings: Health: 2 Flammability: 0 Reactivity: 0

Label Hazard Warning:

DANGER! MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. AFFECTS MUSCLES (INCLUDING THE HEART), AND CENTRAL NERVOUS SYSTEM.

Label Precautions:

Avoid breathing dust.

Avoid contact with eyes, skin and clothing.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Label First Aid:

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. In all cases call a physician.

Product Use:

Laboratory Reagent.

Disclaimer:

Changsha Hecom Chemical Co., Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

Prepared by:

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