

MSDS Number: **B0348** * * * * * *Effective Date: 11/02/01* * * * * * *Supercedes: 11/17/99*



BARIUM CARBONATE

1. Product Identification

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

CAS No.: 513-77-9

Molecular Weight: 197.34

Chemical Formula: BaCO₃

Product Codes:

J.T. Baker: 0950

Mallinckrodt: 3736

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.

J.T. Baker SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 3 - Severe (Life)

Flammability Rating: 0 - None

Reactivity Rating: 1 - Slight

Contact Rating: 3 - Severe (Corrosive)

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; 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 (NaSO₄) 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 and 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

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.

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
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. 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

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-----\Chemical Inventory Status - Part 1\-----
Ingredient                                     TSCA  EC   Japan  Australia
-----
Barium Carbonate (513-77-9)                   Yes  Yes  Yes    Yes
-----\Chemical Inventory Status - Part 2\-----
Ingredient                                     --Canada--
Korea  DSL  NDSL  Phil.
-----
Barium Carbonate (513-77-9)                   Yes  Yes  No     Yes
-----\Federal, State & International Regulations - Part 1\-----
Ingredient                                     -SARA 302-  -SARA 313-
RQ     TPQ     List  Chemical Catg.
-----
Barium Carbonate (513-77-9)                   No  No   No     Barium compo
-----\Federal, State & International Regulations - Part 2\-----
Ingredient                                     CERCLA      -RCRA-      -TSCA-
                                     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)

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Australian Hazchem Code: 2Z

Poison Schedule: S6

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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.

Revision Information:

MSDS Section(s) changed since last revision of document include: 8.

Disclaimer:

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