

BARIUM SULFATE

**MSDS Material Safety Data Sheet**

**RCS Chemicals**

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**BARIUM SULFATE (Barytes Powder)**

**1. Product Identification**

**Synonyms:** barium salt; barytes; blanc fixe; barite  
**CAS No. :** 7727-43-7  
**Molecular Weight:** 233.39  
**Chemical Formula:** BaSO4  
**Product Codes:**  
J.T. Baker: 1030, 1040, 1041  
Mallinckrodt: 0991, 4518, 8821

**2. Composition/Information on Ingredients**

Ingredient	CAS No	Percent
Barium Sulfate	7727-43-7	97 – 100%

**3. Hazards Identification**

**Emergency Overview**

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

**SAF-T-DATA<sup>(tm)</sup> Ratings (Provided here for your convenience)**

Health Rating: 1 - Slight  
Flammability Rating: 0 - None  
Reactivity Rating: 1 - Slight  
Contact Rating: 1 - Slight  
Lab Protective Equip: GOGGLES; LAB COAT; PROPER GLOVES  
Storage Color Code: Green (General Storage)

**Potential Health Effects**

**Inhalation** : Not expected to be a health hazard.  
**Ingestion** : Not expected to be a health hazard.  
**Skin Contact** : No adverse effects expected.  
**Eye Contact** : No adverse effects expected but dust may cause mechanical irritation.

**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 even though symptoms and abnormal signs may not be present.

**Aggravation of Pre-existing Conditions** : No information found.

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#### 4. First Aid Measures

**Inhalation** : Remove to fresh air. Get medical attention for any breathing difficulty.  
**Ingestion** : Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.  
**Skin Contact** : Wash exposed area with soap and water. Get medical advice if irritation develops.  
**Eye Contact** : Wash thoroughly with running water. Get medical advice if irritation develops.

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#### 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.

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#### 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

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#### 7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. 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.

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#### 8. Exposure Controls/Personal Protection

<b>Airborne</b>				<b>Exposure</b>			<b>Limits:</b>
-OSHA		Permissible		Exposure		Limit	(PEL):
15	mg/m3	total	dust,	5	mg/m3	respirable	dust
-ACGIH		Threshold		Limit		Value	(TLV):
10				mg/m3			(TWA)
<b>Ventilation</b>							<b>System:</b>

In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if

conditions of use create discomfort to the worker, a local exhaust system should be considered.

**Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn 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 protective gloves and clean body-covering clothing.

**Eye Protection:**

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

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**9. Physical and Chemical Properties**

Appearance	:	Fine, white powder.
Odor	:	Odorless.
Solubility	:	Insoluble in water.
Specific Gravity	:	4.5 @ 15 (59F)
pH	:	5% in water is neutral to litmus.
% Volatiles by volume @ 21C (70F)	:	0
Boiling Point	:	1600C (2912F) Decomposes.
Melting Point	:	1580C (2876F)
Vapor Density (Air=1)	:	No information found.
Vapor Pressure (mm Hg)	:	No information found.
Evaporation Rate (BuAc=1)	:	No information found.

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**10. Stability and Reactivity**

Stability	:	Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products	:	Burning may produce sulfur oxides.
Hazardous Polymerization	:	Will not occur.
Incompatibilities	:	Aluminum, phosphorus.
Conditions to Avoid	:	Dusting and incompatibles.

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**11. Toxicological Information**

No LD50/LC50 information found relating to normal routes of occupational exposure.

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

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Barium Sulfate (7727-43-7)	No	No	None

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**12. Ecological Information**

**Environmental Fate** : This material may bioaccumulate to some extent.  
**Environmental Toxicity** : No information found.

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### 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. 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

Not regulated. (Non-hazardous for air, sea and road freight)

### 15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----  
Ingredient TSCA EC Japan Australia  
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Barium Sulfate (7727-43-7) Yes Yes Yes Yes

-----\Chemical Inventory Status - Part 2\-----  
--Canada--  
Ingredient Korea DSL NDSL Phil.  
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Barium Sulfate (7727-43-7) Yes Yes No Yes

-----\Federal, State & International Regulations - Part 1\-----  
-SARA 302- -SARA 313-  
Ingredient RQ TPQ List Chemical Catg.  
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Barium Sulfate (7727-43-7) No No No No

-----\Federal, State & International Regulations - Part 2\-----  
-RCRA- -TSCA-  
ingredient CERCLA 261.33 8(d)  
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Barium Sulfate (7727-43-7) No No No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No  
SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No  
Reactivity: No (Pure / Solid)

**Australian Hazchem Code:** None allocated.

**Poison Schedule:** None allocated.

#### 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.

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## 16. Other Information

**NFPA Ratings:** Health: 0 Flammability: 0 Reactivity: 0

**Label Hazard Warning :**

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

**Label Precautions :** None

**Label First Aid :** Not applicable

**Product Use :** Laboratory Reagent

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