



# Super Conductor Materials, Inc.

391 Spook Rock Industrial Park, Suffern, NY 10901 · 845.368.0240 · Fax 845.368.0250 · www.scm-inc.com

Chemtrec: (800) 424-9300

Poison Center: (800) 562-8236

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## SAFETY DATA SHEET

Identity: Barium Peroxide

Formula: BaO2

### SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

The information below is believed to be accurate and represents the best information available to Super Conductor Materials, Inc. However, SCM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

### SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 169.34

CAS #	OSHA PEL	ACGIH TLV	%
1304-29-6	0.5mg(Ba)/m3	0.5mg(Ba)/m3	100.0%

### SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A

Melting Point: 450.00 °C

Evaporation Rate: N/A

Solubility in water: Insoluble in water/soluble in dilute acids

Vapor Pressure (vs. air or mmHg):

Density: 4.96 g/cm<sup>3</sup>

Flash Point: N/A

*Appearance and odor:* White-gray heavy powder and pieces, no odor.

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

*Method Used:* Unknown

*Explosive Limits:* LEL: N/A

UEL: N/A

*Extinguishing Media:* Use suitable extinguishing agent for surrounding material and type of fire

*Special Fire Fighting Procedures:*

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.



*Unusual Fire and Explosion Hazards:*

- Strong oxidizing agent, which may ignite or accelerate combustion.
- Ignites when mixed with calcium-silicon alloys, powdered aluminum and magnesium, water + organic compounds.
- Ignites when heated to 265°C with selenium.
- Wood ignites with friction from the peroxide.
- Explodes on contact with acetic anhydride.

**SECTION V - REACTIVITY DATA**

*Stability:* Stable.

*Conditions to Avoid (instability):* None.

*Incompatibility:* Acetic anhydride, calcium-silicon alloy, hydrogen sulfide, hydroxylamine, metals, non-metal oxides, organic material + water, peroxyformic acid, propane, selenium and wood.

*Hazardous Decomposition or Byproducts:* Barium oxide, acetyl peroxide and hydrogen peroxide.

*Hazardous Polymerization:* Will not occur.

*Conditions to avoid (hazardous polymerization):* None.

**SECTION VI - HEALTH HAZARD DATA**

*Route of Entry:* Inhalation? Yes    Ingestion? Yes    Eyes? Yes    Skin? Yes    Other? No

To the best of our knowledge the chemical, physical and toxicological properties of barium peroxide have not been thoroughly investigated and recorded.

Barium compounds: The barium salts, such as the chloride and sulfide, are poisonous when ingested. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Inorganic peroxides have variable toxicity. They may cause injury on contact with skin or mucous membranes. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

*Signs and Symptoms of Overexposure:*

*Inhalation:* Acute barium poisoning may cause: a slow, hard pulse and elevated blood pressure; excessive salivation; vomiting; colic; violent diarrhea; convulsive tremors; muscular paralysis and paralysis of the central nervous system; strong vasoconstriction, due to the direct barium stimulation of arterial muscles, raises blood pressure. High blood pressure can cause the stomach, intestines and kidneys to hemorrhage. Chronic barium poisoning is similar but less severe than acute barium poisoning.

*Ingestion:* See inhalation for acute and chronic barium poisoning.

*Skin:* May cause redness, itching and burning.

*Eye:* May cause redness, itching and watering.

*Health Hazards (Acute and Chronic):*

*Inhalation:*

Acute: May cause injury to the mucous membrane, irritation of the nose and eyes, muscular twitching, fatigue, abdominal cramps, cold sweat and acute barium poisoning.

Chronic: May cause chronic barium poisoning.



*Ingestion:*

Acute: May cause a disagreeable taste, muscular twitching, nausea, vomiting, stomach pain, diarrhea, anxiety, slow heart rate, convulsions, bluish face and lips, paralysis of lower limb spreading to upper limbs, difficulty in breathing, death by respiratory failure or paralysis. May cause acute barium poisoning.  
Chronic: May cause chronic barium poisoning.

*Skin:*

Acute: May cause irritation.  
Chronic: Repeated or prolonged contact with moist skin may cause ulcerations.

*Eye:*

Acute: May cause irritation and inflammation.  
Chronic: No chronic health effects recorded.

*Target Organs:* May affect upper respiratory system, liver, kidneys, blood, skin and eyes.  
*Carcinogenicity:* NTP? No IARC Monographs? No OSHA Regulated? No  
*Medical Conditions Aggravated by Exposure:* Pre-existing respiratory disorders.

*Emergency and First Aid Procedures:*

- Inhalation:* Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention
- Ingestion:* Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person
- Skin:* Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist
- Eye:* Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

*Steps to be taken in case material is released or spilled:*

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

*Waste disposal method:*

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

*Hazard Label Information:*

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

**SECTION VIII - CONTROL MEASURES**

*Protective Equipment Summary (Hazard Label Information):*

NIOSH approved respirator, impervious gloves, vented glasses, and clothes to prevent skin contact.



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*Ventilation:*

Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General): Not recommended.

*Work/Hygienic/Maintenance Practices:*

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established
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