Material Safety Data Sheet: Barium Titanate Page 1of 2

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Section 1, Product Identification

Trade Name: Barium Titanate
Synonyms: BTO
Chemical Nature: Metal Titanate
Formula: BaTiO3

OSHA PEL: 0.5 mg/m^3 (as Ba)
ACGIH TLV: 0.5 mg/m^3 (as Ba)

HMIS Ratings: Health 2 Flammability 0 Reactivity 0

Section 2: Composition/Ingredients

INGREGIENT	CAS#	Percent
Barium Titanate	12047-27-7	100

Section 3: Physical/Chemical Data

Boiling Point: No Data
Specific Gravity (H2O=1):5.95
Vapor Pressure (mm Hg): N/A
Vapor Density (Air = 1): N/A
% Volatile by Volume: N/A
Evaporation Rate (Butyl Acetate=1): 0
Solubility in Water: Insoluble
Appearance and Odor: white appearance with no odor

Section 4: Fire and Explosion Hazard Data

Flash Point: N/A Flammable Limits: Nonflammable LEL: N/A UEL: N/A
Extinguishing Media: Nonflammable. This material is not combustible nor will it support combustion.
Special Fire Fighting Procedures: Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.
Unusual Fire and Explosion Hazards: Non-flammable

Section 5: Reactivity Data

Stability: Stable
Conditions to Avoid: N/A
Incompatibility (Conditions to Avoid): Acids
Hazardous Polymerization: Will not occur
Hazardous Decomposition Products: Thermal and Others: Ba fumes upon thermal decomposition

Section 6: Health Hazard Data

Effects of Exposure:

To the best of our knowledge, the chemical, physical and toxicological properties of barium titanate have been thoroughly investigated and reported. Barium poisoning is virtually unknown in industry, although the potential exists when the soluble forms are used. When ingested or given orally, the soluble, ionized barium compounds exert a profound effect on all muscles and especially smooth muscles. The heart rate is slowed and may stop in systole. Other effects are increased intestinal peristalsis, vascular construction, bladder contraction, and increased voluntary muscletension. The toxicity of barium titanate is unknown. Animal experiments show low toxicity**.**

Titanium compounds are considered physiologically inert. There are no reported cases where titanium compounds have caused intoxication.

Routes of Entry (Under Normal Conditions of Use):
Inhalation – Yes Skin – Yes Ingestion – Yes

Health Hazards (Acute and Chronic):
Acute Effects:

Inhalation: Barium compounds may cause local irritation to the nose, throat, and mucous membranes.
Ingestion: No data
Skin: A moderate irritant to the skin
Eye: A moderate irritant to the eyes

Chronic Effects:
Inhalation: Long term exposure to Barium compounds can lead to baritosis, a benign pneumoconiosis.
Ingestion: No data
Skin: Prolonged skin contact may cause dermatitis.
Eye: No data

Carcinogenicity: None
NTP – No IARC Monograph – No OSHA Regulated – No

Medical Conditions generally Aggravated By Exposure: Inhalation may aggravate pre-existing disorders.

Emergency and First Aid Procedures: Treat symptomatically
Inhalation: Remove victim to fresh air. Seek medical attention.
Ingestion: DO NOT induce vomiting. Seek medical attention immediately
Skin: Wash affected area with soap and water. Seek medical attention.
Eyes: Immediately flush eyes with lukewarm water for at least 15 minutes. Seek emergency medical attention.

Section 7: Precautions for Safe Handling and Use
Steps to be Taken in Case Material is Released or Spilled: try to keep material dry and away from acid. Sweep or scoop up spilled material. Handle with adequate ventilation. For nuisance dust, see OSHA 29 DFR 1910-94
Ventilation: See CFR 1910-1000 (air contaminates) Respirators may be a requirement.
Waste Disposal Method. Dispose of in accordance with Local, State, and Federal regulations.

Section 8: Control Measures
Respiratory Protection: Wear a NIOSH-approved is required if TLV and PEL exposure limits are exceeded.
Ventilation: Use local exhaust to maintain concentrations at or below PEL, TLV. General exhaust is recommended.
Protective Gloves: Protective gloves required. Eye Protection: Safety glasses required
Other Protective Clothing or Equipment: None necessary
Work/Hygienic Practices: No special work/hygienic practices required under normal conditions of use Do not blow dust off clothing or skin with compressed air. Wash thoroughly before eating and smoking. Maintain eye wash, safety drench shower. Use good housekeeping and sanitation practices.