

Current Version: 2.0
Revision Date: Sep 5, 2012

Material Safety Data Sheet

Identity: Barium Titanate

Formula: BaTiO₃

SECTION I - GENERAL INFORMATION

Manufacturer: [Stanford Advanced Materials](#) (SAM)

The information below is believed to be accurate and represents the best information available to SAM. However, SAM 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

Chemical Family: Metal Titanate

Hazardous Components	CAS #	ACGIH TLV	OSHA PEL	%
Barium Titanate	12047-27-7	.5mm/m ³	0.5mmg/m ³ As Ba	99.9
Barium Oxide	1304-28-5	.5mg/m ³	0.5mg/m ³ As BaO	
Titanium Dioxide	13463-67-7	15mg/m ³	10mg/m ³ As TiO ₂	

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: NA

Vapor Pressure: NA

Melting Point: 1654 °C

Density: 5.95 gm/cc

Evaporation Rate: NA

% Volatile: NA

Solubility in water: insoluble

Appearance and odor: White powder, pieces or pressed parts. Odorless

Other: This material has inert or nuisance dust limits of 5mg/m³

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Flash Point: NA *Autoignition*
Temp: No data *Flammable*
Limits: Non-Flammable
Extinguishing Media: This material is non-flammable. It is not combustible, nor will it support combustion.
Unusual Fire and Explosion Hazards: None known

SECTION V - REACTIVITY DATA

Stability: Stable
Conditions to Avoid (stability): None known.
Incompatibility-Materials to avoid: Strong Acids
Hazardous Decomposition or Byproducts: Ba fumes upon thermal decomposition.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: None known.

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes

Effects of overexposure:

Inhalation: May cause irritation to the nose, and mucous membranes.
Dermal/Eye Contact: Moderate irritant to the eyes and skin. May cause dermatitis.

Emergency and First Aid Procedures:

Inhalation: Remove victim to fresh air, keep warm and quiet, give oxygen if breathing is difficult and seek medical attention if symptoms persist.
Dermal/Eye Contact: Moderate irritant to the eyes and skin. May cause dermatitis.

Emergency and First Aid Procedures:

Inhalation: Remove victim to fresh air; keep warm and quiet; give oxygen if breathing is difficult and seek medical attention if symptoms persist.

Ingestion:

Give 1 – 2 glasses of milk or water and induce vomiting; seek medical attention if symptoms persist.

Skin:

Remove contaminated clothing; brush material off skin; wash affected are with mild soap and water, seek medical attention if symptoms persist.

Eye:

Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

SECTION VII- PRECAUTIONS FOR SAFE HANDLING AND USE

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

Wearing full protective equipment, cover with dry sand or vermiculite. Mix well and carefully transfer to a container.

Waste Disposal method:

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

Hazard Label Information:

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

SECTION VIII – CONTROL MEASURES

Protective Equipment Summary – Hazard Label Information

NIOSH/MSHA approved respirator, Impervious gloves, safety glasses, clothes to prevent skin contact.

Respiratory Protection (Specify type) – NIOSH – approved dust respirator

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General) Recommended

Protective Gloves: Rubber gloves.

Eye Protection: Safety Glasses

Other Protective Clothing on Equipment: Protective gear suitable to prevent contamination.

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 and smoking. Do not blow dust off clothing or skin with compressed air.