

SAFETY DATA SHEET

Date Accessed: 25/08/2023

Date Revised: 03/11/2022

SECTION 1. IDENTIFICATION

Product Name: BST (Barium Strontium Titanate)

CAS #: 12430-73-8

Relevant identified uses of the substance: Scientific research and development

Supplier details:

Stanford Advanced Materials

E-mail: sales@samaterials.com

Tel: (949) 407-8904

Address: 23661 Birtcher Dr., Lake Forest, CA 92630 U.S.A.

SECTION 2. HAZARDS IDENTIFICATION

Statements of Hazard: Irritant

Acute Health Hazard: Irritant to eyes, skin, mucous membranes and respiratory system. May be harmful by ingestion, inhalation or skin absorption.

Chronic Health Hazard: Not Available

HMIS Rating: H:0 F:0 P:0

NFPA Rating: H:0 F:0 R:0

To the best of our knowledge, the toxicological properties of this chemical have not been thoroughly investigated. Use appropriate procedures and precautions to prevent or minimize exposure.

Pictogram

Signal Word: Warning

Hazard Statement(s): H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.H332 Harmful if inhaled.

H335 May cause respiratory irritation.

Precautionary Statement(s): P261 Avoid breathing dust/ fume/ gas/ mist/
vapors/ spray.

P280 Wear protective gloves/protective clothing/eye
protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON
CENTER or doctor/physician if you feel unwell.

P302+P352 IF ON SKIN: Wash with plenty of soap
and water.

P304+P340 IF INHALED: Remove victim to fresh air
and keep at rest in a position comfortable for
breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously
with water for several minutes. Remove contact
lenses, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical
advice/ attention.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Barium strontium titanate

Synonyms: BST

CAS Number: 12430-73-8

MDL Number: MFCD05865190

EINECS Number: 235-659-5

Beilstein Registry Number: Not Available

Molecular Formula: $(\text{BaTiO}_3)(\text{SrTiO}_3)$

Molecular Weight: 416.68

Content: 99+%

Notes: Not Available

SECTION 4. FIRST AID MEASURES

Eye Contact: Flush eyes with large amounts of water for fifteen minutes. Separate eyelids with fingers. If irritation persists, seek medical attention.

Skin Contact: Wash skin with soap and water. If irritation persists, seek medical attention.

Ingestion: Do not induce vomiting. Seek medical attention.

Inhalation: Move to a fresh air environment. Contact a physician if breathing becomes difficult.

SECTION 5. FIREFIGHTING MEASURES

Flash Point: Not Available

Explosion Limits: Lower: Not Available

Upper: Not Available

Autoignition: Not Available

Extinguishing Media: Carbon dioxide, dry chemical powder, alcoholresistantfoam or water spray.

Protective Equipment: Wear self-contained respirator and fully protective impervious suit.

Specific Hazards: May emit hazardous fumes under fire conditions.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection: Wear a self-contained breathing apparatus, rubber boots and gloves, and disposable coveralls. Dispose of coveralls after use.

Keep unprotected persons away.

Environmental Protection: Keep spills out of sewers and bodies of water. Dike and contain the spill with inert material. Absorb on sand, vermiculite or diatomite. Transfer material to a container for disposal or recovery. Ventilate area and wash spill site after material pickup is complete.

SECTION 7. HANDLING AND STORAGE

Handling: Avoid breathing dust, vapor, mist or gas. Avoid contact with skin and eyes. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Open and handle container with care. Keep ignition sources away.

Storage: Store in a tightly closed container in a dry, wellventilated place.

Sensitivities: Not Available

Storage Temperature: 15-30 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Wear appropriate protective eyeglass or chemical safety goggles. Make sure that there is an eyewash facility in your vicinity.

Skin: Wear impervious gloves and protective clothing.

Respiratory: Use a NIOSH approved respirator when exposure limits are exceeded or if irritation or other symptoms are experienced.

Exposure Limits: Country Source Type Value

USA ACGIH TWA Not Available

USA OSHA STEL Not Available

USA OSHA PEL Not Available

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Powder or solid

Odor: Not Available

Melting Point: Not Available Boiling Point: Not Available

pH Value: Not Available

Density: 4.91 g/cm³

Refractive Index, n₂₀

D: Not Available

Viscosity: Not Available

Solubility in Water: Not Available

Vapor Pressure: Not Available

Vapor Density(Air=1): Not Available

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures.

Incompatibility: Strong oxidizing agents.

Conditions to Avoid: Heat, Flame, Sparks, other ignition sources

Hazardous Decomposition Products: Barium oxides, Strontium oxides, Titanium oxides

SECTION 11. TOXICOLOGICAL INFORMATION

RTECS Reference: Not Available

Target Organs: Not Available

Toxicity Data: Not Available

Skin corrosion/irritation: Not Available

Serious eye damage/irritation: Not Available

Carcinogenicity: Not Available

SECTION 12. ECOLOGICAL INFORMATION

Not Available

SECTION 13. DISPOSAL CONSIDERATIONS

Contact a licensed professional waste disposal service. Dispose in a manner consistent with federal, state and local environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT: Not Regulated

IATA: Not Regulated

IMDG: Not Regulated

SECTION 15. REGULATORY INFORMATION

United States: Toxic Substance Control Act (TSCA): Listed

Superfund Amendments and Reauthorization Act (SARA 302): Not listed

Superfund Amendments and Reauthorization Act (SARA 311/312): Not listed

Superfund Amendments and Reauthorization Act (SARA 313): Not listed

European Union:

European Inventory of Existing Chemical Substances (EINECS): No. 235-659-5

Hazard Codes: Xi

Risk Statements: 36/37/38

Safety Statements: 26

Canada

Canadian Domestic Substances List (DSL): Not listed

Canadian Non-Domestic Substances List (NDSL): Listed

SECTION 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.