

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (3N) 99.9% Barium Lanthanum Tin Oxide Sputtering Target

Product Code: LABA-SNO-03-ST

CAS Number: N/A

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements 10884 Weyburn Ave. Los Angeles, CA 90024 Tel: +1 310-208-0551

Tel: +1 310-208-0551 Fax: +1 310-208-0351

Emergency telephone number:

+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Statement of Hazard: Irritant, Respiratory irritant, Toxic Acute Health Hazard: Irritant to eyes, skin, mucous membranes and respiratory system. May be toxic by ingestion and inhalation, harmful by skin absorption. Chronic Health Hazard: Not Available HMIS Rating: H - 3, F - 0, P - 0 NFPA Rating: H - 3, F - 0, P - 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: Danger Hazard Statement(s): H301 Toxic if swallowed. H312 Harmful in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H331 Toxic if inhaled. H335 May cause respiratory irritation. Precautionary Statement(s): P261 Avoid breathing dust/fume/gas/mist/vapors/spray. P264 Wash skin thoroughly after handling. P270 Do not eat, drink, or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. 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. P403+P233 Store in a well-ventilated place. Keep container tightly closed.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Lanthanum Barium Tin Oxide CAS Number: N/A

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 (°C): Not Available Explosion Limits: Not Available Auto Ignition Temperature (°C): Not Available Extinguishing Media: Carbon dioxide, dry chemical powder, alcohol-resistant foam, 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. Remove from ignition sources if safe to do so. Follow emergency response plan and contact proper authorities if needed. 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 and Storage: 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. Store in a tightly closed container in a dry, well-ventilated place. Sensitivities: Not Available Storage Temperature (°C): 15 to 30

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use product in a well ventilated area or under a fume hood. Use proper lab equipment while handling this product. Keep away from incompatible materials for possible risk of hazardous reaction. Eye Protection: Wear appropriate protective eyeglass or chemical safety goggles. Make sure that there is an eyewash station in your vicinity. Skin Protection: Wear impervious gloves and protective clothing. Respiratory Protection: Use a NIOSH approved respirator when exposure limits are exceeded or if irritation or other symptoms are experienced.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Solid Odor: Not determined Odor Threshold: Not determined Flash Point (°C): Not determined Auto Ignition Temperature (°C): Not determined UEL % by Volume: Not determined Melting Point (°C): Not determined Boiling Point (°C): Not determined

Evaporation Rate: Not determined pH Value: Not determined Density (g/cm³): 7.6 Refractive Index: Not determined Viscosity: Not determined Solubility in Water: Not determined Solubility in Other: Not determined Vapor Pressure (mmHg): Not determined Vapor Density (Air=1): Not determined

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures. Incompatibility: Strong oxidizing agents Reactivity: Product may react with incompatible materials to release other hazardous substances. Conditions to Avoid: Heat, flame, sparks, other ignition sources. Hazardous Decomposition Products: Barium oxides, Tin oxides

SECTION 11. TOXICOLOGICAL INFORMATION

RTECS Reference: Not Available Target Organs: Not Available Toxicity Data: Not Available Carcinogenicity: National Toxicology Program (NTP) listed: Not Available International Agency for Research on Cancer (IARC) listed: Not Available Potential Symptoms: Not Available

SECTION 12. ECOLOGICAL INFORMATION

Toxicity: 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 Shipping Name: Barium Compound, N.O.S. DOT UN Number: UN1564 DOT Hazard Class: Class 6.1 DOT Packing Group: PGIII IMDG Shipping Name: Barium Compound, N.O.S IMDG UN Number: UN1564 IMDG Hazard Class: Class 6.1 IMDG Packing Group: PGIII Marine Pollutant: No IATA: Barium Compound, N.O.S. IATA UN Number: UN1564 IATA Hazard Class: Class 6.1 IATA Packing Group: PGIII

SECTION 15. REGULATORY INFORMATION

United States Toxic Substance Control Act (TSCA) listed: Yes Superfund Amendments and Reauthorization Act (SARA 302) listed: No Superfund Amendments and Reauthorization Act (SARA 311/312) listed: No Superfund Amendments and Reauthorization Act (SARA 313) listed: No European Union European Inventory of Existing Chemical Substances (EINECS): 234-545-2 Canada Canadian Domestic Substances List (DSL) listed: Yes Canadian Non-Domestic Substances List (NDSL) listed: Yes

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

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