

SAFETY DATA SHEET

Date Printed: 05/16/2024 Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: (4N) 99.99% Fluorine-Doped Tin Oxide Sputtering Target

Product Code: SNO-FD-04-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 Fax: +1 310-208-0351 Emergency telephone number: +1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture Not a hazardous substance or mixture. GHS Label elements, including precautionary statements Not a hazardous substance or mixture. Hazards not otherwise classified (HNOC) or not covered by GHS-none

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures Synonyms: FTO glass, TEC 7 Hazardous components Tin(IV) oxide CAS-No.18282-10-5 EC-No. 242-159-0 Concentration: >=90-<=100%

SECTION 4. FIRST AID MEASURES

Description of first aid measures General advice Move out of dangerous area. If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. In case of skin contact Wash off with soap and plenty of water. In case of eye contact Flush eyes with water as a precaution. If swallowed Never give anything by mouth to an unconscious person. Rinse mouth with water. Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11 Indication of any immediate medical attention and special treatment needed No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Special hazards arising from the substance or mixture No data available Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary. Further information No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Avoid dust formation. Avoid breathing Vapors, mist or gas. For personal protection see section 8. Environmental precautions Do not let product enter drains. Methods and materials for containment and cleaning up Sweep up and shovel. Keep in suitable, closed containers for disposal. Reference to other sections For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling Provide appropriate exhaust ventilation at places where dust is formed.Normal measures for preventive fire protection. For precautions see section 2.2. Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place. Specific end use(s)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls Appropriate engineering controls General industrial hygiene practice. Personal protective equipment Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. **Body Protection** Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control of environmental exposure Do not let product enter drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties Appearance Form: Glass Odor No data available Odor Threshold No data available pН No data available Melting point/freezing point No data available Initial boiling point and boiling range No data available Flash point No data available Evaporation rate No data available Flammability (solid, gas) No data available Upper/lower flammability or explosive limits

No data available Vapor pressure No data available Vapor density No data available Relative density No data available Water solubility No data available Partition coefficient: n-octanol/water No data available Auto-ignition temperature No data available Decomposition temperature No data available Viscosity No data available Explosive properties No data available Oxidizing properties No data available Other safety information No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity No data available Chemical stability Stable under recommended storage conditions. Possibility of hazardous reactions No data available Conditions to avoid No data available Incompatible materials No data available Hazardous decomposition products Hazardous decomposition products formed under fire conditions.-Tin/tin oxides Other decomposition products-No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity Skin corrosion/irritation Serious eye damage/eye irritation Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP:

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA:

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Specific target organ toxicity -single exposure

Specific target organ toxicity -repeated exposure

Aspiration hazard

Additional Information

RTECS: Not available

Stomach-Irregularities-Based on Human Evidence

Stomach-Irregularities-Based on Human Evidence

Stomach-Irregularities-Based on Human Evidence (Tin difluoride)

SECTION 12. ECOLOGICAL INFORMATION

Toxicity Persistence and degradability Bioaccumulative potential Mobility in soil Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted Other adverse effects

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed disposal company. Contaminated packaging Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US) Not dangerous goods IMDG Not dangerous goods IATA Not dangerous goods

SECTION 15. REGULATORY INFORMATION

SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. **SARA 313** Components This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III. Section 313. SARA 311/312 Hazards Chronic Health Hazard Massachusetts Right To Know Components Tin(IV) oxide CAS-No. 18282-10-5 Revision Date 2007-03-01 Pennsylvania Right To Know Components Tin(IV) oxide CAS-No. 18282-10-5 Revision Date 2007-03-01 New Jersey Right To Know Components Tin(IV) oxide CAS-No. 18282-10-5 **Revision Date** 2007-03-01 California Prop. 65 Components This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.