

SAFETY DATA SHEET

Date Printed: 05/11/2024 Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: (3N) 99.9% Sodium Aluminate Sputtering Target

Product Code: NA-ALO-03-ST

CAS Number: 1302-42-7

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 in accordance with 29 CFR 1910 (OSHA HCS) GHS05 Corrosion Skin Corr. 1B H314 Causes severe skin burns and eye damage. Eye Dam. 1 H318 Causes serious eye damage. Hazards not otherwise classified No data available GHS label elements GHS label elements, including precautionary statements Hazard pictograms

Signal word Danger Hazard statements H314 Causes severe skin burns and eye damage. Precautionary statements P260 Do not breathe dust/fume/gas/mist/vapors/spray. P280

Wear protective gloves/protective clothing/eye protection/face protection. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 Immediately call a POISON CENTER/doctor. P363 Wash contaminated clothing before reuse. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. WHMIS classification D2B - Toxic material causing other toxic effects E - Corrosive material Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) Health (acute effects) = 3Flammability = 0Physical Hazard = 1 Other hazards Results of PBT and vPvB assessment PBT: N/A vPvB: N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances CAS No. / Substance Name: 1302-42-7 Sodium aluminum oxide Identification number(s): EC number: 215-100-1

SECTION 4. FIRST AID MEASURES

Description of first aid measures General information Immediately remove any clothing soiled by the product. If inhaled: Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm. Seek immediate medical advice. In case of skin contact: Immediately wash with soap and water; rinse thoroughly. Seek immediate medical advice. In case of eye contact: Rinse opened eye for several minutes under running water. Consult a physician. If swallowed: Seek medical treatment. Information for doctor Most important symptoms and effects, both acute and delayed Causes severe skin burns. Causes serious eye damage. Indication of any immediate medical attention and special treatment needed No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media Suitable extinguishing agents Product is not flammable. Use fire-fighting measures that suit the surrounding fire. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Sodium oxide Aluminum oxide Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow material to be released to the environment without official permits. Methods and materials for containment and cleanup: Use neutralizing agent. Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation. Prevention of secondary hazards: No special measures required. Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Handling Precautions for safe handling Handle under dry protective gas. Handle under protective gas.

Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Information about protection against explosions and fires: The product is not flammable Conditions for safe storage, including any incompatibilities Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from water/moisture. Do not store together with acids. Store away from oxidizing agents. Further information about storage conditions: Store under dry inert gas. This product is hygroscopic. Keep container tightly sealed. Store in cool, dry conditions in well-sealed containers. Protect from humidity and water. Specific end use(s) No data available

Additional information about design of technical systems:

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. **Control parameters** Components with limit values that require monitoring at the workplace: None. Additional information: No data Exposure controls Personal protective equipment Follow typical protective and hygienic practices for handling chemicals. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Recommended filter device for short term use: Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards. Protection of hands: Impervious gloves Inspect gloves prior to use. Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer. Material of gloves Nitrile rubber, NBR Penetration time of glove material (in minutes)

480 Glove thickness 0.11 mm Eye protection: Tightly sealed goggles Full face protection Body protection: Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties Appearance: Form: Crystalline Odor: Odorless Odor threshold: No data available. pH: N/A Melting point/Melting range: No data available Boiling point/Boiling range: No data available Sublimation temperature / start: No data available Flash point: N/A Flammability (solid, gas) No data available. Ignition temperature: No data available Decomposition temperature: No data available Autoignition: No data available. Danger of explosion: Product does not present an explosion hazard. **Explosion limits:** Lower: No data available Upper: No data available Vapor pressure: N/A Density at 20 °C (68 °F): 1.52 g/cm³ (12.684 lbs/gal) Relative density No data available. Vapor density N/A Evaporation rate N/A Solubility in Water (H₂O): Soluble Partition coefficient (n-octanol/water): No data available. Viscosity: Dynamic: N/A Kinematic: N/A Other information No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity No data available Chemical stability Stable under recommended storage conditions. Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Possibility of hazardous reactions Reacts with strong oxidizing agents Conditions to avoid No data available Incompatible materials: Acids Oxidizing agents Water/moisture Hazardous decomposition products: Sodium oxide Aluminum oxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity: Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach. LD/LC50 values that are relevant for classification: No data Skin irritation or corrosion: Causes severe skin burns. Eye irritation or corrosion: Causes serious eye damage. Sensitization: No sensitizing effects known. Germ cell mutagenicity: No effects known. Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Aspiration hazard: No effects known. Subacute to chronic toxicity: No effects known. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. Carcinogenic categories OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity Aquatic toxicity: No data available Persistence and degradability No data available **Bioaccumulative potential** No data available Mobility in soil No data available Additional ecological information: Do not allow material to be released to the environment without official permits. Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems. Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: N/A vPvB: N/A Other adverse effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods Recommendation Consult official regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14. TRANSPORT INFORMATION

UN-Number DOT, IATA UN2812 UN proper shipping name DOT, IATA Sodium aluminate, solid Transport hazard class(es) DOT Class 8 Corrosive substances. Label 8 Class 8 (C6) Corrosive substances IMDG Class 8 Corrosive substances. IATA Class 8 Corrosive substances. Label 8 Packing group DOT. IATA ш Environmental hazards: N/A Special precautions for user Warning: Corrosive substances Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A Transport/Additional information: DOT Marine Pollutant (DOT): No UN "Model Regulation": 8

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture GHS GHS label elements, including precautionary statements Hazard pictograms GHS05 Signal word Danger Hazard statements H314 Causes severe skin burns and eye damage. Precautionary statements P260 Do not breathe dust/fume/gas/mist/vapors/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 Immediately call a POISON CENTER/doctor. P363 Wash contaminated clothing before reuse. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. National regulations All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. All components of this product are listed on the Canadian Domestic Substances List (DSL). SARA Section 313 (specific toxic chemical listings) Substance is not listed. California Proposition 65 Prop 65 - Chemicals known to cause cancer Substance is not listed. Prop 65 - Developmental toxicity Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Information about limitation of use: For use only by technically qualified individuals. Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed. Substance is not listed. Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.