

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (4N) 99.99% Aluminum Tungstate

Product Code: AL-W-04

CAS Number: 15123-82-7

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 Classification according to Regulation (EC) No 1272/2008 GHS07 Skin Irrit. 2 H315 Causes skin irritation. Eye Irrit. 2 H319 Causes serious eye irritation. STOT SE 3 H335 May cause respiratory irritation. Classification according to Directive 67/548/EEC or Directive 1999/45/EC Xi: Irritant R36/37/38: Irritating to eyes, respiratory system and skin. Information concerning particular hazards for human and environment: Not applicable Other hazards that do not result in classification No information known. Label elements Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labelled according to the CLP regulation. Hazard pictograms



GHS07 Signal word Warning Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances CAS# Designation: 15123-82-7 Aluminum tungsten oxide

SECTION 4. FIRST AID MEASURES

Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. Seek immediate medical advice. After skin contact Instantly wash with water and soap and rinse thoroughly. Seek immediate medical advice. After eye contact Rinse opened eve for several minutes under running water. Then consult doctor. After swallowing Seek medical treatment. Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media Suitable extinguishing agents CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Metal oxide Advice for firefighters Protective equipment: Wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow material to be released to the environment without proper governmental permits. Methods and material for containment and cleaning up: 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 information on disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace. Information about protection against explosions and fires: No information known. Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and containers: No special requirements. Information about storage in one common storage facility: Store away from oxidising agents. Store away from halogens. Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Specific end use(s) No further relevant information available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls Personal protective equipment General protective and hygienic measures The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. Breathing equipment: Use breathing protection with high concentrations. Protection of hands: Check protective gloves prior to each use for their proper condition. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Material of gloves Impervious gloves Eye protection: Safety glasses Face protection Body protection: Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties **General Information** Appearance: Form: Powder Colour: Dark blue Smell: Odourless Odour threshold: Not determined. pH-value: Not applicable. Change in condition Melting point/Melting range: Not determined Boiling point/Boiling range: Not determined Sublimation temperature / start: Not determined Flash point: Not applicable Inflammability (solid, gaseous) Not determined. Ignition temperature: Not determined Decomposition temperature: Not determined Self-inflammability: Not determined. Danger of explosion: Product is not explosive. Critical values for explosion: Lower: Not determined Upper: Not determined Steam pressure: Not applicable. Density

Not determined Relative density Not determined. Vapour density Not applicable. Evaporation rate Not applicable. Solubility in / Miscibility with Water: Not determined Partition coefficient (n-octanol/water): Not determined. Viscosity: dynamic: Not applicable. kinematic: Not applicable. Other information No further relevant information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity No information known. Chemical stability Stable under recommended storage conditions. Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications. Possibility of hazardous reactions No dangerous reactions known Conditions to avoid No further relevant information available. Incompatible materials: Oxidising agents Halogens Hazardous decomposition products: Metal oxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity: No effects known. LD/LC50 values that are relevant for classification: No data Skin irritation or corrosion: Causes skin irritation. Eye irritation or corrosion: Causes serious eye irritation. Sensitization: No sensitizing effect 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: May cause respiratory irritation. 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.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities to reach ground water, water course or sewage svstem. Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Other adverse effects No further relevant information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods Recommendation Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number ADR. IMDG. IATA None UN proper shipping name ADR, IMDG, IATA None Transport hazard class(es) ADR, IMDG, IATA Class None Packing group ADR, IMDG, IATA None Environmental hazards: Not applicable. Special precautions for user Not applicable. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. Transport/Additional information: Not dangerous according to the above specifications.

SECTION 15. REGULATORY INFORMATION

National regulations Information about limitation of use: Employment restrictions concerning young persons must be observed. For use only by technically qualified individuals. Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water. Other regulations, limitations and prohibitive regulations ELINCS (European List of Notified Chemical Substances) Substance is not listed. 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.