SAFETY DATA SHEET

Date Printed: 03/28/2024
Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Niobium Nitride Sputtering Target

Product Code: NB-N-05-ST

CAS Number: 24621-21-4

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

For additional information on toxicity, please refer to Section 11.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

NIOBIUM NITRIDE
CAS # 24621-21-4
Formula: NbN
Sara 313: No

SECTION 4. FIRST AID MEASURES

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.
INHALATION EXPOSURE
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.
EYE EXPOSURE
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

SECTION 5. FIREFIGHTING MEASURES

FLASH POINT
N/A
AUTOIGNITION TEMP
N/A
FLAMMABILITY
N/A
EXTINGUISHING MEDIA
Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.
FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.
METHODS FOR CLEANING UP
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

SECTION 7. HANDLING AND STORAGE

HANDLING
User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
STORAGE
Suitable: Keep tightly closed. Store in a cool dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.
PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.
GENERAL HYGIENE MEASURES
Wash contaminated clothing before reuse. Wash thoroughly after handling

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Molecular Weight 106,9100 AMU
pH N/A
BP/BP Range N/A
MP/MP Range N/A
Freezing Point N/A
Vapor Pressure N/A
Vapor Density N/A
Saturated Vapor Conc. N/A
SG/Density 8,4000
g/cm3
Bulk Density N/A
Odor Threshold N/A
Volatile% N/A
VOC Content N/A
Water Content N/A
Solvent Content N/A
Evaporation Rate N/A
Viscosity N/A
Surface Tension N/A
Partition Coefficient N/A
Decomposition Temp. N/A
Flash Point N/A
Explosion Limits N/A
Flammability N/A
Autoignition Temp N/A
Refractive Index N/A
Optical Rotation N/A
Miscellaneous Data N/A
Solubility N/A
N/A = not available

SECTION 10. STABILITY AND REACTIVITY

STABILITY
Materials to Avoid: Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.
Eye Contact: May cause eye irritation.
Multiple Routes: May be harmful by inhalation, ingestion, or skin absorption.
SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION

No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT
Proper Shipping Name: None
Non-Hazardous for Transport:
This substance is considered to be non-hazardous for transport.
IATA
Non-Hazardous for Air Transport:
Non-hazardous for air transport.

SECTION 15. REGULATORY INFORMATION

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No
CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: 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 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.