SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Nickel Gallium Sputtering Target

Product Code: NI-GA-05-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
Classification according to Regulation (EC) No 1272/2008
GHS08 Health hazard
Carc. 2 H351 Suspected of causing cancer.
STOT RE 1 H372 Causes damage to the lung, the kidneys and the liver through prolonged or repeated exposure. Route of exposure: Inhalative.
GHS07
Skin Sens. 1 H317 May cause an allergic skin reaction.
Classification according to Directive 67/548/EEC or Directive 1999/45/EC
T; Toxic
R48/23: Toxic: danger of serious damage to health by prolonged exposure through inhalation.
Xn; Harmful
R40: Limited evidence of a carcinogenic effect.
Xi; Sensitizing
R43: May cause sensitization by skin contact.
Carc. Cat. 3
Information concerning particular hazards for human and environment:
Not applicable
Hazards not otherwise classified
No information known.
Label elements

Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labeled according to the CLP regulation.
Hazard pictograms



GHS07 GHS08
Signal word: Danger
Hazard statements
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H372 Causes damage to the lung, the kidneys and the liver through prolonged or repeated exposure.
Route of exposure: Inhalative.
Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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
D2A - Very toxic material causing other toxic effects
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
Health (acute effects) = 1
Flammability = 0
Physical Hazard = 0
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Substances
CAS# Description:
7440-02-0 Nickel
7440-55-3 Gallium

SECTION 4. FIRST AID MEASURES

Description of first aid measures
General information
No special measures required.
After inhalation
Supply fresh air and to be sure call for a doctor.
Seek medical treatment in case of complaints.
After skin contact

Generally the product does not irritate the skin.
After eye contact
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing
If symptoms persist consult doctor.
Information for doctor
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
Special powder for metal fires. Do not use water.
For safety reasons unsuitable extinguishing agents
Water
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Toxic metal oxide fume
Advice for firefighters
Protective equipment:
No special measures required.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Not required.
Environmental precautions:
Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.
Methods and material for containment and cleaning up:
Dispose of contaminated material as waste according to section 13.
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
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:

No special measures required.
Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles:
No special requirements.
Information about storage in one common storage facility:
No information known.
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 for handling chemicals should be followed.
Maintain an ergonomically appropriate working environment.
Breathing equipment: Not required.
Protection of hands: Not required.
Penetration time of glove material (in minutes)
Not determined
Eye protection: Safety glasses
Body protection: Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
General Information
Appearance:
Form: Solid in various forms
Color: Silver grey
Odor: Odorless
Odor 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
Flammability (solid, gaseous): Not determined.
Ignition temperature: Not determined
Decomposition temperature: Not determined
Auto igniting: Not determined.
Danger of explosion: Not determined.
Explosion limits:
Lower: Not determined
Upper: Not determined
Vapor pressure: Not applicable.
Density at 20 °C (68 °F): Not determined

Relative density: Not determined.
Vapor density: Not applicable.
Evaporation rate: Not applicable.
Solubility in / Miscibility with Water: Insoluble
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:
Decomposition will not occur 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:
No information known.
Hazardous decomposition products:
Toxic metal oxide fume

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion:
Powder: irritant effect
Eye irritation or corrosion:
Powder: irritant effect
Sensitization:
May cause an allergic skin reaction.
Germ cell mutagenicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.
Carcinogenicity:
Suspected of causing cancer.
IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals.
NTP-R: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals.
ACGIH A5: Not suspected as a human carcinogen: Not suspected as a human carcinogen on the

basis of properly conducted epidemiologic studies in humans.
Studies have sufficiently long follow-up, reliable exposure histories, sufficiently high dose, and adequate statistical power to conclude that exposure to the agent does not convey a significant risk of cancer to humans. Evidence suggesting a lack of carcinogenicity in experimental animals will be considered if it is supported byother relevant data.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.
Reproductive toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.
Specific target organ system toxicity - repeated exposure:
Causes damage to the lung, the kidneys and the liver through prolonged or repeated exposure. Route of exposure: Inhalative.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Subacute to chronic toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.
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 product to reach ground water, water course or sewage system.
Do not allow material to be released to the environment without proper governmental permits.
Danger to drinking water if even small quantities leak into the ground.
Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Recommendation
Consult state, local or national regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, ADN, IMDG, IATA
Not applicable
UN proper shipping name
DOT, ADN, IMDG, IATA
Not applicable
Transport hazard class(es)
DOT, ADR, ADN, IMDG, IATA
Class
Not applicable
Packing group
DOT, IMDG, IATA
Not applicable
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:
DOT
Marine Pollutant (DOT):
No
UN "Model Regulation":
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SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
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)
7440-02-0 Nickel
California Proposition 65
Prop 65 - Chemicals known to cause cancer
7440-02-0 Nickel
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.
This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.
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.
REACH - Pre-registered substances
Substance is listed.
Chemical safety assessment:
A Chemical Safety Assessment has not been carried out

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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.