SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: Inconel 617 Alloy Sheet

Product Code: INCO-ALLY-617-SHE

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 in accordance with 29 CFR 1910 (OSHA HCS)
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.
Hazards not otherwise classified
No data available
GHS label elements
GHS label elements, including precautionary statements
Hazard pictograms



GHS07 GHS08
Signal word
Danger
Hazard-determining components of labeling:

Nickel
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/vapors/spray.
P261 Avoid breathing dust/fume/gas/mist/vapors/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
D2B - Toxic material causing other toxic effects
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
Health (acute effects) = 0
Flammability = 0
Physical Hazard = 0
Other hazards
Results of PBT and vPvB assessment
PBT:
N/A
vPvB:
N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures
Dangerous components:
7440-02-0 Nickel Carc. 2, H351; STOT RE 1, H372; Skin Sens. 1, H317
Additional information
None known.
Non-Hazardous Ingredients
7440-47-3 Chromium
7439-89-6 Iron

SECTION 4. FIRST AID MEASURES

Description of first aid measures
General information
No special measures required.
If inhaled:
Supply fresh air and to be sure call for a doctor.
Seek medical treatment in case of complaints.
In case of skin contact:
Generally the product does not irritate the skin.
In case of eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
If swallowed:
If symptoms persist consult doctor.
Information for doctor
Most important symptoms and effects, both acute and delayed
No data available
Indication of any immediate medical attention and special treatment needed
No data 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 official permits.
Methods and materials for containment and cleanup:
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
Requirements to be met by storerooms and receptacles:
No special requirements.

Information about storage in one common storage facility:
Do not store together with acids.
Store away from oxidizing agents.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well-sealed containers.
Specific end use(s)
No data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:
No further data; see section 7.
Control parameters
Components with limit values that require monitoring at the workplace:
7440-02-0 Nickel (77.0%)
PEL (USA)

Long-term value: 1 mg/m^3
REL (USA)

Long-term value: 0.015 mg/m^3
as Ni; See Pocket Guide App. A
TLV (USA)

Long-term value: 1.5* mg/m^3
elemental, *inhalable fraction
EL (Canada)

Long-term value: 0.05 mg/m^3
as Ni; ACIGH A1, IARC 1

EV (Canada) Long-term value: 1* 0.2** 0.1*** mg/m^3
inh.;*metal;**insol. compds.;***soluble compds.
7440-47-3 Chromium (15.5%)
PEL (USA)

Long-term value: 1* 0.5** mg/m^3
*metal;**inorganic compds., as Cr
REL (USA)

Long-term value: 0.5* mg/m^3
*metal+inorg.compds.as Cr;See Pocket Guide App. C
TLV (USA)

Long-term value: 0.5 mg/m^3
EL (Canada)
Short-term value: C 0.1*** ppm

Long-term value: 0.5* 0.01** 0.025*** mg/m^3
IARC1,ACGIH A1;*metal, inorg.**insol.;**water-sol.

EV (Canada) Long-term value: 0.05 mg/m^3
7439-89-6 Iron (7.5%)

EV (Canada) Long-term value: 1* 5** mg/m^3
as iron;*salts, wate
r-soluble;**welding fume

TLV (Canada) Long-term value: 5 mg/m^3

Additional information:
No data
Exposure controls
Personal protective equipment
Follow typical protective and hygienic practices for handling chemicals.
Maintain an ergonomically appropriate working environment.
Breathing equipment:
Not required.
Protection of hands:
Not required.
Penetration time of glove material (in minutes)
No data available
Eye protection:
Safety glasses
Body protection:
Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
Appearance:
Form: Solid in various forms
Color: Silver-colored
Odor: No data available
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
Flammability (solid, gas)
No data available.
Ignition temperature: No data available
Decomposition temperature: No data available
Autoignition: Product is not selfigniting.
Danger of explosion: No data available.
Explosion limits:
Lower: No data available
Upper: No data available
Vapor pressure: N/A
Density: No data available
Relative density
No data available.
Vapor density
N/A
Evaporation rate
N/A
Solubility in Water (H_2O): Insoluble
Partition coefficient (n-octanol/water): No data available.
Viscosity:
Dynamic: N/A
Kinematic: N/A
Solvent content:
Organic solvents: 0.0 %

Solids content: 100.0 %
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
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 components in this product.
LD/LC50 values that are relevant for classification:
No data
Skin irritation or corrosion:
No irritant effect.
Eye irritation or corrosion:
No 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 components in this product.
Carcinogenicity:
Suspected of causing cancer.
IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals.
EPA-CBD: Carginogenic potential cannot be determined.
ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for components in this product.
Reproductive toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.

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:
No effects known.
Subacute to chronic toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for components in this product.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

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 product to reach groundwater, water courses, or sewage systems.
Do not allow material to be released to the environment without official 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:
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.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, ADN, IMDG, IATA
N/A
UN proper shipping name
DOT, ADN, IMDG, IATA
N/A
Transport hazard class(es)
DOT, ADR, ADN, IMDG, IATA
Class
N/A
Packing group
DOT, IMDG, IATA
N/A
Environmental hazards:
Marine pollutant (IMDG):
No
Special precautions for user
N/A
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
N/A
Transport/Additional information:
DOT
Marine Pollutant (DOT):
No

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
GHS07
GHS08
Signal word
Danger
Hazard-determining components of labeling:
Nickel
Hazard statements
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
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P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
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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)
7440-02-0 Nickel
77.0%
7440-47-3 Chromium
15.5%
California Proposition 65
Prop 65 - Chemicals known to cause cancer
7440-02-0 Nickel
77.0%
Prop 65 - Developmental toxicity
None of the ingredients are listed.
Prop 65 - Developmental toxicity, female
None of the ingredients are listed.
Prop 65 - Developmental toxicity, male
None of the ingredients are 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.
None of the ingredients are 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.
None of the ingredients is listed.
Annex XIV of the REACH Regulations (requiring Authorisation for use)
None of the ingredients 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.