

Safety Data Sheet

Material Name: Nickel Strip, Bar, Plate, Rod and Wire

*** Section 1 - Product and Company Identification ***

Manufacturer Information

Ametek Specialty Metal Products
21 Toelles Road
Wallingford, CT 06492

Phone: 203-265-6731

Emergency # 800-424-9300 Chemtrec

*** Section 2 - Hazards Identification ***

GHS Classification:

Respiratory Sensitizer - Category 1
Skin Sensitizer - Category 1
Carcinogenicity - Category 2
Toxic to reproduction - Category 1B
Specific target organ toxicity - Single exposure - Category 1 (kidneys, respiratory system)
Specific target organ toxicity - Repeated exposure - Category 1 (respiratory system, skin)
Hazardous to aquatic environment - Chronic Hazard - Category 4

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

Danger

Hazard Statements

May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Suspected of causing cancer
May damage fertility or the unborn child
Causes damage to organs (kidneys, respiratory system)
Causes damage to organs through prolonged or repeated exposure (respiratory system)

Precautionary Statements

Prevention

Do not breathe dust/fume/gas/mist/vapours/spray
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing should not be allowed out of the workplace.
Wash thoroughly after handling
Wear protective gloves/eye protection/face protection
Contaminated work clothing should not be allowed out of the workplace
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Do not eat, drink or smoke when using this product.
Avoid release to the environment

Response

IF exposed or concerned: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Storage

Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
7440-02-0	Nickel	99.0-100

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

Lift eyelids and flush immediately with flooding amounts of water for at least 15 minutes. Do not allow the victim to rub his/her eyes or keep them shut. Consult a physician or ophthalmologist if all material cannot be removed or if there is continuing irritation.

First Aid: Skin

Remove clothing around affected area. Rinse away loose material and wash affected area with soap and water. If there is a severe skin reaction or reddened or blistered skin, consult a physician.

First Aid: Ingestion

Never give anything by mouth to an unconscious or convulsing person. Contact a poison control center with information from this SDS and the Technical Data Sheet on the composition of the material ingested. Unless the poison control center advises otherwise, give the person one or two glasses of water, then induce vomiting. After first aid, have the person see a physician for follow up care.

First Aid: Inhalation

Move the person to fresh air and support breathing as required. Consult a physician if victim has continued difficulty breathing.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.
Dust is an explosion hazard.

Hazardous Combustion Products

Toxic metal oxides, carbon and nitrogen oxides may be produced during a fire involving metal alloys. Alloys with nickel may also produce toxic nickel carbonyl.

Extinguishing Media

Use dry sand, dry dolomite, or dry graphite powder or other dry chemical extinguishing agent formulated for metal fires.

Unsuitable Extinguishing Media

Do not use water or halon.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear. Do not allow runoff from fire fighting to enter roadways or sewers.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Collect spilled material and place in sealed containers for reclamation or disposal.

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Materials and Methods for Clean-Up

Use clean up measures that minimize dust. Avoid inhalation of dust. Remove sources of heat or ignition as dust clouds can burn or explode.

Emergency Measures

Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment

Wear appropriate protective clothing and respiratory protection for the situation.

Environmental Precautions

None

Prevention of Secondary Hazards

None

*** Section 7 - Handling and Storage ***

Handling Procedures

Use local exhaust ventilation to protect against dust and fume inhalation. If workers are exposed to dust provide appropriate respiratory, eye, and skin protection. An eye wash station should be readily available to areas of use.

Storage Procedures

Store in a closed container when possible to prevent possible product contamination. Protect containers from physical damage.

Incompatibilities

Keep dry and isolated from acids, caustics, halogenated compounds, and oxidizers. Do not store near combustible materials.

*** Section 8 - Exposure Controls / Personal Protection ***

A: Component Exposure Limits

Nickel (7440-02-0)

ACGIH: 1.5 mg/m3 TWA (inhalable fraction)

OSHA: 1 mg/m3 TWA

NIOSH: 0.015 mg/m3 TWA

Engineering Measures

Where feasible, enclose processes to prevent dust dispersion into the work area. Provide local exhaust when possible, and general ventilation as necessary, to keep airborne concentrations below exposure limits and as low as possible.

Personal Protective Equipment: Respiratory

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

Personal Protective Equipment: Hands

Use impervious gloves such as neoprene, nitrile, or rubber for hand protection.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes

Wear safety glasses with side shields and/or goggles as necessary to prevent dust from entering eyes.

Personal Protective Equipment: Skin and Body

Use body protection appropriate for task.

*** Section 9 - Physical & Chemical Properties ***

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Appearance: Strip, Bar, Plate, Rod and Wire
Physical State: Solid
Vapor Pressure: ND
Boiling Point: ND
Solubility (H2O): Insoluble
Evaporation Rate: ND
Octanol/H2O Coeff.: ND
Flash Point Method: NA

Lower Flammability Limit (LFL): NA
Auto Ignition: NA

Odor: None
pH: NA
Vapor Density: ND
Melting Point: ND
Specific Gravity: ND
VOC: ND
Flash Point: NA
Upper Flammability Limit (UFL): NA
Burning Rate: NA

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Contamination from other materials.

Incompatible Products

Reacts with strong acids and caustics to form flammable and explosive hydrogen gas.

Hazardous Decomposition Products

Toxic metal oxides and carbon and nitrogen oxides may be produced during a fire involving metal alloys. Alloys with nickel may also produce poisonous nickel carbonyl.

*** Section 11 - Toxicological Information ***

Acute Toxicity

Component Analysis - LD50/LC50

Nickel (7440-02-0)

Oral LD50 Rat >9000 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause allergic skin reaction.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

No potential health effects anticipated.

Potential Health Effects: Ingestion

Ingestion of small amounts may occur through eating, smoking, or other hand to mouth contact. Ingestion of small amounts is unlikely to cause significant health effects, but alloys containing high concentrations of copper or nickel may cause nausea, vomiting, stomach pain, and diarrhea.

Potential Health Effects: Inhalation

Inhalation of metal powder may cause chills, fever, sweating, nausea, and cough (symptoms of metal fume fever). Metal fume fever symptoms typically begin within 4 to 12 hours after the initial exposure and lasts from approximately 24 hours without causing permanent damage.

Respiratory Organs Sensitization/Skin Sensitization

May cause nose and throat irritation, metallic taste, difficulty breathing, wheezing, and chest pain. Alloys with high concentrations of chromium may cause headache, coughing, shortness of breath, nasal irritation, pneumoconiosis, and fever. Alloys with nickel and/or manganese may cause coughing, difficulty breathing and shortness of breath, rapid breathing, and chest tightness.

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Some individuals may become sensitized from repeated contact with metal powders, especially alloys containing copper, nickel, and vanadium. Nickel alloys may cause "nickel itch," reddened ulcerated skin and sensitization to nickel.

Generative Cell Mutagenicity

This product is not reported to produce mutagenic effects in humans.

Carcinogenicity

A: General Product Information

Suspected of causing cancer.

B: Component Carcinogenicity

Nickel (7440-02-0)

ACGIH: A5 - Not Suspected as a Human Carcinogen

NIOSH: potential occupational carcinogen

NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)

IARC: Monograph 49 [1990]; Supplement 7 [1987] (Group 2B (possibly carcinogenic to humans))

Reproductive Toxicity

May damage fertility or the unborn child.

Specified Target Organ General Toxicity: Single Exposure

Causes damage to organs (kidneys, respiratory system)

Specified Target Organ General Toxicity: Repeated Exposure

May cause damage to organs through prolonged or repeated exposure (respiratory system).

Aspiration Respiratory Organs Hazard

None

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Data not available for metal and metal powder.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Nickel (7440-02-0)

Test & Species

Conditions

96 Hr LC50 Brachydanio rerio	>100 mg/L
96 Hr LC50 Cyprinus carpio	1.3 mg/L [semi-static]
96 Hr LC50 Cyprinus carpio	10.4 mg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	0.18 mg/L
96 Hr EC50 Pseudokirchneriella subcapitata	0.174 - 0.311 mg/L [static]
48 Hr EC50 Daphnia magna	>100 mg/L
48 Hr EC50 Daphnia magna	1 mg/L [Static]

Persistence/Degradability

Metal powders may cause ecological damage through silting or sedimentation effect in water depriving organisms of habitat and mobility, and/or fouling of gills, lungs and skin thus limiting oxygen uptake.

Bioaccumulation

Metal powders in water or soil may form metal oxides or other metal compounds that could become bioavailable and harm aquatic or terrestrial organisms.

Mobility in Soil

Metal powder would be relatively immobile in soils but some metal compounds may be transported with ground water.

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*** Section 13 - Disposal Considerations ***

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Section 14 - Transportation Information ***

IATA Information

Shipping Name: Environmentally Hazardous Substance Solid, n.o.s.

UN #: 3077 Hazard Class: 9 Packing Group: III

ICAO Information

Shipping Name: Environmentally Hazardous Substance Solid, n.o.s.

UN #: 3077 Hazard Class: 9 Packing Group: III

IMDG Information

Shipping Name: Environmentally Hazardous Substance Solid, n.o.s.

UN #: 3077 Hazard Class: 9 Packing Group: III

*** Section 15 - Regulatory Information ***

Regulatory Information

US Federal Regulations

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Nickel (7440-02-0)

SARA 313: 0.1 % de minimis concentration

CERCLA: 100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Nickel	7440-02-0	Yes	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

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Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Nickel	7440-02-0	0.1 %

Additional Regulatory Information

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Nickel	7440-02-0	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

Literature References

None

End of Sheet