WHMIS	Personal Protection Equipment	TDG (Ground)
		N/A

1 Identification of the substance/mixture and of the company/undertaking

Product identifier
Trade name: Nickel Metal
SDS Nr: SDS-0032
Chemical description: Nickel
CAS No: 7440-02-0
EC No: 231-111-4
Registration-No: Registration deadline not expired.
Use: Used in stainless steel alloys, production of magnets, brazing alloys, production of batteries, electrical contacts, production of silver-nickel alloys, metal surface treatment, and production of nickel containing electronic components.

Company identification: Freepoint Commodities, LLC
58 Commerce Road
Stamford, Ct. 06902

E-Mail address (competent person): Lou Santore

Lou Santore [LSantore@freepoint.com]

Emergency telephone number: Within the U.S. or Canada: 1 800 424 9300
Outside the U.S. and Canada: +1 703 527 3887 (collect calls accepted)

MSDS prepared by: Paule Patterson, ENERCON Services, Inc.

2 Hazards identification

GHS Classification:

Classification according to Regulation (EC) No 1272/2008 (CLP/GHS):

May cause skin allergic reaction; H317
Suspected of causing cancer; H351
Causes lung damage through prolonged or repeated inhalation exposure; H372

Classification according to Directive 67/548/EEC or 1999/45/EC:

Carc. Cat 3
R40
R43
T,R48/R23

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

Danger

CLP Hazard Statements :

ENVIRONMENTAL HAZARDS:

H400: Very toxic to aquatic life
H412: Harmful to aquatic life with long lasting effects.

HEALTH HAZARDS:

H317 May cause skin allergic reaction.
H351 Suspected of causing cancer.
H372 Causes lung damage through prolonged or repeated inhalation exposures.

CLP Precautionary statements
Prevention :
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P264: Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P281: Use personal protective equipment as required.

Storage:
P405 Store locked up.

Response :
P302+P352 Wash exposed skin with soap and water.
P308+P313 Obtain medical advice if exposure occurs.
P333+P313 Obtain medical attention if irritation or rash occurs.
P314 Obtain medical advice if feeling unwell if exposed.
P363 Wash contaminated clothing prior to reuse.

Disposal:
P501: Dispose of contents and container to appropriate waste site or reclaimer in accordance with local, state, and national regulations.

Label elements According to Directive 67/548/EEC & Directive 1999/45/EC

Hazard pictogram(s): N/A

Hazard Symbol: Danger

Risk Phrases: N/A
R40: Extremely flammable.
R43: Irritating to skin.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:
S23: Do not breathe fumes/vapor.
S24: Avoid contact with skin.
S36/37: Wear suitable protective clothing and gloves. S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S51: Use only in well-ventilated areas.
S53: Avoid exposure - obtain special instructions before use.

3 Composition/information on ingredients

EC Classification No. 1272/2008

Component	Product Identifiers	Percent	Hazard symbol(s) and hazard statement(s)
Nickel Metal o	CAS No: 7440-02-0 EC No: 231-111-4	100	Skin allergy; H317 May Cause Cancer; H351 May damage lungs; H372 (Inhalation) o

EC Classification No. 67/548/EC

Component	Product Identifiers	Percent	Risk Phrases and Safety Phraseso
Nickel Metal o	CAS No: 7440-02-0 EC No: 231-111-4	100	R40 Limited evidence of a carcinogenic effect. R43 May cause sensitization by skin contact. S22 Do not breath dust. S36 Wear suitable protective clothing.

4 First aid measures

First Aid: Eyes
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin
Remove contaminated clothing. Rinse thoroughly for at least 15 minutes. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

First Aid: Ingestion
Causes gastrointestinal irritation with nausea, vomiting, and diarrhea. Obtain immediate medical attention.

First Aid: Inhalation
Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. Inhalation of a mist of this material may cause respiratory tract irritation. Breathing Nickel (Dust and Fume) can cause a sore or hole in the "bone" (septum) dividing the inner nose. Obtain immediate medical attention for any inhalation exposures.

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately if breathing becomes difficult.

5 Fire-fighting measures

General Fire Hazards

See Section 9 for Flammability Properties.

Hazardous Combustion Products

Fumes, smoke, carbon monoxide, sulfur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

Extinguishing Media

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
Dusts at sufficient concentrations can form explosive mixtures with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dust can be an explosion hazard when exposed to heat or flame.

Confining and smothering is preferable to applying water. **DO NOT USE WATER, CO2, OR FOAM DIRECTLY ON FIRE ITSELF.** Use DRY sand, sodium chloride powder, graphite powder, copper powder or Lith-X powder.
Dousing metallic fires with water may generate hydrogen gas, an extremely dangerous explosion hazard, particularly if fire is in a confined environment.

Any extinguisher suitable for Class B fires, dry chemical, CO2, fire-fighting foam, or gaseous extinguishing agent. Water may splash and spread flaming liquid. ***DO NOT USE WATER JET.*** Avoid spreading burning liquid with water used for cooling purposes. Do not flush down public sewers. The use of self- contained breathing apparatus and protective clothing is recommended for fire fighters. Avoid inhalation of vapors.

Unsuitable Extinguishing Media

Water if metals are burning.

6 Accidental release measures

Recovery and Neutralization

Use proper personal protective equipment as indicated in Section 8.

Carefully scoop up and place into appropriate disposal container. Provide ventilation.

Materials and Methods for Clean-Up

Very fine particles can cause a fire or explosion. Eliminate all ignition sources. Reduce airborne dust and prevent scattering by moistening with water. Sweep up, then place into a suitable container for disposal.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

7 Handling and storage

Handling Procedures

Wash thoroughly after handling. Remove contaminated clothing and launder before reuse. Use with adequate ventilation. Avoid contact with the skin and eyes. Avoid ingestion and inhalation.

Storage Procedures

Keep away from flame, sparks, excessive temperatures, static electricity, pilot lights, and other ignition sources. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

Incompatibilities:

Keep away from strong acids and oxidizers.

8 Exposure controls/personal protection

Component Exposure Limits:
OSHA Permissible Exposure Limit (PEL): 1.0 mg/m^3 (TWA), Inhalation

NIOSH Recommended Exposure Limits:1.5 mg/m^3 (TWA), Inhalation, 10.0 mg/m^3 IDLH

ACGIH Threshold Limit Value (TLV): 1.5 mg/m^3 (TWA), Inhalation.

Engineering Measures

Use adequate ventilation to provide explosion proof ventilation to keep dust concentrations of this product below exposure and flammability limits in enclosed

work areas, particularly in confined spaces. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal Protective Equipment: Hands

Gloves constructed of chemical resistant materials are recommended.

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Respiratory

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

A NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations (for exposures over TLV up to 1.5 mg/m^3) are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Employees engaged in handling operations involving benzene must be provided with, and required to wear and use, a *half-mask* filter-type respirator for dusts, mists, and fumes. A respirator affording higher levels of protection than this respirator may be substituted.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

Hygiene Measures

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use gasoline or solvents (naphtha, kerosene, etc.) for washing this product from exposed skin areas. Waterless hand cleaners are effective.
Promptly remove contaminated clothing and launder before reuse. Consider the need to discard contaminated leather shoes and gloves.

9 Physical and chemical properties

Appearance:	White to Light Grey	**Odor:**	Characteristic hydrocarbon odor
Physical State:	Solid	**pH:**	ND
Vapor Pressure:	1 mm Hg @ 3290°F (1810 °C)	**Vapor Density:**	ND
Boiling Point:	4946°F / 2730 °C	**Melting Point:**	2651 °F (1455 °C)
Solubility (H2O):	Insoluble	**Specific Gravity:**	8.90
Evaporation Rate:	ND	**VOC:**	ND
Octanol/H2O Coeff.:	ND	**Flash Point:**	ND
Flash Point Method:	ND	**Upper Flammability Limit (UFL):**	ND
Lower Flammability	ND	**Burning Rate:**	ND

Limit (LFL):			
Auto Ignition:		ND	

10 Stability and reactivity

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Hazardous Polymerization will not occur.

Conditions to Avoid

Incompatible materials and dust generation.

Incompatible Products

Acids and strong oxidizing agents.

11 Toxicological information

As supplied, this product does not pose a health
Swallowed: Expected to be of low toxicity: LD50 >9000 mg/kg (Oral –Rat).

Inhalation: Low toxicity: LC50 >10 mg/m^3.

Skin Contact: LD50 data not available.

Eye: Expected to be irritating to eyes.

Skin: Irritating to skin: Low toxicity: LD50 data not available.

Carcinogenicity: The U.S. National Institute for Occupational Safety and Health (NIOSH) concluded that there is no evidence that nickel is a carcinogenic when ingested.

The International Agency for Research on Cancer (IARC) {Vol. 49} found there was inadequate evidence that metallic nickel is carcinogenic to humans but since there was sufficient evidence that it is carcinogenic to animals, IARC concluded that metallic nickel is possible carcinogenic to humans (Group 2B) . Epidemiological studies of workers exposed to nickel powder and to dust and fumes generated in the production of nickel alloys and of stainless steels have not indicated the presence of a significant respiratory cancer hazard.

12 Ecological information

Ecotoxicity

A: General Product Information

Keep away from dust and fumes.

B: Component Analysis - Ecotoxicity – Not classified as Toxic to the environment.

Component	Species	Result
Nickel	Algae - Macrocystis pyrifera - Young Algae - Glenodinium halli	2 ppm EC50, 4 days 100 mg/l NOEC, 72 hours
	Aquatic plants - Lemna minor	450 µg/l EC50, 4 days
	Daphnia - Daphnia magna	1000 µg/l EC50, 48 hours
	Crustaceans - Americamysis bahia - Juvenile	0.31 mg/l IC50, 48 hours
	Fish - Heteropneustes fossilis	47.5 ng/L LC50, 96 hours
	Fish - Cyprinus carpio	3.5 µg/l NOEC, 4 weeks

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, state, and federal regulations.

Disposal Regulatory Requirements:

Dispose of materials in accordance with local, state, and federal regulations.

14 Transport information

NOT REGULATED

Reportable quantity: 132.01 lbs / 59. 934 kg Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

15 Regulatory information

Component Analysis

US Federal Regulations
Not regulated

International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XN
Risk Phrases:
R 40 Limited evidence of a carcinogenic effect.
R 43 May cause sensitization by skin contact.
Safety Phrases:
S 22 Do not breathe dust.
S 36 Wear suitable protective clothing.

State and Local Regulations
California Proposition 65: carcinogen, initial date 10/1/89 NTP: Suspect carcinogen IARC: Group 1 carcinogen

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the state of California to cause cancer.
NICKEL COMPOUNDS

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the

following substance(s) known to the state of California to cause reproductive harm.
NICKEL COMPOUNDS

16 Other information

DISCLAIMER OF LIABILITY: Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

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