

# SAFETY DATA SHEET



Nickel Metal

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : Nickel Metal  
**Index number** : 028-002-00-7  
**EC number** : 231-111-4

#### REACH Registration number

Registration number	Legal entity
01-2119438727-29-0000; 01-2119438727-29-0007	HH Compliance Acting as Only Representative, Email C Terrett: info@h2compliance.com

**CAS number** : 7440-02-0  
**Product code** : Not available.  
**Product description** : Not available.  
**Product type** : Massive metal.  
**Other means of identification** : Pellets, P Pellets, S Pellets, Discs, Chips, Plating Rounds, Melt Rounds, Premium Melt Rounds, Assorted Melt Rounds  
**Chemical formula** : Ni

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Formulation or re-packing; Use of nickel metal in the production of stainless, special steels and special alloys
Formulation or re-packing; Use of nickel metal in the production of integrated steel and iron
Formulation or re-packing; Use of nickel metal in electric arc furnace carbon steel manufacturing
Formulation or re-packing; Use of nickel metal in the production of brazing alloys
Formulation or re-packing; Use of nickel metal for the production of silver-nickel contact materials
Formulation or re-packing; Use of nickel metal and nickel containing alloys for the production of steel and other alloy powders by atomisation
Formulation or re-packing: Small scale silver coating of nickel powder
Use at industrial sites; Use of nickel metal containing powders in additive manufacturing (3D-printing)
Use at industrial sites; Use of nickel-containing stainless, special steels and special alloys
Use at industrial sites; Use of nickel-containing integrated steel and iron
Use at industrial sites; Use of nickel-containing carbon steel
Use at industrial sites; Use of nickel powder or nickel alloy powder in powder metallurgy
Use at industrial sites; Use of nickel-containing brazing alloys in industrial settings
Widespread use by professional workers; Use of nickel-containing consumables for welding/brazing by professionals
Use at industrial sites; Use of silver-nickel contact materials
Use at industrial sites; Use of nickel-containing steel and other alloy powders
Use at industrial sites; Use of nickel-containing alloys for sand blasting in industrial settings
Formulation or re-packing; Use of nickel metal in formulating and repackaging of surface treatment products
Use at industrial sites; Use of nickel metal in metal surface treatment (nickel electroplating and nickel electroforming technologies)
Use at industrial sites; Use of nickel metal in sputter deposition techniques
Use at industrial sites; Use of nickel metal in thin film deposition by evaporation technique
Use at industrial sites; Use of nickel metal for thermal spraying
Formulation or re-packing; Use of nickel metal powder in the formulation of micronutrient additives for biogas production
Use at industrial sites; Use of nickel metal-derived micronutrient powder in biogas production
Widespread use by professional workers; Use of nickel metal-derived micronutrient in compostable bags in biogas production
Use at industrial sites; Use of pre-reduced nickel-containing catalyst
Use at industrial sites; Intermediate use of nickel metal for the manufacture of other substances in catalyst or catalyst precursor manufacture
Use at industrial sites; Use of nickel metal in the production of abrasive tools

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Use at industrial sites; Production of batteries using nickel electrodes  
 Use at industrial sites; Use of nickel metal in the production of nickel-containing electronics  
 Use at industrial sites; Intermediate use of nickel metal for the manufacture of nickel-containing inorganic pigments  
 Use at industrial sites; Use of nickel metal powder in the production of magnets  
 Use at industrial sites; Intermediate use of nickel metal for the manufacture of nickel salts  
 Use at industrial sites; Use of nickel containing anti-seize lubricant  
 Service life (worker at industrial site); Service life of nickel alloys and nickel-coated metal objects (machining and handling) in industrial settings  
 Service life (professional worker); Service life of nickel alloys and nickel-coated metal objects (machining and handling) in professional settings  
 Service life (worker at industrial site); Service life of nickel-containing electronic parts and batteries in industrial settings  
 Service life (professional worker); Service life of nickel-containing electronic parts and batteries in professional settings  
 Service life (worker at industrial site); Service life of abrasive tools containing nickel in industrial settings  
 Service life (professional worker); Service life of abrasive tools containing nickel in professional settings  
 Consumer use: Use of nickel-containing alloys for welding/brazing by consumers

Uses advised against	Reason
Use of nickel-containing High Sulphur stainless steel for surgical implants (AISI grade 303 or ISO 7153-1 reference grade Ni) Use of nickel and nickel compounds in tattoo inks or permanent makeup products. Use of nickel containing food contact materials for which release into foodstuff would exceed more than 0.14mg/kg food of nickel	

### 1.3 Details of the supplier of the safety data sheet

Vale Canada Limited, 200 Bay Street, Royal Bank Plaza, Suite 1500, South Tower, PO Box 70, Toronto, Ontario, Canada, M5J 2K2, Email: msds@vale.com

**e-mail address of person responsible for this SDS** : msds@vale.com

#### National contact

Manufacturer

Vale Canada Limited, Ontario Operations, Sudbury, Ontario, Canada P0M 1N0, Email: msds@vale.com

Vale Newfoundland and Labrador Limited, 1 Nickel Road, PO Box 39, Long Harbour, NL, Canada, A0B 2J0, Email: msds@vale.com

Vale Europe Limited, Clydach Refinery, Clydach, Swansea, UK, SA6 5QR, Email: msds@vale.com

Distribution

Vale Canada Limited, 200 Bay Street, Royal Bank Plaza, Suite 1500, South Tower, PO Box 70, Toronto, Ontario, Canada, M5J 2K2, Email: msds@vale.com

Importer

Vale Americas Inc., 140 E. Ridgewood Avenue, Suite 415, South Tower, Paramus, NJ 07652, U.S.A, Email: msds@vale.com

Vale Base Metals Asia Pacific PTE. Limited, One Temasek Avenue #18-01/02, Millenia Tower, Singapore, 039192, Email: msds@vale.com

Vale International SA, Route de Pallatex 29, 1162 Saint-Prex, Switzerland, Email: msds@vale.com

Vale Holdings BV, Piet Heinkade 55, 1019GM, Amsterdam, The Netherlands, Telephone Number 31 20 308 5644 214, Email: msds@vale.com

REACH Only Representative for Vale: HH Compliance, Rubicon Building, CIT Campus, T12Y275, Bishopstown, Cork, Republic of Ireland; OR Manager, Telephone number: +353-21-486-81121, Email C Terrett: info@h2compliance.com

### 1.4 Emergency telephone number

#### National advisory body/Poison Center

**Telephone number** : None identified.

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### Supplier

- Telephone number** : For Fire, Spill, or Chemical Emergency call CHEMTREC: +1 703 527-3887; for Europe call CHEMTREC: +(44) 870 8200418
- Hours of operation** : 24-hour telephone and/or website
- Information limitations** : Emergency essential information

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mono-constituent substance

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Sens. 1, H317

Carc. 2, H351

STOT RE 1, H372

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : May cause an allergic skin reaction.  
Suspected of causing cancer.  
Causes damage to organs through prolonged or repeated exposure.

#### Precautionary statements

**Prevention** : Obtain special instructions before use. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Avoid release to the environment. Do not breathe dust. Do not eat, drink or smoke when using this product.

**Response** : Collect spillage. IF exposed or concerned: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention.

**Storage** : Not applicable.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** : nickel

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

#### Special packaging requirements

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Not applicable.

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## SECTION 2: Hazards identification

### 2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

PBT	P	B	T	vPvB	vP	vB
Not applicable (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

Other hazards which do not result in classification : None known.

## SECTION 3: Composition/information on ingredients

3.1 Substances : Mono-constituent substance

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
nickel	EC: 231-111-4 CAS: 7440-02-0 Index: 028-002-00-7	100	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372 <b>See Section 16 for the full text of the H statements declared above.</b>	-	[1]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[1] Constituent

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Eye contact** : Get medical attention.
- Inhalation** : Not applicable.
- Skin contact** : Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Cuts should be treated promptly and covered.
- Ingestion** : Not applicable.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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## SECTION 4: First aid measures

**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous combustion products** : Decomposition products may include the following materials: metal oxide/oxides

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : No special protection is required.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions** : Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

### 6.3 Methods and materials for containment and cleaning up

**Small spill** : Restack safely. Take care with items that are sharp or heavy.

**Large spill** : Restack safely. Take care with items that are sharp or heavy.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

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## SECTION 7: Handling and storage

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Take care with items that are sharp or heavy.
- Advice on general occupational hygiene** : Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store locked up. See Section 10 for incompatible materials before handling or use.

#### Seveso Directive - Reporting thresholds

##### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
Not applicable	-	-

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures** : Not applicable.

#### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
nickel	DNEL	Long term Inhalation	60 ng/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	60 ng/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Oral	0.011 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.035 mg/cm <sup>2</sup>	General population	Local
	DNEL	Long term Dermal	0.035 mg/cm <sup>2</sup>	Workers	Local
	DNEL	Long term Inhalation	0.05 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	0.05 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Oral	0.37 mg/	General	Systemic

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## SECTION 8: Exposure controls/personal protection

	DNEL	Short term Inhalation	kg bw/day 0.8 mg/m <sup>3</sup>	population General population	Local
	DNEL	Short term Inhalation	11.9 mg/m <sup>3</sup>	Workers	Local

### PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
nickel	Fresh water	7.1 µg/l	-
	Fresh water sediment	109 mg/kg	-
	Marine water	8.6 µg/l	-
	Marine water sediment	109 mg/kg	-
	Soil	29.9 mg/kg	-

## 8.2 Exposure controls

**Appropriate engineering controls** : No special ventilation requirements. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Wash thoroughly after handling.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### Skin protection

**Hand protection** : Use strong, cut-resistant gloves suitable for handling metals.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Not applicable.

**Environmental exposure controls** : Not applicable.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical state** : Solid. [Metal.]

**Color** : Silvery.

**Odor** : Odorless.

**Odor threshold** : Not available.

**Melting point/freezing point** : 1455°C

**Initial boiling point and boiling range** : 2730°C (4946°F)

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## SECTION 9: Physical and chemical properties

<b>Flammability</b>	: Not available.
<b>Lower and upper explosion limit</b>	: Not applicable.
<b>Flash point</b>	: Open cup: Not applicable.
<b>Auto-ignition temperature</b>	: Not applicable.
<b>Decomposition temperature</b>	: Not available.
<b>pH</b>	: Not available.
<b>Viscosity</b>	: Not applicable.
<b>Solubility in water</b>	: Not available.
<b>Partition coefficient: n-octanol/ water</b>	: Not available.
<b>Vapor pressure</b>	: Not applicable.
<b>Relative density</b>	: 8.9
<b>Density</b>	: 8.9 g/cm <sup>3</sup>
<b>Vapor density</b>	: Not applicable.
<b>Explosive properties</b>	: Not available.
<b>Oxidizing properties</b>	: Not available.
<b>Particle characteristics</b>	
<b>Median particle size</b>	: Not applicable.
<b>Specific surface area</b>	: <670 mm <sup>2</sup> /g
<b>Percentage of particles with aerodynamic diameter ≤ 10 μm</b>	: 0
<b>Additional information</b>	: <100 μm, <99%

### 9.2 Other information

**Molecular weight** : 58.71 g/mole

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: No specific data.
<b>10.5 Incompatible materials</b>	: No specific data.
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.



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## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

**Conclusion/Summary** : Not available.

#### Acute toxicity estimates

N/A

#### Irritation/Corrosion

**Conclusion/Summary** : Not available.

#### Sensitization

Product/ingredient name	Route of exposure	Species	Result
nickel	skin	Mammal - species unspecified	Sensitizing

#### Conclusion/Summary

**Skin** : May cause an allergic skin reaction.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
nickel	Positive - Intravenous - TC	Mammal - species unspecified	-	-

**Conclusion/Summary** : Suspected of causing cancer.

#### Reproductive toxicity

**Conclusion/Summary** : Not available.

#### Teratogenicity

**Conclusion/Summary** : Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
nickel	Category 1	-	-

#### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

#### Potential acute health effects

**Eye contact** : Not applicable.

**Inhalation** : Not applicable.

**Skin contact** : May cause an allergic skin reaction.

**Ingestion** : Not applicable.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

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## SECTION 11: Toxicological information

- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

- Conclusion/Summary** : Not available.

**General** : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

Not available.

#### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
nickel	Acute EC50 2 ppm Marine water	Algae - <i>Macrocystis pyrifera</i> - Young	4 days
	Acute EC50 450 µg/l Fresh water	Aquatic plants - <i>Lemna minor</i>	4 days
	Acute EC50 1000 µg/l Marine water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute IC50 0.31 mg/l Marine water	Crustaceans - <i>Americamysis bahia</i> - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 47.5 ng/L Fresh water	Fish - <i>Heteropneustes fossilis</i>	96 hours
	Chronic NOEC 100 mg/l Marine water	Algae - <i>Glenodinium halli</i>	72 hours
	Chronic NOEC 3.5 µg/l Fresh water	Fish - <i>Cyprinus carpio</i>	4 weeks

- Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

- Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Not available.

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## SECTION 12: Ecological information

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
nickel	Not applicable (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

### 12.6 Endocrine disrupting properties

Not available.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-	-
<b>14.4 Packing group</b>	-	-	-	-

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## SECTION 14: Transport information

14.5 Environmental hazards	No.	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Maritime transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air** : Listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Listed

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

Not applicable

National regulations

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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## SECTION 15: Regulatory information

### Montreal Protocol

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: This material is listed or exempted.
<b>Canada</b>	: This material is listed or exempted.
<b>China</b>	: This material is listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : This material is listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: This material is listed or exempted.
<b>Philippines</b>	: This material is listed or exempted.
<b>Republic of Korea</b>	: This material is listed or exempted.
<b>Taiwan</b>	: This material is listed or exempted.
<b>Thailand</b>	: This material is listed or exempted.
<b>Turkey</b>	: This material is listed or exempted.
<b>United States</b>	: This material is active or exempted.
<b>Viet Nam</b>	: This material is listed or exempted.

**15.2 Chemical Safety Assessment** : Not available.

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	: ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number SGG = Segregation Group vPvB = Very Persistent and Very Bioaccumulative
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### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372	Regulatory data Regulatory data Regulatory data

### Full text of abbreviated H statements

H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.

### Full text of classifications [CLP/GHS]

Nickel Metal

## SECTION 16: Other information

Carc. 2	CARCINOGENICITY - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

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