

# SAFETY DATA SHEET



Ni Powder 100 Series

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

### 1.1 Product identifier

**Product name** : Ni Powder 100 Series  
**Index number** : 028-002-01-4  
**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** : Solid.  
**Other means of identification** : T-123, CGNP  
**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 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

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

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

Vale Europe Limited, Clydach Refinery, Clydach, Swansea, UK, SA6 5QR, 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 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.

#### Supplier

**Telephone number** : For Fire, Spill, or Chemical Emergency call CHEMTREC: +1 703 527-3887; for Europe call CHEMTREC: +(44) 870 8200418

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

- 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

Aquatic Chronic 3, H412

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.  
Harmful to aquatic life with long lasting effects.

#### Precautionary statements

**General** : Read carefully and follow all instructions. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**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** : Store locked up.

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

**Hazardous ingredients** : nickel powder

**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** : Yes, applicable.

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## SECTION 2: Hazards identification

**Tactile warning of danger** : Yes, applicable.

### 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 powder	EC: 231-111-4 CAS: 7440-02-0 Index: 028-002-01-4	100	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372 Aquatic Chronic 3, H412  <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** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. 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. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## SECTION 4: First aid measures

**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.  
**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. This material is harmful 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** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## 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. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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".

## SECTION 6: Accidental release measures

**6.2 Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). 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** : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

**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

**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. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. 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 in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. 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.

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## SECTION 7: Handling and storage

**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** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
nickel powder	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/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	0.8 mg/m <sup>3</sup>	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 powder	Fresh water	7.1 µg/l	-
	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** : 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.

## SECTION 8: Exposure controls/personal protection

### 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.
- 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** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 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.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- Melting point/freezing point** : 1453°C
- Initial boiling point and boiling range** : 2730°C (4946°F)
- Flammability** : Not available.
- Lower and upper explosion limit** : Not applicable.
- Flash point** : Not applicable.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.
- pH** : Not available.



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## SECTION 9: Physical and chemical properties

**Viscosity** : Dynamic: Not applicable.

**Solubility in water** : Not available.

**Partition coefficient: n-octanol/ water** : Not available.

**Vapor pressure** : Not available.

**Relative density** : 8.9

**Vapor density** : Not applicable.

**Explosive properties** : Not available.

**Oxidizing properties** : Not available.

### Particle characteristics

**Median particle size** : Not available.

**Size distribution** :

Distribution (dN)	Size
10	1 µm
90	8 µm

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : No specific data.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 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 powder	skin	Mammal - species unspecified	Sensitizing

#### Conclusion/Summary

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

#### Mutagenicity

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## SECTION 11: Toxicological information

**Conclusion/Summary** : Not available.

### Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Nickel powders	Suspected Carcinogen	N/A	N/A	N/A

**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 powder	Category 1	-	-

### Aspiration hazard

Not available.

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

### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : May cause an allergic skin reaction.  
**Ingestion** : No known significant effects or critical hazards.

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

- Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**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.

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## SECTION 11: Toxicological information

- 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 powder	- Chronic NOEC 100 mg/l Marine water Chronic NOEC 3.5 µg/l Fresh water	- Algae - Glenodinium halli Fish - Cyprinus carpio	- 72 hours 4 weeks

**Conclusion/Summary** : Harmful to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 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 powder	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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

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

#### Remarks

: **Solid bulk cargoes**

Harmful to the marine environment with regard to MARPOL Annex V: No

Material is hazardous only in bulk according to the IMSBC: No

## 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.

#### 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

Ni Powder 100 Series

## SECTION 15: Regulatory information

<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.
<b>15.2 Chemical Safety Assessment</b>	: 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	Regulatory data
Carc. 2, H351	Regulatory data
STOT RE 1, H372	Regulatory data
Aquatic Chronic 3, H412	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.
H412	Harmful to aquatic life with long lasting effects.

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

Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
Carc. 2	CARCINOGENICITY - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

<b>Date of printing</b>	: 6/2/2023
<b>Date of issue/ Date of revision</b>	: 5/29/2023
<b>Date of previous issue</b>	: 5/29/2023
<b>Version</b>	: 3.09

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## SECTION 16: Other information

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.