

# Safety information sheet

according to Regulation (EC) No. 1907/2006 (REACH) as modified by 2015/830/EU

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

### 1.1. Product identifier

Product type:

#### Article

This product is an article as defined by REACH regulation article 3. Therefore, a safety data sheet is not required. This document is a safety information sheet, and its objective is to provide to the user the relevant information about health and safety for the above mentioned product, as required by article 33 of REACH regulation. For ease of reading, this document is structured as a safety data sheet.

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

Intended use

Carbon and low alloy steels

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

Name  
Full address  
District and Country

**RODACCIAI SpA**  
**Via Leopardi, 1**  
**23842 Bosisio Parini (LC)**  
**ITALY**

tel. +39 031878111

Competent person responsible for the safety information sheet

**ufficio tecnico – Ing. Matteo Passavanti**  
[matteo.passavanti@rodacciai.com](mailto:matteo.passavanti@rodacciai.com)

### 1.4. Emergency telephone number

For urgent inquiries refer to

tel. +39 031878111

## SECTION 2. Hazards identification

Under normal conditions, steel in solid form does not present any danger for health and safety. The possible formation of vapors or dust during working processes of the material may increase the risk of inhalation and skin contact with hazardous substances.

Treatments that subject steel to thermal or mechanical stresses may involve the formation of inhalable fumes / vapors or dusts.

Short-term exposure to fumes or steel dust generated during thermal and mechanical treatment processes may produce irritation to the eyes and respiratory system.

Chronic inhalation of high concentrations of dust or fumes during thermal and mechanical treatment processes can cause siderosis. Inhalation of high concentrations of ferric oxides during thermal and mechanical treatment processes may have a synergistic effect and increase the long-term risk of developing lung cancer.

Long exposure to Nickel vapors and its compounds during thermal and mechanical treatment processes can cause dermal sensitization, inflammation and ulcers in the respiratory tract and cancer.

See section 8 of this sheet for more information on individual exposure.

### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Carcinogenicity, category 2	H351	Suspected of causing cancer.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.

### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

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Signal words:

Warning

Hazard statements:

**H351** Suspected of causing cancer.  
**H373** May cause damage to organs through prolonged or repeated exposure.  
**H317** May cause an allergic skin reaction.

Precautionary statements:

**P201** Obtain special instructions before use.  
**P261** Avoid breathing dust / fume / gas / mist / vapours / spray.  
**P280** Wear protective gloves / clothing and eye / face protection.  
**P308+P313** IF exposed or concerned: Get medical advice / attention.  
**P362+P364** Take off contaminated clothing and wash it before reuse.

**Contains:** NICKEL

## 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

## SECTION 3. Composition/information on ingredients

### 3.1. Substances

Information not relevant

### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
<b>NICKEL</b> CAS 7440-02-0 EC 231-111-4 INDEX 028-002-00-7	x ≤ 5	Carc. 2 H351, STOT RE 1 H372, Skin Sens. 1 H317, Note 7 S

## SECTION 4. First aid measures

Treatments that subject steel to thermal or mechanical stresses may involve the formation of inhalable fumes / vapors or dusts. First aid measures are not necessary during the handling of the product as supplied by Rodacciai.

### 4.1. Description of first aid measures

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

**SKIN:** Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again. Contact with hot, molten metal will cause thermal burns.

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**INHALATION:** The product as such is not inhalable. In case of inhalation of welding fumes, provide fresh air; in the event of breathing difficulties, get medical advice/attention immediately.

**INGESTION:** Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

In case of allergic reaction, seek medical advice immediately.

## SECTION 5. Firefighting measures

**The product is not considered flammable. The molten metal, at high temperature, can ignite combustible materials.**

#### 5.1. Extinguishing media

##### SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

##### UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

##### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

#### 5.3. Advice for firefighters

##### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

##### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## SECTION 6. Accidental release measures

**Treatments that subject steel to thermal or mechanical stresses may involve the formation of inhalable fumes / vapors or dusts. The measures to be taken in case of accidental release are not necessary during the handling of the product as supplied by Rodacciai.**

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

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

#### 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

#### 6.3. Methods and material for containment and cleaning up

Collect the leaked product and place it in containers for recovery or disposal. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

#### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

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## SECTION 7. Handling and storage

Solid form presents no problems for handling and storage except for accident prevention (crushing, cutting, striking during working processes of the material)

### 7.1. Precautions for safe handling

Handle with care, to avoid cuts, punctures and abrasions. Avoid leaving the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store in well ventilated place, away from direct sunlight.

### 7.3. Specific end use(s)

Information not available

## SECTION 8. Exposure controls/personal protection

There are no exposure limits for steel products. Treatments that subject steel to thermal or mechanical stresses may involve the formation of inhalable fumes / vapors or dusts. The exposure control parameters and the technical control measures are not applicable to the handling phase of the product as supplied by Rodacciai.

### 8.1. Control parameters

In case of welding, please consider the following parameters

COMPONENT	ACGIH TLV-TWA 2017
Iron	5.0 mg/m <sup>3</sup> [dust and fumes]
Chromium	0.5 mg/m <sup>3</sup> [Metal chromium and inorganic non-soluble compounds] 0.003 mg/m <sup>3</sup> [Chromium III & soluble compounds] 0.0002 mg/m <sup>3</sup> [Chromium VI & soluble compounds]
Nickel	1.5 mg/m <sup>3</sup> [elemental] 0.2 mg/m <sup>3</sup> [insoluble compounds] 0.1 mg/mg <sup>3</sup> [soluble compounds]
Manganese	0.02 mg/m <sup>3</sup> [respirable fraction] 0.1 mg/m <sup>3</sup> [inhalable]
Molybdenum	10.0 mg/m <sup>3</sup> [inhalable] 3.0 mg/m <sup>3</sup> [respirable fraction]
Copper	0.2 mg/m <sup>3</sup> [fumes] 1.0 mg/m <sup>3</sup> [dust]
Sulfur	0.66 mg/m <sup>3</sup>
Silicon	0.025 mg/m <sup>3</sup> [respirable fraction]

### 8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. When choosing personal protective equipment, ask your chemical substance supplier for advice. Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

#### HAND PROTECTION

In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374). Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

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## SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

## EYE PROTECTION

In case of welding, wear airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

## RESPIRATORY PROTECTION

If necessary, whether in the presence of dust or fumes, wear suitable respiratory protective equipment (see standard EN 149).

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

When welding in confined spaces, or where local exhaust or ventilation does not keep exposure below occupational exposure limits, evaluate the need to use a full face respirator conforming to EN 143.

## THERMAL HAZARD PROTECTION

In case of welding, wear suitable clothing for the protection against heat, splashes and sparks.

## ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance	solid
Colour	grey
Odour	no odour
Odour threshold	Not applicable
pH	Not applicable
Melting point / freezing point	1450-1800 °C
Initial boiling point	Not available
Boiling range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not applicable
Upper explosive limit	Not applicable
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	7,8 kg/dm <sup>3</sup>
Solubility	insoluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not applicable
Explosive properties	not applicable
Oxidising properties	Not available

### 9.2. Other information

Information not available

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions

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No hazardous reactions are foreseeable in normal conditions of use and storage

#### 10.4. Conditions to avoid

Nothing in particular

#### 10.5. Incompatible materials

Information not available

#### 10.6. Hazardous decomposition products

Information not available

## SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

**The stainless steel products in solid form do not present health and safety hazards to the user because there is no possible exposure to hazardous substances by inhalation, ingestion or dermal contact.**

#### 11.1. Information on toxicological effects

**NICKEL**  
LD50 (Oral) > 9000 mg/kg Rat

**SKIN CORROSION / IRRITATION**  
Does not meet the classification criteria for this hazard class

**SERIOUS EYE DAMAGE / IRRITATION**  
Does not meet the classification criteria for this hazard class

**RESPIRATORY OR SKIN SENSITISATION**  
Sensitising for the skin

**GERM CELL MUTAGENICITY**  
Does not meet the classification criteria for this hazard class

**CARCINOGENICITY**  
Suspected of causing cancer

**REPRODUCTIVE TOXICITY**  
Does not meet the classification criteria for this hazard class

**STOT - SINGLE EXPOSURE**  
Does not meet the classification criteria for this hazard class

**STOT - REPEATED EXPOSURE**  
May cause damage to organs

**ASPIRATION HAZARD**  
Does not meet the classification criteria for this hazard class

## SECTION 12. Ecological information

#### Solid form don't cause problems

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on aquatic environment.

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## 12.1. Toxicity

Information not available

## 12.2. Persistence and degradability

NICKEL

Degradability: information not available

COPPER

Solubility in water < 0,1 mg/l

Degradability: information not available

## 12.3. Bioaccumulative potential

NICKEL

BCF 7

## 12.4. Mobility in soil

Information not available

## 12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

## 12.6. Other adverse effects

Information not available

## SECTION 13. Disposal considerations

### 13.1. Waste treatment methods

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

## SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

### 14.1. UN number

Not applicable

### 14.2. UN proper shipping name

Not applicable

### 14.3. Transport hazard class(es)

Not applicable

### 14.4. Packing group

Not applicable

### 14.5. Environmental hazards

Not applicable

### 14.6. Special precautions for user

Not applicable

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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Information not relevant

## SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

#### Contained substance

Point	27	NICKEL
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#### Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

#### Substances subject to authorisation (Annex XIV REACH)

None

#### Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

#### Substances subject to the Rotterdam Convention:

None

#### Substances subject to the Stockholm Convention:

None

#### Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

### 15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

## SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Carc. 2</b>	Carcinogenicity, category 2
<b>STOT RE 1</b>	Specific target organ toxicity - repeated exposure, category 1
<b>STOT RE 2</b>	Specific target organ toxicity - repeated exposure, category 2
<b>Skin Sens. 1</b>	Skin sensitization, category 1
<b>H351</b>	Suspected of causing cancer.
<b>H372</b>	Causes damage to organs through prolonged or repeated exposure.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
<b>H317</b>	May cause an allergic skin reaction.

#### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation



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- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

## GENERAL BIBLIOGRAPHY

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
  4. Regulation (EU) 2015/830 of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

PROPOPOSITION 65: Carbon and low alloy steels contain nickel and are subject to restrictions imposed by Proposition 65. Therefore, the products to be exported to California need to be identified by means of appropriate warning

CEPA 99: No chemical contained in Annex 1 to CEPA 99 called SOR / 2012-285 is contained in the chemical elements present in Carbon and low alloy steels.

## Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review: sections 2