

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 18.07.2022

Version number 1

Revision: 18.07.2022

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

### · 1.1 Product identifier

· Trade name: **PowderRange 316**

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

· Sector of Use Additive Manufacturing.

### · Application of the substance / the mixture

Metal Working.

Additive Manufacturing.

· Uses advised against Any Other Uses.

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

#### · Manufacturer/Supplier:

Carpenter Additive.

Dennis Road

Widnes

Cheshire, WA8 0GU

United Kingdom

· Further information obtainable from: Health and Safety Department

### · 1.4 Emergency telephone number:

+(44)-870-8200418

For acute incidents contact the emergency services. For non-acute incidents please use the CHEMTREC number provided. CHEMTREC contact numbers are available 24 hours a day, 7 days a week. Language interpretation services are also available.

## 2 Hazards identification

### · 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008



health hazard

Carc. 2 H351 Suspected of causing cancer. Route of exposure: Inhalation.

STOT RE 1 H372 Causes damage to the respiratory system through prolonged or repeated exposure.  
Route of exposure: Inhalation.



Skin Sens. 1 H317 May cause an allergic skin reaction.

### · 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the GB CLP regulation.

(Contd. on page 2)

GB

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 18.07.2022

Version number 1

Revision: 18.07.2022

Trade name: PowderRange 316

(Contd. of page 1)

#### · Hazard pictograms



GHS07 GHS08

#### · Signal word Danger

#### · Hazard-determining components of labelling:

nickel

#### · Hazard statements

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer. Route of exposure: Inhalation.

H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

#### · Precautionary statements

P102 Keep out of reach of children.

P103 Read label before use.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P285 In case of inadequate ventilation wear respiratory protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### · 2.3 Other hazards

#### · Results of PBT and vPvB assessment

· **PBT:** Not applicable.· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

#### · 3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

#### · Dangerous components:

CAS: 7440-47-3 EINECS: 231-157-5 Reg.nr.: 01-2119485652-31	chromium substance with a Community workplace exposure limit	10-25%
CAS: 7440-02-0 EINECS: 231-111-4 Index number: 028-002-00-7 Reg.nr.: 01-2119462838-24	nickel ☠ Carc. 2, H351; STOT RE 1, H372; ⚠ Skin Sens. 1, H317	10-25%
CAS: 7439-96-5 EINECS: 231-105-1 Reg.nr.: 01-2119449803-34	manganese substance with a Community workplace exposure limit	≤2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First aid measures

#### · 4.1 Description of first aid measures

#### · General information:

Immediately remove any clothing soiled by the product.

(Contd. on page 3)

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 18.07.2022

Version number 1

Revision: 18.07.2022

**Trade name: PowderRange 316**

(Contd. of page 2)

*Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

**· After inhalation:**

*Supply fresh air and to be sure call for a doctor.*

*In case of unconsciousness place patient stably in side position for transportation.*

**· After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*

**· After eye contact:** *Rinse opened eye for several minutes under running water.*

**· After swallowing:** *If symptoms persist consult doctor.*

**· 4.2 Most important symptoms and effects, both acute and delayed**

*No further relevant information available.*

**· 4.3 Indication of any immediate medical attention and special treatment needed**

*No further relevant information available.*

### \* 5 Firefighting measures

**· 5.1 Extinguishing media**

**· Suitable extinguishing agents:** *Special powder for metal fires. Do not use water.*

**· 5.2 Special hazards arising from the substance or mixture**

*During heating or in case of fire poisonous gases are produced.*

*Product is not flammable. A high concentration of airborne dusts may form an explosive mixture with air.*

**· 5.3 Advice for firefighters**

**· Protective equipment:** *Mouth respiratory protective device.*

### 6 Accidental release measures

**· 6.1 Personal precautions, protective equipment and emergency procedures**

*Mount respiratory protective device.*

**· 6.2 Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*

**· 6.3 Methods and material for containment and cleaning up:**

*Dispose contaminated material as waste according to item 13.*

*Ensure adequate ventilation.*

**· 6.4 Reference to other sections**

*See Section 7 for information on safe handling.*

*See Section 8 for information on personal protection equipment.*

*See Section 13 for disposal information.*

### \* 7 Handling and storage

**· 7.1 Precautions for safe handling**

*Ensure good ventilation/exhaustion at the workplace.*

*Open and handle receptacle with care.*

*Avoid creating dust where possible. Ensure good dust ventilation during handling. If necessary, use local exhaust ventilation.*

*Wet mopping or HEPA vacuuming is recommended to clean up any dusts that may be generated during handling and processing.*

**· Information about fire - and explosion protection:** *Keep respiratory protective device available.*

**· 7.2 Conditions for safe storage, including any incompatibilities**

**· Storage:**

**· Requirements to be met by storerooms and receptacles:** *Not determined.*

**· Information about storage in one common storage facility:** *Not required.*

**· Further information about storage conditions:** *Keep container tightly sealed.*

(Contd. on page 4)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 18.07.2022

Version number 1

Revision: 18.07.2022

Trade name: PowderRange 316

(Contd. of page 3)

· 7.3 **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- 8.1 **Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.

· **Ingredients with limit values that require monitoring at the workplace:**

### 7440-47-3 chromium

WEL Long-term value: 0.5 mg/m<sup>3</sup>

### 7440-02-0 nickel

WEL Long-term value: 0.5 mg/m<sup>3</sup>  
as Ni; Sk; Carc

### 7439-96-5 manganese

WEL Long-term value: 0.2\* 0.05\*\* mg/m<sup>3</sup>  
as Mn \*inhalable fraction \*\*respirable fraction

· **Additional information:** The lists valid during the making were used as basis.

### 8.2 Exposure controls

#### · **Personal protective equipment:**

#### · **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.

#### · **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.



Filter P3

#### · **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

#### · **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

#### · **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 18.07.2022

Version number 1

Revision: 18.07.2022

Trade name: PowderRange 316

(Contd. of page 4)

## · Eye protection:



Safety glasses

## · Body protection: Protective work clothing

## 9 Physical and chemical properties

## · 9.1 Information on basic physical and chemical properties

## · General Information

## · Appearance:

· Form:	Powder
· Colour:	Grey
· Odour:	Odourless
· Odour threshold:	Not determined.

· pH-value: Not applicable.

## · Change in condition

· Melting point/freezing point: &gt;1,000 °C

· Flash point: Not applicable.

· Flammability (solid, gas): Not determined.

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Not determined.

## · Explosion limits:

· Lower:	Not determined.
· Upper:	Not determined.

· Vapour pressure: Not applicable.

· Density at 20 °C:	4-6 g/cm <sup>3</sup>
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.

· Solubility in / Miscibility with water: Insoluble.

· Partition coefficient: n-octanol/water: Not determined.

## · Viscosity:

· Dynamic:	Not applicable.
· Kinematic:	Not applicable.

· 9.2 Other information No further relevant information available.

## 10 Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided: No further relevant information available.

· 10.3 Possibility of hazardous reactions No dangerous reactions known.

(Contd. on page 6)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 18.07.2022

Version number 1

Revision: 18.07.2022

Trade name: PowderRange 316

(Contd. of page 5)

- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Metal oxide fumes

## 11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation**  
May cause an allergic skin reaction.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**  
Suspected of causing cancer. Route of exposure: Inhalation.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure**  
Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## 12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

GB

(Contd. on page 7)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 18.07.2022

Version number 1

Revision: 18.07.2022

Trade name: PowderRange 316

(Contd. of page 6)

### 14 Transport information

- |   |                 |
|---|-----------------|
| · 14.1 UN-Number<br>· ADR, ADN, IMDG, IATA                                | not regulated   |
| · 14.2 UN proper shipping name<br>· ADR, ADN, IMDG, IATA                  | not regulated   |
| · 14.3 Transport hazard class(es)<br>· ADR, ADN, IMDG, IATA<br>· Class    | not regulated   |
| · 14.4 Packing group<br>· ADR, IMDG, IATA                                 | not regulated   |
| · 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 | Not applicable. |
| · UN "Model Regulation":  | not regulated   |

### 15 Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.  
H372 Causes damage to organs through prolonged or repeated exposure.
- **Department issuing SDS:** Environment protection department.
- **Abbreviations and acronyms:**  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Skin Sens. 1: Skin sensitisation – Category 1  
Carc. 2: Carcinogenicity – Category 2  
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
- **\* Data compared to the previous version altered.**