

**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 174**

### · 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 2

H373 May cause damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.



Skin Sens. 1

H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

### · 2.2 Label elements

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

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

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## · Hazard pictograms



GHS07 GHS08

## · Signal word Warning

## · Hazard-determining components of labelling:

nickel

## · Hazard statements

H317 May cause an allergic skin reaction.

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

H373 May cause damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

H412 Harmful to aquatic life with long lasting effects.

## · Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

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

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face 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	≥2.5-<10%
CAS: 7440-50-8 EINECS: 231-159-6 Index number: 029-024-00-X Reg.nr.: 01-2119480154-42	copper ⚠ Aquatic Chronic 2, H411	≥2.5-≤10%
CAS: 7439-96-5 EINECS: 231-105-1 Reg.nr.: 01-2119449803-34	manganese substance with a Community workplace exposure limit	≤2.5%
CAS: 7440-21-3 EINECS: 231-130-8 Reg.nr.: 01-2119480401-47	silicon ⚠ Flam. Sol. 2, H228	≤2.5%

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· **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.

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 product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

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

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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.
- **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>
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### 7440-02-0 nickel

WEL	Long-term value: 0.5 mg/m <sup>3</sup> as Ni; Sk; Carc
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### 7440-50-8 copper

WEL	Short-term value: 2** mg/m <sup>3</sup> Long-term value: 0.2* 1** mg/m <sup>3</sup> *fume **dusts and mists (as Cu)
-----	---

### 7439-96-5 manganese

WEL	Long-term value: 0.2* 0.05** mg/m <sup>3</sup> as Mn *inhalable fraction **respirable fraction
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### 7440-21-3 silicon

WEL	Long-term value: 10* 4** mg/m <sup>3</sup> *inhalable dust **respirable dust
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· **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

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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.

· **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:**

· <b>Form:</b>	Powder
· <b>Colour:</b>	Grey
· <b>Odour:</b>	Odourless
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· **Melting point/freezing point:** Undetermined.

· **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:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· **Vapour pressure:** Not applicable.

· **Density at 20 °C:** 7.29277-8.2945 g/cm<sup>3</sup>

· **Relative density** Not determined.

· **Vapour density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with water:**

Soluble.

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- |  |  |
|--|--|
| · <b>Partition coefficient: n-octanol/water:</b> | Not determined.                            |
| · <b>Viscosity:</b>                              |  |
| <b>Dynamic:</b>                                  | Not applicable.                            |
| <b>Kinematic:</b>                                | Not applicable.                            |
| · <b>9.2 Other information</b>                   | 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.
- **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**  
May cause 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.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **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.

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- Harmful to aquatic organisms*
- **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.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>14.1 UN-Number</b>  |                 |
| · <b>ADR, IMDG, IATA</b>   | not regulated   |
| · <b>14.2 UN proper shipping name</b>  |                 |
| · <b>ADR, IMDG, IATA</b>   | not regulated   |
| · <b>14.3 Transport hazard class(es)</b>   |                 |
| · <b>ADR, ADN, IMDG, IATA</b>  |                 |
| · <b>Class</b>   | not regulated   |
| · <b>14.4 Packing group</b>  |                 |
| · <b>ADR, IMDG, IATA</b>   | not regulated   |
| · <b>14.5 Environmental hazards:</b>   | Not applicable. |
| · <b>14.6 Special precautions for user</b>                                       | Not applicable. |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | 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**
- H228 Flammable solid.
- H317 May cause an allergic skin reaction.
- H351 Suspected of causing cancer.

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*H372 Causes damage to organs through prolonged or repeated exposure.*  
*H411 Toxic to aquatic life with long lasting effects.*

· **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*

*Flam. Sol. 2: Flammable solids – Category 2*

*Skin Sens. 1: Skin sensitisation – Category 1*

*Carc. 2: Carcinogenicity – Category 2*

*STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1*

*STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2*

*Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2*

*Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

· **\* Data compared to the previous version altered.**

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