

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

- **Product details**
- **Trade name:** *Niobium zirconium alloy*  
*(0.8 up to 1.2 % Zr, bulky form)*
- **Application of the substance / the preparation** *Special alloy*
- **Manufacturer/Supplier:**  
*W.C. Heraeus GmbH*  
*Engineered Materials Division*  
*Heraeusstr. 12-14, D-63450 Hanau*  
*Deutschland/ Germany*
- **Further information obtainable from:** *Jörg Schielke Tel: +49-(0)6181-355051*

## 2 Composition/information on ingredients

- **Chemical characterization**
- **Description:**  
*The product is a bulky (semi-finished) material. It is not present in form of powder or dust.*  
CAS: 7440-03-1 *Niobium (95-99,5%)*  
CAS: 7440-67-7 *Zirconium (0.8-1.2%)*
- **Dangerous components:** *Void*

## 3 Hazards identification

- **Hazard description:** *Not applicable.*
- **Information concerning particular hazards for human and environment:**  
*The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.*
- **Classification system:**  
*The classification is according to the latest editions of the EU-lists, and extended by company and literature data.*

## 4 First aid measures

- **General information:** *In case of accident or if you feel unwell, seek medical advice immediately.*
- **After inhalation:**  
*After inhalation of dust or powder seek medical advice.*  
*Supply fresh air.*
- **After skin contact:**  
*Fine sized material wash off with plenty of water.*  
*If skin irritation continues, consult a doctor.*
- **After eye contact:**  
*Fine sized material in the eye rinse immediately with plenty of water (15 minutes), also under the eyelids.*  
*Seek medical treatment.*
- **After swallowing:**  
*Rinse mouth with water after swallowing of fine sized material.*  
*Seek immediate medical advice.*

## 5 Fire-fighting measures

- **Suitable extinguishing agents:** *Special powder for metal fires. Do not use water.*
- **For safety reasons unsuitable extinguishing agents:** *Water*
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
*Bulky material is not so easily flammable.*  
*Fine sized material is more easily flammable. Keep away from sources of ignition.*

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· **Protective equipment:** Wear self-contained respiratory protective device.

**6 Accidental release measures**

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:**  
Pick up mechanically.  
Send for recovery or disposal in suitable receptacles.

**7 Handling and storage**

- **Handling:**
- **Information for safe handling:**  
Wear protective equipment. Keep unprotected persons away.  
Prevent formation of dust.
- **Information about fire - and explosion protection:** see chapter 5
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.

**8 Exposure controls/personal protection**

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:** Do not eat, drink, smoke or sniff while working.
- **Respiratory protection:**  
Use respiratory protective device against the effects of fumes/dust/aerosol.  
Filter P3
- **Protection of hands:**  
No chemical-protective gloves required.  
Wear gloves for the protection against mechanical hazards according to EN 388.
- **Eye protection:**  
Necessarily if material in form of dust is present.



Tightly sealed goggles

· **Body protection:** Light weight protective clothing

**9 Physical and chemical properties**

· **General Information**

<b>Form:</b>	Particulate
<b>Colour:</b>	Silver grey
<b>Odour:</b>	Odourless

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|--|
| · <b>Change in condition</b><br>Melting point/Melting range: > 2400°C<br>Boiling point/Boiling range: > 4900°C |
| · <b>Flash point:</b> Not applicable.  |
| · <b>Flammability (solid, gaseous):</b> Bulky material is not so easily flammable.                             |
| · <b>Self-igniting:</b> Product is not self igniting.  |
| · <b>Danger of explosion:</b> Product does not present an explosion hazard.                                    |
| · <b>Density at 20°C:</b> ca. 8.5 g/cm <sup>3</sup>  |
| · <b>Solubility in / Miscibility with water:</b> Insoluble.  |
| · <b>Solvent content:</b><br>Organic solvents: 0.0 %   |
| · <b>Solids content:</b> 100.0 %   |

## 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.  
Prevent formation of dust.
- **Dangerous reactions** Reacts with strong acids and alkali.
- **Dangerous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

7440-03-1 niobium powder

Oral LD50 &gt;10000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No data available.
- **on the eye:** No data available.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

## 12 Ecological information

- **Ecotoxicological effects:**
- **Remark:** No data available.
- **General notes:** Generally not hazardous for water

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### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Contact manufacturer for recycling information.  
If residues of products are classified as waste use the legal requirements to assign the appropriate Waste Code.  
Disposal must be made according to official regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -

- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

- **Transport/Additional information:**  
The material in bulky form is not a dangerous good in the sense of this regulations.

### 15 Regulatory information

- **Labelling according to EU guidelines:**  
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

### 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.

- **Department issuing MSDS:** HH-SUS

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