

## Safety data sheet

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

Printing date: 02.03.2011

Version: 3

Revision: 02.03.2011

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

- **Product identifier**
- **Trade name:** DOCERAM Nacera Z
- **Relevant identified uses of the substance or mixture and uses advised against:** -
- **Application of the substance / the preparation:** Ceramics for various industrial applications
- **Details of the supplier of the safety data sheet**
- **Supplier/Manufacturer:**  
DOCERAM Medical Ceramics GmbH  
Heßlingsweg 65-67  
D-44309 Dortmund  
Tel.: +49-231-92 56 68-0  
Fax: +49-231-92 56 68-60
- **Email competent person:** angelika.torges@kft.de
- **Information department:** See supplier/manufacturer
- **Emergency telephone number:**  
National Poisons Information Centre Telephone: 0870 6006266 (UK only)  
Telephone: +44 (0)191 230 5460

#### \* 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** not applicable
- **Information concerning particular hazards for human and environment:**  
No hazards to be particularly mentioned. Please note the information of this Material Safety Data Sheet.
- **Classification system:**  
The classification was made according to the latest editions of the EC-lists and expanded using company data and specialized literature.
- **Label elements**
- **Labelling according to EU guidelines:**  
The product is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (GefStoffV).
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

#### \* 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Zirconium oxide ceramics in pre-sintered discs
- **Dangerous components:**

CAS: 1314-23-4 zirconium dioxide	50-100%
EINECS: 215-227-2	
CAS: 12055-23-1 hafnium dioxide	1-5%
EINECS: 235-013-2	

- **Additional information:**  
The product is not a chemical preparation but an article.  
Upon machining (e.g. grinding) dust may be formed (see chapter 8).  
For further components with national limit values which require monitoring at the workplace please see chapter 8.

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#### 4 First aid measures

- **Description of first aid measures**
- **General information:** If symptoms persist or in case of doubt, seek medical advice.
- **After inhalation:** If dust is inhaled, supply fresh air; consult a doctor in case of complaints.
- **After skin contact:**  
After contact with swarf:  
Clean affected skin thoroughly with water and a mild cleansing agent. No residues shall remain on the skin.
- **After eye contact:**  
This product is an inert solid substance. If particles get into the eyes, remove as customary for foreign bodies.  
Rinse opened eye for several minutes under running water.  
If symptoms persist, consult a doctor.
- **After swallowing:** void
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** Local irritation symptoms
- **Indication of any immediate medical attention and special treatment needed** Symptomatic treatment

#### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
The product is not combustible and does not support the combustion.  
Use fire fighting measures suiting the environment.
- **Special hazards arising from the substance or mixture** No specific hazards known.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

#### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** No special measures required.
- **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

- **Handling:**
- **Precautions for safe handling**  
Machining only by trained staff.  
For subsequent processing observe instructions of the manufacturer.  
Prevent formation of dust.  
Ensure good ventilation/exhaustion at the workplace.  
Avoid inhalation of dust.
- **Information about protection against explosions and fires:** Observe the general rules of industrial fire protection.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Not required
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Store in dry conditions.  
Protect from exposure to light.

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- **Storage class:** 13 Non combustible solid
- **Specific end use(s)**  
In case of thermic and/or mechanic processing apply appropriate extraction system at the machines respectively at the workplace in order to fall below the threshold values mentioned in chapter 8.  
Follow the directions!

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
  - 1314-23-4 zirconium dioxide**
  - WEL (Great Britain) Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 5 mg/m<sup>3</sup>  
as Zr
  - OEL (Ireland) Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 5 mg/m<sup>3</sup>  
as Zr
  - 1344-28-1 aluminium oxide**
  - WEL (Great Britain) Long-term value: 10\* 4\*\* mg/m<sup>3</sup>  
\*inhalable dust \*\*respirable dust
  - OEL (Ireland) Long-term value: 10\* 4\*\* mg/m<sup>3</sup>  
\*inhalable \*\*respirable dust
- **CAS No. Designation of material % Type Value Unit**
- **Additional Occupational Exposure Limit Values for possible hazards during processing:**  
Observe general threshold limit for dust.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** The usual protective measures based on the application have to be followed.
- **Breathing equipment:**  
When material is mechanically machined and dust is formed:  
Short term filter device:  
Filter P2.
- **Protection of hands:** Protective gloves.
- **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.
- **Penetration time of glove material:** -
- **Eye protection:**  
In case of mechanical processing:  
Safety glasses
- **Body protection:** Protective work clothing.

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information:**
- **Appearance:**
  - Form:** Pre-fabricated parts in various forms
  - Colour:** White
- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **pH-value:** not applicable

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- **Change in condition:**
  - Melting point/Melting range:** Not determined
  - Boiling point/Boiling range:** not determined
- **Flash point:** not applicable
- **Ignition temperature:**
  - Decomposition temperature:** Not determined.
- **Self ignition temperature:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower:** not applicable
  - Upper:** not applicable
- **Density:** Not determined
- **Solubility in / Miscibility with Water:** Insoluble
- **Segregation coefficient (n-octanol/water):** not applicable
- **Viscosity:**
  - dynamic:** Not applicable.
  - kinematic:** Not applicable.
- **Other information** No further relevant information available.

#### \*10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Hazardous decomposition products:** No hazardous decomposition products; if instructions for storage and handling are followed.

#### \*11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:** No adverse effects known.
- **Primary irritant effect:**
  - **on the skin:** Swarf may be irritant to skin and respiratory tract.
  - **on the eye:** Eye irritation is possible after mechanical influence (dust).
- **On respiratory tract:** Slight irritations possible.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:**
  - **STOT-single exposure** No data available.
  - **STOT-repeated exposure:** No data available.
- **Aspiration hazard** not relevant
- **Additional toxicological information:**

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

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### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** Not applicable
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Additional ecological information:**
- **General notes:** The product is insoluble in water, inert and not biodegradable.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Contact manufacturer for recycling information.  
Disposal according to instructions of local authorities.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** No hazardous good according to the regulation.
- **Maritime transport IMDG:**
- **IMDG Class:** No hazardous good according to the regulation.
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** No hazardous good according to the regulation.
- **Special precautions for user** Not applicable.

### \*15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Water hazard class:** Not hazardous for water
- **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.

- **Reasons for amendments:**  
EC Regulation 453/2010  
Data on components  
General revision
- **Replaces version dated:** 22.01.2008

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**· Department issuing MSDS:**

KFT Chemieservice GmbH  
Im Leuschnerpark. 3 D-64347 Griesheim  
Postfach 1451 D-64345 Griesheim

Phone: +49 6155 86829-0 Fax: +49 6155 86829-25

Safety Data Sheet Service: +49 6155 86829-22

**· Contact:** Angelika Torges**· \* Data compared to the previous version altered.**

Changes have been made to chapters marked with a \*, as compared to the previous version.

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