


Safety Data Sheet according to 1907/2006/EG, § 6 GefStV. TRGS 220

## 1. Substance/Preparation and company name

<b>Name of substance</b>	Zfx™ Zirconium effect
<b>Use of substance/preparation</b>	Zfx™ Zirconium effect made of zirconium dioxide are ceramic blanks for the manufacture of crown and bridge frameworks.
<b>Company name</b>	<b>Zfx GmbH</b> Kopernikusstraße 15   85221 Dachau   Deutschland Tel. +49 (0) 8131 / 33 244 - 0   Fax +49 (0) 8131 / 33 244 - 10 info@zfx-dental.com   www.zfx-dental.com

CE 0123 

## 2. Composition/information on ingredients

Synonyms	CAS no.	EINECS no.	Concentration	Molecular formula
Zirconium oxide	1314-23-4	215-227-2	70 - 100%	ZrO <sub>2</sub>
Aluminum oxide	1344-28-1	215-691-6	0 - 1%	Al <sub>2</sub> O <sub>3</sub>
Yttrium oxide	1314-36-9	215-233-5	3 - 15%	Y <sub>2</sub> O <sub>3</sub>
Hafnium oxide	12055-23-1	235-013-2	1 - 5%	HfO <sub>2</sub>

## 3. Possible risks

No classification

## 4. First aid measures

<b>Inhalation</b>	Bring into fresh air, contact a doctor if discomfort continues.
<b>Skin contact</b>	Wash thoroughly with warm water and soap. Consult a doctor should skin irritation occur.
<b>Eye contact</b>	Wash out immediately with copious amounts of cool water. Consult a doctor if irritation persists.
<b>Swallowing</b>	Rinse out mouth with water and then drink copious amounts of water, consult a doctor in the event of complaints.



## 5. Fire fighting measures

<b>Suitable extinguishing agent</b>	Fire extinguishing measures suited to environment. The product itself does not burn.
<b>Unsuitable extinguishing agent</b>	Unknown
<b>Special risks</b>	Unknown
<b>Special protective equipment for fire fighting</b>	Wear respiratory protective equipment independent of ambient air in case of fire.
<b>Additional instructions</b>	Prevent extinguishing water from penetration surface water or the ground water system.

## 6. Measures in case of unintended release

<b>Personal precautionary measures</b>	Use personal protective equipment.
<b>Environmental protection measures</b>	Prevent from penetrating surface water or the sewer system.
<b>Cleaning procedure</b>	Pick up mechanically, avoid dust formation, fill into labelled, closable containers.

## 7. Handling and storage

### Handling

This product should only be handled by trained personnel. Ensure that

- × dust formation and dust deposits are avoided
- × all contact with damp (e.g. wet hands) is avoided
- × adequate ventilation and a suitable extraction systems is available.
- × occupational exposure limits (OEL) and / or other limit values are observed

### Storage

Ensure that the blanks:

- × are stored in their original packaging
- × are not exposed to blows or severe vibration
- × do not come into contact with liquid: observe water directives
- × are not contaminated
- × are stored between 5°C and 50°C.

Instructions for common storage:

adhere to VCI storage system rules

Instructions on fire and explosion protection:

no special precautionary measures required

VCI storage class:

13, non-flammable solids

### Specific usage

Please observe instructions for use.

## 8. Exposure control and personal protective equipment

### Exposure limits

<b>TRGS 900</b> – General. Dust limit; alveolar fraction; value:	3 mg/m <sup>3</sup>
<b>TRGS 900</b> – General. Dust limit; respirable fraction; value:	10 mg/m <sup>3</sup> 2(II)
<b>Zirconium Oxide</b> – CAS-No.: EC No.:	1314-23-4 215-227-2
<b>TRGS 900</b> – zirconium and water-insoluble compounds, inhalable fraction, value: Peak limitation category: Skin absorption / Sensitization	1 mg/m <sup>3</sup> 1 (I) Sah
<b>Aluminum Oxide</b> – CAS No.: EC No.:	1344-28-1 215-691-6
<b>DFG</b> - aluminum, aluminum oxide, aluminum hydroxide containing dust (respirable fraction) measured as respirable, value:	1.5 mg/m <sup>3</sup>
<b>DFG</b> - aluminum oxide, fibrous dust, carcinogenic (C)	2
<b>DFG</b> - inhalable fraction measured as the inhalable fraction, value:	4 mg/m <sup>3</sup>

### Personal protective equipment

<b>Peak limitation category:</b>	Respiratory protection with particle filter EN 143
<b>Skin absorption / Sensitization:</b>	Glove material, butyl rubber, natural rubber, nitrile rubber. Details of material thickness and break through time are not applicable for non-dissolved solids / dusts
<b>Eye protection</b>	Wear safety glasses during grinding work.
<b>Body protection</b>	Protective clothing
<b>General protective measures</b>	The precautionary measures usual when handling chemicals should be observed. Store working clothes separately

## 9. Physical and chemical properties

### General information

<b>Appearance</b>	industrially-manufactured solid
<b>Colour</b>	white
<b>Odour</b>	odourless

### Important information regarding health and environmental protection and safety

<b>PH value</b>	no data available
<b>Flammability (solid, gaseous)</b>	not highly flammable, method Directive 67/548/EEC, Annex V, A.10
<b>Flammability (contact with water)</b>	not highly flammable, method Directive 67/548/EEC, Annex V, A.12.
<b>Dust explosion hazard</b>	no data available
<b>Explosion limits</b>	
<b>Lower explosion limit</b>	no data available
<b>Spontaneous ignitability</b>	not highly flammable, method Directive 67/548/EEC, Annex V, A.16.
<b>Density</b>	no data available
<b>Bulk density</b>	1.000 – 1.500 kg/m <sup>3</sup>
<b>Solubility</b>	water insoluble

## 10. Stability and reactivity

<b>Conditions to be avoided</b>	None known
<b>Substances to be avoided</b>	None known
<b>Hazardous degradation products</b>	Not applicable
<b>Thermal degradation</b>	Not applicable

## 11. Toxicological information

Toxicological information not available.

## 12. Ecological information

<b>Ecotoxicity</b>	No ecological problems should be expected if handled and used correctly.
<b>Mobility</b>	Not applicable
<b>Persistence and degradability</b>	Not applicable
<b>Bioaccumulation potential</b>	Unknown
<b>Other harmful effects</b>	Unknown



## 13. Disposal instructions

### Product

- × Disposal should conform to federal/national and local regulations
- × No waste key number can be determined for this product in compliance with the European Waste List, as assignment can only be realised on the basis of the purpose of use of the consumer

### Packaging

- × Non-contaminated and cleaned packaging can be recycled

## 14. Transportation information

<b>Land transportation</b>	ADR/RID	Not hazardous substance
<b>Air transportation</b>	ICAO-TI/IATA-DGR	Not hazardous substance
<b>Sea transportation</b>		Not hazardous substance

## 15. Legal provisions

### Labelling in compliance with EU Directive

<b>Directive 1999/45/EC</b>	Not subject to mandatory labelling
-----------------------------	------------------------------------

### National regulations

<b>Hazardous Incident Ordinance</b>	12.BUMSCHV; Annex 1; Number: not subject to Hazardous Incident Ordinance 96/82/EC; Annex 1, Number: not subject to Seveso II Directive
<b>German Clean Air Act</b>	Number 5.2.1: Total dust, including fine dust

## 16. Other information

Information in this safety data sheet is based on the current state of knowledge and experience. The safety data sheet describes products with regard to safety requirements. However, these specifications are no guarantee of product characteristics and do not establish any contractually-legal relationship. The information is designed to provide you with a guide to safe handling of products mentioned in the safety data sheet during storage, transportation, processing and disposal. Insofar as the product named in this safety data sheet is blended, mixed or processed with other materials, or subject to processing, the information in this safety data sheet cannot be transferred to the new material manufactured in this manner, provided nothing else is expressly achieved from this. The information does not have the importance of statements of condition, assurances of certain characteristics or guarantees.