

**DD Bio ZX<sup>2</sup>**

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**DD Bio ZX<sup>2</sup>**Further trade names**

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**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**DD Bio ZX<sup>2</sup> milling blanks are intended for the fabrication of fixed dentures for long-term use.**Uses advised against**

No information available.

**1.3. Details of the supplier of the safety data sheet**

Company name:	Dental Direkt GmbH	
Street:	Industriezentrum 106-108	
Place:	D-32139 Spenge	
Telephone:	05225 - 8 63 19-0	Telefax: 05225 - 8 63 19-99
E-mail:	info@dentaldirekt.de	
Internet:	www.dentaldirekt.de	
Responsible Department:	info@dentaldirekt.de	

**1.4. Emergency telephone number:**+49 (0) 761 19240 (VIZ Freiburg); Poisons information Centre of Ireland +353 1 809 21 66; <http://www.poisons.ie/Public>**Further Information**

Medical device

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008****Hazard statements**

H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**P273 Avoid release to the environment.  
P501 Dispose of contents/container to an appropriate recycling or disposal facility.**Special labelling of certain mixtures**

95 - &lt; 100 per cent of the mixture consists of component(s) of unknown acute toxicity (dermal).

**2.3. Other hazards**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria. This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

**SECTION 3: Composition/information on ingredients**

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### 3.2. Mixtures

#### Chemical characterization

The product contains: Yttrium zirconium oxide

#### Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
12061-16-4	Dierbium trioxide			<1 %
	235-045-7			
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			

Full text of H and EUH statements: see section 16.

#### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
12061-16-4	235-045-7	Dierbium trioxide	<1 %
	Aquatic Chronic 1; H410: M=1		

#### Further Information

No information available.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Take off contaminated clothing and wash it before reuse.

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

#### After inhalation

Remove person to fresh air and keep comfortable for breathing. In case of respiratory tract irritation, consult a physician.

#### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. If skin irritation occurs: Get medical advice/attention.

#### After contact with eyes

Protect uninjured eye.

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

#### After ingestion

Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person or a person with cramps.

Do NOT induce vomiting.

Call a physician immediately.

### 4.2. Most important symptoms and effects, both acute and delayed

Reference to other sections: 11

### 4.3. Indication of any immediate medical attention and special treatment needed

First Aid, decontamination, treatment of symptoms.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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**Suitable extinguishing media**

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

No data available

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

In case of fire may be liberated: Carbon dioxide (CO<sub>2</sub>), Carbon monoxide, MetalOx

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Do not allow run-off from fire-fighting to enter drains or water courses.

Residues of fire and contaminated water have to be disposed according to the local regulations.

**SECTION 6: Accidental release measures**

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

**General advice**

See protective measures under point 7 and 8.

Personal protection equipment: see section 8

Provide adequate ventilation.

Avoid dust formation. In case of inadequate ventilation wear respiratory protection.

Avoid contact with skin, eyes and clothes.

**For non-emergency personnel**

Remove persons to safety.

Keep unprotected persons away. Stay on the side facing the wind.

**For emergency responders**

Knock down dust with water spray jet.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

**6.3. Methods and material for containment and cleaning up**

**For containment**

Take up mechanically. Avoid dust formation. Collect in closed and suitable containers for disposal. Dispose of waste according to applicable legislation.

**For cleaning up**

Clean with detergents. Avoid solvent cleaners.

**Other information**

Provide fresh air.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

Wear personal protection equipment (refer to section 8).

Keep container tightly closed.

Avoid contact with skin, eyes and clothes.

Avoid release to the environment. Clear spills immediately.

Avoid dust formation. Avoid: Dust deposits

Do not breathe dust. In case of inadequate ventilation wear respiratory protection.

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**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Wash contaminated clothing prior to re-use.

When using do not eat, drink, smoke, sniff.

Wash hands before breaks and after work.

Apply skin care products after work.

**Further information on handling**

Avoid dust formation. Observe instructions for use.

Provide adequate ventilation as well as local exhaustion at critical locations.

To follow: Occupational exposure limit values

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

**Requirements for storage rooms and vessels**

Keep/Store only in original container.

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

**Hints on joint storage**

Keep away from food, drink and animal feedingstuffs.

**Further information on storage conditions**

Keep away from: Frost, Heat Protect from moisture.

Handle with care - avoid bumps, friction and impact.

**7.3. Specific end use(s)**

No data available

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
-	Dusts non-specific, respirable	-	4		TWA (8 h)	
-	Dusts non-specific, total inhalable	-	10		TWA (8 h)	

**8.2. Exposure controls**

**Appropriate engineering controls**

Technical ventilation of workplace

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Suitable eye protection: EN 166

Eye glasses with side protection

goggles

**Hand protection**

Tested protective gloves must be worn: EN ISO 374

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material: NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber)

Breakthrough times and swelling properties of the material must be taken into consideration. Observe the wear time limits as specified by the manufacturer.

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Replace when worn.

**Skin protection**

Protective clothing.

**Respiratory protection**

Usually no personal respiratory protection necessary. Respiratory protection necessary at: exceeding exposure limit values, dust formation

Use appropriate respiratory protection. Particle filter device (EN 143)

**Thermal hazards**

No information available.

**Environmental exposure controls**

See section 7. No additional measures necessary.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	solid, Powder	
Colour:	white	
Odour:	odourless	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		No data available
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		No data available
Decomposition temperature:		No data available
pH-Value:		No data available
Water solubility:		practically insoluble
Solubility in other solvents		
No information available.		
Partition coefficient n-octanol/water:		No data available
Vapour pressure:		No data available
Density:		No data available
Bulk density:		1.000-1.500 kg/m <sup>3</sup>
Relative vapour density:		No data available

**9.2. Other information****Information with regard to physical hazard classes**

Explosive properties	
No data available	
Sustained combustibility:	No data available
Self-ignition temperature	
Solid:	No data available
Gas:	No data available
Oxidizing properties	
No data available	

**Other safety characteristics**

Evaporation rate:	No data available
Solid content:	100,00 %
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
Viscosity / dynamic:	No data available

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**Further Information**

No information available.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

No information available.

**10.4. Conditions to avoid**

No information available.

**10.5. Incompatible materials**

No information available.

**10.6. Hazardous decomposition products**

MetalOx

**Further information**

No further relevant information available.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

No information available.

**Acute toxicity**

Based on available data, the classification criteria are not met.

**ATEmix calculated**

ATE (oral) &gt; 2000 mg/kg; ATE (dermal) &gt; 2000 mg/kg; ATE (inhalation vapour) &gt; 20 mg/l; ATE (inhalation dust/mist) &gt; 5 mg/l

**Irritation and corrosivity**

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

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**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Practical experience**

After eye contact: Is féidir le deannach a bheith ina chúis le greannú meichniúil.

Following inhalation: dust/mist May cause respiratory irritation.

**11.2. Information on other hazards**

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**Further information**

Calculation method.

**SECTION 12: Ecological information****12.1. Toxicity**

Harmful to aquatic life with long lasting effects.  
No information available.

**12.2. Persistence and degradability**

Product/Substance is inorganic.

**12.3. Bioaccumulative potential**

No information available.

**12.4. Mobility in soil**

No information available.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

No information available.

**Further information**

Water hazard class 2

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. (AVV 180106\*; 160303\*)

Hazardous waste according to Directive 2008/98/EC (waste framework directive).

**Contaminated packaging**

Dispose of waste according to applicable legislation. Non-contaminated packages may be recycled.

**SECTION 14: Transport information****Land transport (ADR/RID)****14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.**Inland waterways transport (ADN)****14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.**Marine transport (IMDG)****14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.**Air transport (ICAO-TI/IATA-DGR)****14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No dangerous good in sense of this transport regulation.

**14.7. Maritime transport in bulk according to IMO instruments**

No dangerous good in sense of this transport regulation.

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)  
Classification according to Regulation (EC) No 1272/2008 [CLP]  
COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)  
Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste  
Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives

**National regulatory information**

Water hazard class (D): 2 - obviously hazardous to water

**Additional information**

Germany:  
Hazardous Substances Ordinance (GefStoffV)  
Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV)

TRGS 201, TRGS 220, TRGS 400, TRGS 420, TRGS 500, TRGS 509, TRGS 510, TRGS 555, TRGS 600, TRGS 900

DGUV Information 213-850  
DGUV Information 213-730

**15.2. Chemical safety assessment**

For the following substances of this mixture a chemical safety assessment has been carried out:  
Dierbium trioxide

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 1,13,15.

**Abbreviations and acronyms**

Aquatic Acute: Acute aquatic hazard  
Aquatic Chronic: Chronic aquatic hazard  
ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road )  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer  
(Regulations Concerning the International Transport of Dangerous Goods by Rail )  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures,  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
EC50: Effect concentration, 50 percent  
DNEL: Derived No Effect Level  
PNEC: Predicted No Effect Concentration  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative

**Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]**

Classification	Classification procedure
Aquatic Chronic 3; H412	Calculation method

**Relevant H and EUH statements (number and full text)**

H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*