

EC - Safety Data Sheet

1. Substance / Preparation and company name

1.1 Name of substance or preparation

DD Bio Z (incl. DD Bio Z color)

1.2 Use of substance / preparation

DD Bio Z are dental milling blanks made of yttria-stabilized zirconia for the manufacture of dental restorations. DD Bio Z can be used for all dental constructions with up to two pontics in anterior and posterior region.

1.3 Company name

Dental Direkt GmbH
Industriezentrum 106-108
32139 Spenge
Germany

2. Composition / information on ingredients

Substance name	CAS no.	EINECS no.	Concentration	Molecular formula
Zirconium oxide	1314-23-4	215-227-2	88 - 96%	ZrO ₂
Aluminum oxide	1344-28-1	215-691-6	0 – 1%	Al ₂ O ₃
Yttrium oxide	1314-36-9	215-233-5	4 – 6%	Y ₂ O ₃
Hafnium oxide	12055-23-1	235-013-2	1 - 5%	HfO ₂
Other oxides	-	-	< 1 %	-

3. Possible risks

No classification

4. First aid measures

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

5. Fire fighting measures

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

6. Measures in case of unintended release

6.1 Personal precautionary measures

Use personal protective equipment.

6.2 Environmental protection measures

Prevent from penetrating surface water or the sewer system.

6.3 Cleaning procedure

Pick up mechanically, avoid dust formation, fill into labelled, closable containers

7. Handling and storage

7.1 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 system is available.
- occupational exposure limits (OEL) and / or other limit values are observed

7.2 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

7.3 Specific usage

Please observe instructions for use.

8. Exposure control and personal protective equipment

8.1 Exposure limits

General dust limit value

TRGS 900

General dust limit value

Alveolar fraction

Value 3 mg/m³

TRGS 900

General dust limit value

Inhalable fraction

Value 10 mg/m³

Peak limit 2 (II)

Zirconium dioxide

CAS no. 1314-23-4

EG no. 215-227-2

TRGS 900

Zirconium and water-insoluble compound

Inhalable fraction

Value 1 mg/m³

Peak limit 1 (I)

Mainresorption / sensitization Sah

Aluminium oxide

CAS no. 1344-28-1

EG no. 215-691-6

DFG

Containing aluminium-, aluminium oxide-, aluminium hydroxide dusts (alveolar fraction)

Measured as alveolar fraction

Alveolar fraction

Value 1.5 mg/m³

DFG

Aluminium oxide

Flue

Carcinogenic (C) 2

DFG

Containing aluminium-, aluminium oxide-, aluminium hydroxide dusts (inhalable fraction)

Measured as inhalable fraction

Inhalable fraction

Value 4 mg/m³

8.2 Personal protective equipment

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

9. Physical and chemical properties

9.1 General information

Description

Appearance	industrially-manufactured solid
Colour	white
Odour	odourless

9.2 Important information regarding health and environmental protection and safety

Description

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

10. Stability and reactivity

10.1 Conditions to be avoided

None known

10.2 Substances to be avoided

None known

10.3 Hazardous degradation products

Not applicable

10.4 Thermal degradation

Not applicable

11. Toxicological information

Toxicological information not available

12. Ecological information

12.1 Ecotoxicity

No ecological problems should be expected if handled and used correctly.

12.2 Mobility

Not applicable

12.3 Persistence and degradability

Not applicable

12.4 Bioaccumulation potential

Unknown

12.5 Other harmful effects

Unknown

13. Disposal instructions

13.1 Product

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

Specifications

Land transportation ADR/RID

Air transportation ICAO-TI/IATA-DGR

Sea transportation

Description

Not hazardous substance

Not hazardous substance

Not hazardous substance

15. Legal provisions

15.1 Labelling in compliance with EU Directive

Directive 1999/45/EC

Not subject to mandatory labelling

15.2 National regulations

Hazardous Incident Ordinance - 12.BImSchV, Annex 1

Number is not subjected to failure V

- 96/82/EC, Annex 1

Number is not subjected to Seveso II Directive

German Clean Air Act

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.