

EU – Safety Data Sheet



According to 1907/2006 (REACH)

Date of issue: 10.10.2011

Zirkon BioStar Colour Blanks

1. Identification of the substance / Preparation and Company:

Identification of the substance or preparation:

Commercial product name: Zirkon BioStar Colour Blanks

Company / Manufacturer: SILADENT Dr. Böhme & Schöps GmbH
Im Klei 26
D - 38644 Goslar
0 53 21 / 37 79 – 0
0 53 21 / 38 96 32
info@sbs-dental.de / www.sbs-dental.de

2. Composition / Information on Ingredients:

2.1 Chemical nature: Mixture.

2.2 Hazardous components:

Chemical Name	CAS-No.	EC-No.	Symbol(s)	R-Phrases	Concentration [%]
Zirconium oxide (ZrO ₂)	1314-23-4	215-227-2			87 - 95
Yttrium oxide	1314-36-9	215-233-5			4.9 - 5.3
Hafnium oxide (HfO ₂)	12055-23-1	235-013-2			<5
Diiron trioxide	1309-37-1	215-168-2			0.1 - 2

3. Hazards Identification:

Classification: No classification.

4. First aid measures:

4.1 In case of skin contact: Wash off with soap and water.

4.2 If swallowed: Obtain medical attention.

5. Fire Fighting measures:

5.1 Suitable extinguishing media: Extinguishing methods depends upon fire in vicinity poses.
The product itself does not burn.

5.2 Extinguishing media which shall not be used for safety reasons: None known.

5.3. Special exposure hazards arising from the substances or preparation itself, combustion products, resulting gases: None known.

5.4 Special protective equipment for fire-fighters: In the event of fire, wear self-contained breathing apparatus.

5.5 Additional advice: Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental release measures:

6.1 Personal precautions: Use personal protective equipment.

6.2 Environmental precautions: Do not flush into surface water or sanitary sewer system.

6.3 Methods for cleaning up: Use mechanical handling equipment.
Fill into labelled, sealable containers.

7. Handling and Storage:

7.1 Handling:

Advice on safe handling: Avoid dust formation. Ensure adequate ventilation and, if necessary, exhaust ventilation when handling or transferring the product. Ensure that the occupational exposure limit value/s (OEL) and/or other limit values are complied with.

Advice on protection against fire and explosion: No special precautions required.

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- 7.2 Storage:
 Requirements for storage areas and containers: Comply with directives governing water law.
 Further information on storage conditions: Store in tightly closed containers in a dry place.

8. Exposure controls / Personal protection:

- 8.1 Exposure limit values:
- Zirconium and water-insoluble compounds; 1314-23-4**
 Basis: TRGS 900 (Technical Rules for Hazardous Substances)
 Limit value: 1 mg/m³ E
 Peak limitation: 1(I)
 Note: 10, DFG, Sah
- Yttrium oxide; CAS-no.: 1314-36-9**
 Basis: TRGS 900 (Technical Rules for Hazardous Substances)
 Note: No limit value established.
- Hafnium oxide (HfO₂); CAS-no.: 12055-23-1**
 Basis: TRGS 900 (Technical Rules for Hazardous Substances)
 Note: No limit value established.
- General dust limit value; CAS-no.: 1309-37-1**
 Basis: TRGS 900 (Technical Rules for Hazardous Substances)
 Limit value: 3 mg/m³ A
 10 mg/m³ E
 Peak limitation: 2(II)
 Note: AGS
- Zirconium dioxide (ZrO₂); CAS-no.: 1314-23-4**
 Basis: OEL (EC)
 Note: No limit value established.
- Yttrium oxide; CAS-no.: 1314-36-9**
 Basis: OEL (EC)
 Note: No limit value established.
- Hafnium oxide (HfO₂); CAS-no.: 12055-23-1**
 Basis: OEL (EC)
 Note: No limit value established.
- Diiron trioxide; CAS-no.: 1309-37-1**
 Basis: OEL (EC)
 Note: No limit value established.
- 8.2 Personal protective equipment:
 Respiratory protection: Respiratory protective device with particle filter EN 143.
 Hand protection: Glove material: Butyl-rubber, Natural rubber, Nitrile rubber.
 The data about break through time/strength of material is not valid for undissolved solids/dusts.
 Eye protection: Safety glasses.
 Body protection: Protective suit.
 General protective measures: Handle in accordance with good industrial hygiene and safety practice.
 Keep working clothes separately.

9. Physical and chemical properties:

- 9.1 Appearance:
 Form: Disc, Block, Cylinder, Customer-specific form
 Colour: Grey
 White
 Odour: Odourless
 pH-Value: No data available.

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9.2 Change in physical state:	
Melting point / Melting range:	No data available.
Burning number:	1
	Method: VDI 2263
Flammability (solid, gas):	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 explosiveness:	No data available.
Explosion limits:	
- Lower explosion limit:	No data available.
Auto-flammability:	Not auto-flammable.
Density:	> 6 g/cm ³
Solubility:	
- Water solubility:	Practically insoluble.

10. Stability and Reactivity:

10.1 Conditions to avoid:	None known.
10.2 Materials to avoid:	None known.
10.3 Thermal decomposition:	Not applicable.
10.4 Hazardous decomposition products:	Not applicable.

11. Toxicological Information:

11.1 For risk assessment data of relevant ingredients:	
Acute oral toxicity:	LD50 rat > 5.000 mg/kg
Yttrium oxide:	Method: No information available.
Skin irritation:	Rabbit
Yttrium oxide:	No skin irritation.
	Method: No information available.
Eye irritation:	Mild eye irritation.
Yttrium oxide:	Method: No information available.

12. Ecological Information:

12.1 General information:	No information on ecology is available.
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13. Disposal Considerations:

13.1 Product:	The federal, regional and local rules and regulations governing disposal must be complied with.
13.2 Packaging:	Packaging that is not contaminated and has been cleaned can be recycled.

14. Transport Information:

14.1 Land transport ADR/RID:	No dangerous goods.
14.2 Air transport ICAO-TI/IATA-DGR:	No dangerous goods.
14.3 Sea transport IMDG:	No dangerous goods.

15. Regulatory Information:

15.1 Labelling according to EC Directives:	
Directive 1999/45/EC:	No labelling required.

16. Further 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.