

# Safety Data Sheet

Revision date:  
06/07/2017

In compliance with n°1907/2006/CE and US GHS

Version : 15

## BioSpec Products Zirconium Oxide

### Section 1. Identification of the product and of the company/undertaking

#### 1.1. Product

identifier

BioSpec Products Zirconia/Silica Beads

**Commercial name**

Ceramic electrofused beads

Description

Exempted from registration under REACH regulation EC N° 1907/2006

**REACH registration numbers**

1.2. Relevant identified uses of the substance or mixture and uses advised against Identified uses  
media

1.3. supplier of the safety data sheet

Details of the

**Company/undertaking identification**

BioSpec Products, Inc.

Address

280 N. Virginia Ave

Tel.

Bartlesville, OK 74003

Fax

918-336-3363

E-mail

918-336-6060  
info@biospec.com

1.4. Emergency telephone number 918-336-3363

**Emergency tel.**

### Section 2. Hazards identification

#### 2.1. Classification of the substance or mixture

CLP regulation EC 1272/2008

Ceramic beads are not classified as a hazardous product

OSHA GHS (US)

Ceramic beads are not classified as a hazardous product

#### 2.2. Label elements

Not required under Regulation EC 1272/2008 and OSHA GHS (US).

#### 2.3. Other Hazard

Adverse effects on health

Possible irritation through abrasive friction.

NFPA Hazard Rating:

Reactivity: 0  
Flammability: 0  
Health: 0

WHMIS

Not hazardous

### Section 3. Composition/information on ingredients

N°CAS	N° EINECS	Components	Weight %
1314-23-4	215-227-2	Zirconium Dioxide (ZrO <sub>2</sub> )	64 to 70 %
60676-86-0	262-373-8	Silica glass (SiO <sub>2</sub> )	29 to 39 %

Additional information Silica glass free from crystalline silica  
Traces of radioactive elements of natural origin (U+Th < 0.05%)

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#### Section 4. First aid measures

##### 4.1. Description of first aid measures

<u>Eye contact</u>	Treat in the same way as a piece of grit in the eye, rinse thoroughly, pulling the eyelids well away from the eye. If irritation persists, consult an eye specialist.
<u>Ingestion</u>	N/A
<u>Skin contact</u>	N/A
<u>Inhalation</u>	N/A

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

No data available

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

Treat symptomatically.

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#### Section 5. Fire fighting measures

##### 5.1. Extinguishing media

Suitable extinguishing media All extinguishing agents can be used.

##### 5.2. Special hazards arising

from the substance or mixture This product is not combustible or explosive.  
Does not present any particular risk in the event of fire.

##### 5.3. Advice for firefighters

Specific fire fighting methods Does not require any particular methods

##### Protection of fire-fighters

Use appropriate protective equipment.

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#### Section 6. Accidental release measures

##### 6.1. Personal precautions,

protective equipment  
and emergency procedures

Avoid contact with the eyes and the inhalation of dust.

##### 6.2. Environmental precautions

Do not discharge into drains and rivers.

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

Vacuum up the product.  
Risk of slipping on rolling beads.

##### 6.4. Reference to other sections

See section 8 for personal protective equipment. See section 13 for disposal considerations.

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#### Section 7. Handling and storage

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### 7.1. Precautions for safe handling

Technical measures	Ensure areas are well ventilated.
Precautions to be taken	For operations generating dust: Wear P3 dust mask (or N95 for US). Wear safety goggles.

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

Technical measures	Does not require any specific or particular technical measures.
Recommended storage conditions	Dense material: Observe safety rules when stacking.

7.3. Specific end use(s) See section 1.1

## Section 8. Exposure control / personal protection

### 8.1. Control parameters

Engineering measures Use in an enclosed cabinet or containment with an equipment able to capture the dust.

Control parameters No applicable specific control parameters.

### Occupational exposure limit values and/or biological limit values

Components	N° CAS	N° EINECS	Limit values	Remarques
Zirconium compounds	7440-67-7	231-176-9	5 mg/m <sup>3</sup> in Zr	ACGIH, OSHA for 8 hours (TWA)
			10 mg/m <sup>3</sup> in Zr	ACGIH, OSHA for 15 minutes (STEL)
Silica glass	65997-17-3	266-046-0	5 mg/m <sup>3</sup>	ACGIH, OSHA for 8 hours (TWA)
Dust with not specific effect			10 mg/m <sup>3</sup> (inhalable) 3 mg/m <sup>3</sup> (alveolar)	ACGIH (TLV)
			10 mg/m <sup>3</sup> (inhalable) 5 mg/m <sup>3</sup> (alveolar)	INRS (VLEP France), OSHA (PEL)

### 8.2. Exposure controls

#### Personal protective equipment

Respiratory protection Wear a P3 dust mask (or N95 for US) during any operation which might generate dust.

Hand protection Wear safety gloves.  
Eye protection Wear safety goggles.

Skin and body protection Safety shoes.

Hygiene measures Do not drink, eat or smoke during use.

## Section 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<u>Physical State</u>	Beads
<u>Color</u>	White

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<u>Odor</u>	Odorless
<u>Median diameter</u>	< 4 mm
<u>Specific temperatures</u>	Melting point: between 1850°C and 2550°C
<u>Flammability characteristics</u>	Flash point: not applicable
<u>Bulk density</u>	2.3 kg/dm <sup>3</sup>
<u>Mass density</u>	3.8 kg/dm <sup>3</sup>
<u>Solubility</u>	Insoluble

9.2. Other information None

### Section 10. Stability and reactivity

<u>10.1. Reactivity.</u>	No reactivity under normal conditions of use.
<u>10.2. Chemical stability.</u>	Stable under normal conditions of use and below 1300°C
<u>10.3. Possibility of hazardous reactions.</u>	No data available
<u>10.4. Conditions to avoid.</u>	No dangerous reactions known under normal conditions of use.
<u>10.5. Incompatible materials</u>	
<u>Materials to avoid</u>	Reacts with strong acids and bases.
<u>10.6. Hazardous decomposition products.</u>	No data available

### Section 11. Toxicological information

#### 11.1. Information on toxicological effects

<u>Toxicity</u>	No specific data available.
<u>Local effects</u>	The dust can cause mechanical irritation of the eyes and the respiratory tract.

### Section 12. Ecological information

<u>12.1. Toxicity</u>	
<u>Ecotoxicity</u>	No data available.
<u>Effects on aquatic organisms</u>	No data available.
<u>12.2. Persistence and degradability</u>	No data available
<u>12.3. Bioaccumulative potential</u>	No data available
<u>12.4. Mobility in soil</u>	No data available
<u>12.5. Results of PBT and vPvB assessment</u>	Not relevant.
<u>12.6. Other adverse effects</u>	No data available

### Section 13. Disposal considerations

#### 13.1. Waste treatment methods

<u>Waste from product</u>	
<u>Destruction/disposal</u>	The waste materials from surface treatment process must undergo a

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physico-chemical analysis in order to define their mode of disposal.

Possibility to collect the used ceramic beads for recycling upon request (product stewardship).

Contaminated packaging  
Destruction/disposal

Dispose of at an authorised site.

#### Section 14. Transport information

International regulations  
RID/ADR/IMDG/IATA

Not restricted.

#### Section 15. Regulatory information

##### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation CLP (EC) 1272/2008: The ceramic beads are not classified as a dangerous product. All constituent substances are listed on TSCA (Toxic Substance Control Act). None of the constituent substances are listed in Proposition 65 (California).

##### 15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

#### Section 16. Other information

Restrictions of use This product must not be used for applications other than those indicated in § 1.

Replaces sheet 28/04/2015

##### Information concerning the modifications:

- information about Directives 67/548/CEE and 1999/45/CE cancelled in sections 2 and 15

This sheet is in addition to the technical sheets but it does not replace them. The information is given in good faith based on our current knowledge of this product, at the time of publication.

The attention of the user is drawn to the risks possibly incurred by using the product for any other purpose than that for which it was intended.

This does not in any way exempt the user from knowing and applying all the regulations governing his use of the product.

It is the sole responsibility of the user to take all precautions required in handling the product.

The mandatory regulations mentioned are only intended to help the user to fulfil his obligations regarding the use of hazardous products.

This listing must not be considered exhaustive. It does not exonerate the user from ensuring that other legal obligations than those mentioned do not exist, relating to the use and storage of the product for which he solely is responsible.