



# SAFETY DATA SHEET

## -Zirconia Beads

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### 1. IDENTIFICATION

**Product name:** Zirconia Beads**Synonyms:** Zirconium Beads, Grinding Beads, Grinding Resin**Product Use:** Dispersing and Superfine grinding Paint,Pigment,Coating,Ink**Restrictions On Use:** None known**Supplier:** Becens Co., Limited**Emergency Number:** 008618703715763**Web:** <https://becens.com/>

### 2. HAZARDS IDENTIFICATION

**GHS US labeling:** No labeling applicable**Other hazards not contributing to the classification:** None**Unknown acute toxicity (GHS US):** Not applicable

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Substances:**Not applicable

Name	Product identifier	%	GHS US classification
Zirconium oxide (ZrO <sub>2</sub> )	(CAS-No.) 1314-23-4	66.5	Not classified
Silica, amorphous	(CAS-No.) 7631-86-9	33.5	Not classified

### 4. FIRST AID MEASURES

**Eyes:** Flush eyes with large amounts of water. If signs/symptoms persist, seek medical attention.**Skin:** Wash affected area water. If signs/symptoms persist, seek medical attention.

**Inhalation:** Move person to fresh air. If signs/symptoms develop, seek medical attention.

**Ingestion:** Ingestion is an unlikely route of exposure. Seek medical attention if ingested.

**Most important symptoms and effects (acute and delayed):** Not expected to present a significant hazard under anticipated conditions of normal use.

## 5. FIRE-FIGHTING MEASURES

### 5.1. Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media :** Water spray. Dry powder. Foam.

**Unsuitable extinguishing media :** Not determined.

### 5.2. Specific hazards arising from the chemical

**Reactivity:** The product is non-reactive under normal conditions of use, storage and transport.

### 5.3. Special protective equipment and precautions for fire-fighters

**Firefighting instructions :** Exercise caution when fighting any chemical fire.

**Protection during firefighting :** Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

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

#### 6.1.1. For non-emergency personnel

**Emergency procedures :** Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

**Protective equipment :** Do not attempt to take action without suitable protective equipment.

### 6.2. Environmental precautions

Avoid release to the environment.

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

**Methods for cleaning up :** In case of large spillages: Shovel or sweep up and put in a closed container for disposal. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Notify authorities if product enters sewers or public waters.

**Other information :** Dispose of materials or solid residues at an authorized site.

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

**Precautions for safe handling :** Ensure good ventilation of the work station. Wear personal protective equipment.

**Hygiene measures :** Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

**Storage conditions :** Store in a well-ventilated place. Keep cool.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Zirconium oxide (ZrO <sub>2</sub> ) (1314-23-4)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> Table Z-1 Limits for Air Contaminants

Silica, amorphous (7631-86-9)		
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	6 mg/m <sup>3</sup> (vacated)

### 8.2. Appropriate engineering controls

**Appropriate engineering controls :** Ensure good ventilation of the work station.

**Environmental exposure controls :** Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

**Hand protection:** Protective gloves

**Eye protection:** Safety glasses

**Skin and body protection:** Wear suitable protective clothing

**Respiratory protection:** In case of insufficient ventilation, wear suitable respiratory equipment

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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

**Physical state :** Solid

**Appearance :** White spherical beads.

**Color :** white

**Odor :** odorless

**Odor threshold :** No data available

**pH :** No data available

**Melting point :** No data available

**Freezing point :** Not applicable

**Boiling point :** No data available

**Flash point :** Not applicable

**Flammability (solid, gas) :** Non flammable.

**Vapor pressure :** No data available

**Relative density :** 3.2 - 3.8

**Specific gravity / density :** 3.8 g/ml

**Solubility :** No data available

**Log Pow :** No data available

**Auto-ignition temperature :** Not applicable

**Oxidizing properties :** No data available

**Decomposition temperature :** No data available

**Viscosity, kinematic :** Not applicable

**Viscosity, dynamic :** No data available

**Explosion limits :** Not applicable

**Explosive properties :** No data available

**Relative evaporation rate (butyl acetate=1) :** No data available

**Relative vapor density at 20 °C :** No data available

**9.2. Other information**

No additional information available

**10. STABILITY AND REACTIVITY****10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

None under recommended storage and handling conditions .

**10.5. Incompatible materials**

None known

**10.6. Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced. On combustion, forms: carbon oxides (CO and CO<sub>2</sub>).

**11. TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

Acute toxicity : Not classified

<b>Silica, amorphous (7631-86-9)</b>	
LD50 oral rat	7900 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 2.2 mg/l (Exposure time: 1 h)
ATE US (oral)	7900 mg/kg body weight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

<b>Silica, amorphous (7631-86-9)</b>	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

## 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - general** : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment

<b>Silica, amorphous (7631-86-9)</b>	
LC50 fish 1	5000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	7600 mg/l (Exposure time: 48 h - Species: Ceriodaphnia dubia)

### 12.2. Persistence and degradability

<b>Zirconium Grinding Beads</b>	
Bioaccumulative potential	Not established.

### 12.3. Bioaccumulative potential

<b>Zirconium Grinding Beads</b>	
Bioaccumulative potential	Not established

<b>Zirconium oxide (ZrO<sub>2</sub>) (1314-23-4)</b>	
BCF fish 1	(no bioaccumulation)

<b>Silica, amorphous (7631-86-9)</b>	
BCF fish 1	(no bioaccumulation expected)

### 12.4. Mobility in soil

<b>Zirconium Grinding Beads</b>	
Ecology - soil	Not established.

### 12.5. Other adverse effects

Effect on global warming Not established

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Disposal methods

**Waste treatment methods** : Dispose of contents/container in accordance with licensed collector's sorting instructions.

**Product/Packaging disposal recommendations** : Dispose in a safe manner in accordance with local/national regulations.

## 14. TRANSPORT INFORMATION

### Department of Transportation (DOT)

In accordance with DOT

Not regulated

### Transport by sea

Not regulated

### Air transport

Not regulated

## 15. REGULATORY INFORMATION

### 15.1. US Federal regulations

Zirconium Grinding Beads	
SARA Section 311/312 Hazard Classes	None

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

### 15.2. International regulations

#### CANADA

Zirconium oxide (ZrO <sub>2</sub> ) (1314-23-4)
Listed on the Canadian DSL (Domestic Substances List)

Silica, amorphous (7631-86-9)
Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

Zirconium oxide (ZrO <sub>2</sub> ) (1314-23-4)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Silica, amorphous (7631-86-9)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**National regulations**

<b>Zirconium oxide (ZrO2) (1314-23-4)</b>	
Listed on the AICS (Australian Inventory of Chemical Substances)	
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)	
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory	
Listed on the Japanese ISHL (Industrial Safety and Health Law)	
Listed on the Korean ECL (Existing Chemicals List)	
Listed on NZIoC (New Zealand Inventory of Chemicals)	
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)	
Listed on INSQ (Mexican National Inventory of Chemical Substances)	
Listed on CICR (Turkish Inventory and Control of Chemicals)	
Listed on the TCSI (Taiwan Chemical Substance Inventory)	
<b>Silica, amorphous (7631-86-9)</b>	
Listed on the AICS (Australian Inventory of Chemical Substances)	
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Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory	
Listed on the Japanese ISHL (Industrial Safety and Health Law)	
Listed on the Korean ECL (Existing Chemicals List)	
Listed on NZIoC (New Zealand Inventory of Chemicals)	
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)	
Listed on INSQ (Mexican National Inventory of Chemical Substances)	
Listed on CICR (Turkish Inventory and Control of Chemicals)	
Listed on the TCSI (Taiwan Chemical Substance Inventory)	

**15.3. US State regulations**

<b>Zirconium Grinding Beads</b>	
U.S. - California - Proposition 65 - Other information	California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

<b>Zirconium oxide (ZrO2) (1314-23-4)</b>	
U.S. - Massachusetts - Right To Know List	

<b>Silica, amorphous (7631-86-9)</b>
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S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List
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## NOTICE

This SDS summarizes, to our best knowledge at the date of issue, the chemical, health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Becens Co., Limited cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. If clarification or further information is needed, the user should contact Becens Co., Limited at the contact details on page 1. Becens Co., Limited's responsibility for the material as sold is subject to its terms and conditions of sale, a copy of which is available upon request.