



---

## Material Safety Data Sheet

According to 1907/2006/EC  
Version:10/2017

---

### 1. Product Identification

1.1 Chemical Name: Zirconia Block  
1.2 Chemical Formula:  $ZrO_2$   
1.3 application / preparation: Zirconia Block for dental restorations  
1.4 producer/supplier: Shandong Huge Dental Material Corporation  
TEL: +86-0633-2277286 FAX: +86-0633-2277286

---

### 2. Composition/Information on Ingredients

Chemical Name:	CAS#	Hazardous(Y/N)	concentration(%)
zirconium oxide	1314-23-4	Y	>85
Yttrium oxide	1314-36-9	Y	<6
Hafnium oxide	12055-23-1	N	<5
Aluminum oxide	1344-28-1	Y	<1
Inert ingredients	Proprietary	N	<5

---

### 3. Hazards Identification

3.1 Hazard designation for human an environment: n.a.  
3.2 Hazardous / non hazardous preparation: n.a.  
3.3 Harmful effects to health and evironment on: do not inhale dust  
3.4 Other hazards based on Material : none

---

### 4. First Aid Measures



- 
- 4.1 general information: no special measures are required
- 4.2 after inhalation: supply fresh air. If irritations occur or persist, consult a physician
- 4.3 after skin contact: rinse thoroughly with warm water and soap
- 4.4 after eye contact: rinse open eye for several minutes under running water. If symptoms persist, consult a physician
- 4.5 after swallowing: rinse mouth thoroughly with water. If symptoms persist consult a physician
- 4.6 information for physician: n.a.
- 

## 5. Fire-fighting Measures

- 5.1 suitable extinguishing media n.a.
- 5.2 not suitable extinguishing media n.a.
- 5.3 hazardous combustion products n.a.
- 5.4 special protection equipment n.a.
- 

## 6. Accidental Release Measures

- 6.1 personal precautions: common use of protective clothing, dust mask and dust extractor device
- 6.2 environmental precautions: do not empty into surface water, ground-water or drain
- 6.3 methods of cleaning: absorb mechanically
- 6.4 additional information: no special measures are required for material in compact shape
- 

## 7. Operation and Storage

- 7.1 Operation: according to instruction sheet
- 7.2 storage: store break-proof and in dry conditions
- 7.3 application: n.a.
-



## 8. Exposure Controls/Personal Protection

8.1 exposure Guidelines: The following limits apply to components of this material

### Chemical

Zirconium compounds (as Zr)      5mg/M<sup>3</sup>----ACGIH TWA      5mg/M<sup>3</sup>---OSHA PEL

Zirconium compounds (as Zr)      10mg/M<sup>3</sup>----ACGIH TWA      10mg/M<sup>3</sup>---OSHA PEL

Yttrium compounds(as Y)      1mg/M<sup>3</sup>----ACGIH TWA

### Aluminum oxide

(respirable fraction)      3mg/M<sup>3</sup>----ACGIH TWA      5mg/M<sup>3</sup>---OSHA PEL

Aluminum oxide(total dust)      10mg/M<sup>3</sup>----ACGIH TWA      15mg/M<sup>3</sup>---OSHA PEL

(where:TWA=Time-weighted Average(8-hour exposure),STEL=Short-Time Exposure Limit(15-minute time-weighted average exposure))

8.2 limitation and monitoring to exposure:      n.a.

8.2.1 limitation and monitoring to exposure at work station:      use suitable dust extractor device at workstation. Avoid contact with skin, mouth, eye and clothes. Do not eat, drink or smoke. while you are working. Keep away from food and drinks.

8.2.1.1 respiratory protection:      use respirator if there is not sufficient extractor device. Do not inhale dust.

8.2.1.2. hand protection:      wear protective gloves, wash your hands after finishing work

8.2.1.3. eye protection:      wear protective glasses

8.2.1.4. skin protection:      use protective clothes

8.2.2. limitation and monitoring to environmental exposure:      n.a.

## 9. Physical and Chemical Properties

9.1 appearance:      solid

9.1.1 aggregate state:      white

9.1.2 odour:      odourless

9.2 pH:      n.a.

9.2.1 boiling point:      about 5000 °C

9.2.2 flash point:      not flammable



---

9.2.3. auto flammability:	not self-igniting
9.2.4. explosive properties:	n.a.
9.2.5. oxidizing properties:	n.a.
9.2.6. vapor pressure:	n.a.
9.2.7. relative density:	about 3.10-3.40 g/cm <sup>3</sup>
9.2.8. solubility water / fat:	insoluble in water
9.2.9. partition coefficient:	n.a.
9.2.10. Viscosity:	n.a.
9.2.11.vapor density	n.a
9.2.12. evaporation rate:	n.a.
9.3 other data:	melting point about 2680 °C

---

## 10. Stability and Reactivity

10.1 conditions to avoid:	n.a.
10.2 materials to avoid:	n.a.
10.3 hazardous decomposition products:	n.a.

---

## 11. Toxicological Information

This product destn't contain any substances that are considered to be harmful to human health

---

## 12. Ecological Information

If use properly, there are not environmental problems expected. Do not empty into surface water, groundwater or drains.

12.1 ecotoxicity:	none
12.2 mobility:	n.a.
12.3 persistence / degradability:	n.a.
12.4. bioaccumulation potential:	n.a.
12.5. other adverse effects:	none

---

## 13. Disposal Considerations



---

Product and packaging should be disposed to official rules and directives.

---

#### 14. Transport Information

the listed transportation classification does not address regulatory variations due to changes in package size ,mode of shipment or other regulatory descriptors

US Department of Transportation

14.1 Shipping name: Not regulated

14.2 Hazard class: Not regulated

14.3 ID#: Not regulated

14.4 Packing Group: Not regulated

14.5 Labels: Not regulated

14.6 Emergency guide#: Not regulated

---

#### 15. Regulatory Information

subject classification: This product is no subject to declaration according to CE rules.

---

#### 16. Other Information

This safety data sheet 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.

We can not a guarantee or give a warranty for the accuracy, dependability and completeness of this information, explicitly or implicitly. We call up on any person who get this information to urgently check and verify the adequacy and completeness for her or his special application.

n.a. = not applicable