

Material Safety Data Sheet (MSDS)

1 Identification of the substance/mixture and of the company/undertaking

- .Product name:** Zirconia Dental Ceramics
- .Relevant identified uses -Main use category:** Dental materials
- .Manufacturer/Supplier:** DONGGUAN XIANGTONG CO.,LTD
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2 Hazards identification

- .NFPA ratings (scale 0 - 4)**



Health = 1; Fire = 0; Reactivity = 0

- .Classification of the substance or mixture**
- .Classification according to GHS:** Not classified as dangerous goods.
- .Classification according to Regulation (EC) No 1272/2008:** The product is not classified according to the CLP regulation.
- .Classification according to OSHA Hazard Communication Standard (29 CFR 1910.1200):**
The product is not classified according to OSHA Hazard Communication Standard (29 CFR 1910.1200).
- .Labelling elements according to Regulation (EC) No 1272/2008 CLP and GHS:** Not applicable.
- .Hazard pictograms:** Not applicable.
- .Signal word:** Not applicable.
- .Potential Acute Health Effects:**
 - .Eyes:** Under normal circumstances products is no eye contact hazard, eye contact dust may be slightly irritant.
 - .Skin:** No known acute effects of this product resulting from skin contact.
However, in light of good industrial hygiene, exposure to any chemical should be kept to a minimum.
 - .Inhalation:** Short term exposure to high dust levels could cause minor irritation. Long term exposure to high concentrations of dust should be avoided, dust of this products can cause severe and permanent lung damage when inhaled.
 - .Ingestion:** The product is not expected a toxic substances to ingestion. But directly swallowing the product will lead abdominal pain、diarrhea、dizziness and other symptoms.
- .Potential Chronic Health Effects:**
 - .CARCINOGENIC EFFECTS:** This material is not a carcinogen. Classified NONE by NTP, OSHA and by IARC.
 - .MUTAGENIC AND TERATOGENIC EFFECTS:** Not available.



.Other hazards: Not available.

3 Composition/information on ingredients

.Description: Mixture of substances as per client submission listed below with additions.

Components Name	CAS Number	Weight Percent (%)	Air Exposure Limits (mg/m ³)	
			ACGIH TLV (mg/m ³)	OSHA PEL (mg/m ³)
Zirconium dioxide (ZrO ₂)	1314-23-4	≥98	Not Established	Not Established
Hafnium oxide (HfO ₂)	12055-23-1		Not Established	Not Established
Yttrium oxide (Y ₂ O ₃)	1314-36-9		Not Established	Not Established
Aluminum oxide (Al ₂ O ₃)	1344-28-1		10 Total dust	15 Total dust
Other oxide	-- -- --	≤2	Not Established	Not Established

4 First aid measures

.After inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration.

If breathing is difficult, give oxygen. Get medical aid.

.After skin contact: Normally does not need first aid after skin contact, When need flush skin with plenty of water for a few minutes. Get medical aid If irritation or sensitization develops or persists.

.After eye contact: Immediately flush eyes with plenty of water for a few minutes, occasionally lifting the eyelids.

.After swallowing: If victim is conscious and alert, give 2-4 cupfuls of milk or water to emetic. Never give anything by mouth to an unconscious person. Get medical aid.

.Most important symptoms and effects, both acute and delayed: No specific symptoms known.

.Indication of any immediate medical attention and special treatment needed: No special treatment required.

5 Fire-fighting measures

.Suitable Extinguishing Media: Water, CO₂, Dry Chemicals, Foam-Fog.

.Unsuitable extinguishing media: Not available.

.Special hazards arising from the substance or mixture: Negligible fire and explosion hazard.

.Hazardous decomposition products in case of fire: No further relevant information available.

.Firefighters protective equipment and protection measures: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents Avoid breathing fire gases or vapors.

6 Accidental release measures

.Personal precautions, protective equipment and emergency procedures: For personal protection, see Section 8.

.Measures for environmental protection: Do not allow much product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

.Methods and material for containment and cleaning up: Reuse or recycle products wherever possible. Absorb spillage to prevent material damage. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of contents/container in accordance with national regulations.

7 Handling and storage

.Precautions for safe handling:: Removal of products need to wear protective gloves, handled with care when handling apply good manufacturing practice & industrial hygiene practices. Observe good personal hygiene, and do not eat, drink or smoke whilst handling. Wear protective goggles and gloves when handling material. Clean cloths must be worn. Observe all warnings and precautions listed for the product.

.Conditions for safe storage, including any incompatibilities: Store in a cool area, Keep container tightly sealed, Keep air contact to a minimum. Store in well sealed receptacles.

8 Exposure controls/personal protection

.Control parameters: See section 3.

.Appropriate engineering controls: Enhance ventilation, Provide safety shower and eyewash equipment.

.Respiratory Protection: No special respiratory protection is required for use of these products. If respiratory protection is needed, use only protection authorized in the local Standard, Suggest that applicable U.S. State or the EU regulations.

.Body Protection: General protective clothing.

.Protective Gloves: When need choose rubber or plastic gloves with elbow-length gauntlet.

.Eye Protection: Unnecessary, When necessary wear chemical goggles or face shield.

9 Physical and chemical properties

.General Information	
Form:	Solid (Round cake, square, cylindrical, horseshoe)
Color:	White, Colored
Odor:	Odorless
.Change in condition	
Melting point/Freezing point:	About 2700 °C
Boiling point/Boiling range:	About 5000 °C
.Oxidising properties:	Not available
.Density:	
.Relative density:	6 (Water=1)
.Vapor density:	Not available
.Evaporation rate	Not Applicable
.Solubility in/Miscibility with	
Water:	Insoluble
.PH-Value:	Not available
.Viscosity:	Not available

10 Stability and reactivity

- .Chemical Stability: Stable under normal temperatures and pressures.*
- .Possibility of hazardous reactions: Hazardous reactions are unknown, and hazardous polymerisation will not appear.*
- .Conditions to Avoid: No further relevant information available.*
- .Incompatible materials: Strong oxidizers, strong acids.*
- .Hazardous Decomposition Products: No further relevant information available.*

11 Toxicological information

- .Toxicity to Animals:*
 - LD50: Not available.*
 - LC50: Not available.*
- .Skin corrosion/irritation: No further relevant information available.*
- .Potential Acute Health Effects on Humans: No further relevant information available.*
- .Other Toxic Effects on Humans: No further relevant information available.*

12 Ecological information

- .Ecotoxicity: Small amounts of this product are not expected to cause toxicity to the environment.*
- .Persistence and degradability: Not easily degradable.*
- .Bioaccumulative potential: No further relevant information available.*
- .Mobility in soil: No further relevant information available.*
- .Other adverse effects: No further relevant information available.*

13 Disposal considerations

- .Product: Must be disposed of in accordance with applicable Federal, state and local regulations.*
- .Recommendation: Not be dispose together with household garbage.*
- .Uncleaned packaging: Recommendation Disposal must be made according to official regulations.*

14 Transport information

- .UN Proper Shipping Name: Not available.*
- .UN Number: Not applicable.*
- .Packing Group: Not applicable.*
- .Marine Pollutant: Not available.*
- .Hazardous Substance Reportable Quantity: Not available.*
- .DOT Classification: Not a DOT controlled material (United States).*
- .TDG Classification: Not controlled under TDG .*
- .ADR/RID Classification: Not controlled under ADR.*
- .IMO/IMDG Classification: Not controlled under IMDG.*
- .ICAO/IATA Classification: Not controlled under IATA.*

15 Regulatory information

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

.TSCA inventory: Most components are listed as commercial status active on the TSCA.

.WHMIS: Not controlled under WHMIS.

.California Prop.65:There are no Proposition 65 chemicals present in this products levels that would require a warning under the California Safe Drinking Water and Toxic Enforcement Act.

.REACH Regulation List of Substances of very high concern (SVHC) : None of the ingredients is listed.

.Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The contents and format of this MSDS Comprehensive reference with ISO Commission Directive ISO11014:2009.

And EU Regulation EC No 1272/2008 (CLP).

DISCLAIMER OF LIABILITY

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

• Abbreviations and acronyms:

NFPA: National Fluid Power Association.

GHS: Globally Harmonized System of Classification and Labelling of Chemicals.

CLP: Classification, labeling and packaging.

NTP: National Toxicology Program.

ACGIH-TLV: American Conference of Governmental Industrial Hygienists- Threshold limit value.

OSHA-PEL: Occupational Safety and Health Administration- Permissible exposure limits.

IARC: International Agency for Research on Cancer.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

LC50: Lethal concentration, 50 percent.

LD50: Lethal dose, 50 percent.

DOT: U.S. Department of Transportation.

TDG: Transportation of Dangerous Goods Program.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

IMO: International Maritime Organization.

IMDG: International Maritime Code for Dangerous Goods.

IATA: International Air Transport Association.

ICAO: International Civil Aviation Organization.

TSCA: Toxic Substances Control Act.

WHMIS: Workplace Hazardous Materials Information System.

*****The End*****