

# SAFETY DATA SHEET

8/11/2017

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: LUNA™ zirconia for dental substructures  
LUNA™ translucent dental zirconia  
LUNA Orea™ cosmetic dental zirconia  
Iluzion™ multi strength multi layered natural aesthetic zirconia

PRODUCT I.D.: All product numbers with prefixes:  
LAG-, LOD-, LS-, LWD-, LZ-, LZN-, OREA-

COMPANY: Opa Dental, LLC  
105 Whitaker Blvd.  
Huntington, WV 25701

PHONE: 1-304-523-6721

CHEMICAL NAME: Yttria-Stabilized Zirconia  
CHEMICAL FORMULA: ZrO<sub>2</sub>

PRODUCT USE: Dental Prosthetic

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## SECTION 2: COMPOSITION

<b>Chemical Characterization:</b> Pre-Sintered, porous ZrO <sub>2</sub> Block					
<b>Composition:</b>	<b>Percentage:</b>	<b>CAS Number:</b>	<b>EC Number:</b>	<b>NFPA H/F/R/O*</b>	<b>HMIS H/F/PH/PP**</b>
Zirconium Dioxide (ZrO <sub>2</sub> )	86.3-94.4%	1314-23-4	215-222-7	0/0/0/-	0/0/0/E
Yttrium Oxide (Y <sub>2</sub> O <sub>3</sub> )	4-9.7%	1314-36-9	215-233-5	2/0/1/-	2/0/1/E
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	0-1%	1344-28-1	215-691-6	0/0/0/-	0/0/0/E
Erbium Oxide (Er <sub>2</sub> O <sub>3</sub> )	0-2%	12061-16-4	235-045-7	2/0/0/-	2/0/0/E
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	0-0.5%	1332-37-2	215-275-4	2/0/0/-	2/0/0/E
Praseodymium Oxide (Pr <sub>2</sub> O <sub>3</sub> )	0-1%	12037-29-5	234-857-9	0/0/1/OX	0/0/1/E
Other Oxide	<0.5%				

\*Health, Flammability, Reactivity, Other information

\*\*Health, Flammability, Physical Hazard, Personal Protection

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## SECTION 3: HAZARDS IDENTIFICATION

ROUTES OF ENTRY: Dust from grinding into eyes, mouth, or skin.

### POTENTIAL HEALTH EFFECTS

EYES: Dust may irritate  
SKIN: Dust may irritate  
INGESTION: Dust may irritate  
INHALATION: Dust may irritate  
CARCINOGENICITY: None known

**SECTION 4: FIRST AID MEASURES**

EYES: Wash eyes with large quantities of clean water for at least 15 minutes. In case of after-effects, call a physician.

SKIN: Wash thoroughly with warm water.

INGESTION: Rinse with water. In case of after-effects, call a physician.

INHALATION: Move person into fresh air.

**SECTION 5: FIRE-FIGHTING MEASURES**

EXTINGUISHING MEDIA: Normal extinguishing media

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

PERSONAL PRECAUTIONS: Standard measures, e.g. dust mask or dust collection device.

ACCIDENTAL RELEASE MEASURES: Avoid discharge into drains or surface water.

**SECTION 7: HANDLING AND STORAGE**

HANDLING: Only adequately trained personnel should handle this product. Keep out of reach of children. Usual hygienic measures are necessary. When using, do not eat, drink, or smoke. Provide adequate local ventilation or suction unit, especially in case of dust exposure.

STORAGE: No special requirements for place of storage and containers.

No further indications necessary for storage, no restrictions for storage with other products.

**SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION**

Provide adequate local ventilation.

Prepare material in proximity to an air suction unit.

Use a dust protection mask.

Avoid inhalation of dust.

Avoid dust build-up.

Safety eyewear necessary.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	White	Flexural strength:	700-1200 MPa
Aggregate State:	Solid	Vickers hardness:	12.86GPa
Odor:	Odorless	Average grain size:	0.5um
pH:	N/A	Radioactivity:	0.1Bq/g
Boiling Point:	~5,500°C	Partition Coefficient:	N/A
Flash Point:	Not Flammable	Solubility water/fat:	Insoluble in water
Auto-Flammability:	Not Self-Igniting	Chemical solubility:	10ug/cm <sup>3</sup>
Explosive Properties:	N/A	Viscosity:	N/A
Oxidizing Properties:	N/A	Vapor Density:	N/A
Vapor Pressure:	N/A	Evaporation Rate:	N/A
Relative Density:	3g/cm <sup>3</sup>	Melting Point:	~2680°C

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**SECTION 10: STABILITY AND REACTIVITY**

Conditions to avoid: N/A  
Materials to avoid: N/A  
Hazardous Decomposition products: N/A

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**SECTION 11: TOXICOLOGICAL INFORMATION**

Cytotoxicity	None
Short-term systemic toxicity	None
Sensitization (delayed hypersensitivity)	None
Cutaneous reactivity	None

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**SECTION 12: ECOLOGICAL INFORMATION**

ECOLOGICAL INFORMATION: NONE

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**SECTION 13: DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Take to an approved landfill or waste incineration plant, under conditions approved by the local authorities.

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**SECTION 14: TRANSPORT INFORMATION**

Not Hazardous

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**SECTION 15: REGULATORY INFORMATION**

Class II medical device

Device #: 872.6660

Code: EIH

Required pre-market approval, regulated by the FDA, only distributed by FDA registered entities

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**ADDITIONAL INFORMATION**

The Safety Data Sheet serves as a description of the products in regard to necessary safety measures. The indications do not guarantee properties.