

**1**

**PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Zirlux Full Contour Zirconia Stain and Glaze Paste  
**Revision Date:** 03/24/2011  
**MSDS Number:** 216A  
**Product Use:** Dental Restorations

**Ardent, Inc.**  
175 Pineview Drive  
Amherst, NY 14228, USA

Technical Services: (866) 751-8548 (9 AM - 5 PM EST)

For MSDS assistance:

Emergency Call USA-Infotrac: (800) 535-5053 (24 hours/7 days)  
Emergency Call Canada-Canutec: - 1-(613)-996-6666 (24 hours/7 days)

General MSDS Assistance:

US: 1-800-922-5520  
Canada: 1-800-263-8182

**2**

**COMPOSITION/INFORMATION ON INGREDIENTS**

CAS #	Component	
12001-21-7	Dental Porcelain	>65%
56-81-5	Glycerine	<10%
107-99-0	Butanediol	<25%

This material does not contain any forms of crystalline silica. In addition to silicon (Si) and oxygen (O), dental porcelains comprise the following chemical elements: Al, K, Na, Ca, and may also comprise Li, Mg, Ba, Ce, Ti, Zr, Sn, Y, B, F and Fe. All these elements are not present in their pure or individual oxide forms but rather chemically bonded together within insoluble alumo-silicate glass matrix. By convention the composition of dental porcelain, same as composition of many other glass-ceramic materials, is still reported on individual oxide basis. In that representation composition of dental porcelain may be given as about 50-80% of SiO<sub>2</sub>, about 5-15% of Al<sub>2</sub>O<sub>3</sub> and the balance comprised of chemical constituents listed above and below. Dental porcelain also contains small amounts of non-silica inclusions: pigments, opacifiers, opalescing and fluorescing agents, which are based on crystalline forms of TiO<sub>2</sub>, ZrO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, zirconium silicate (ZrSiO<sub>4</sub>) and yttrium silicate (Y<sub>2</sub>SiO<sub>5</sub>). In the fired state of dental porcelain these components are fused and completely encapsulated in chemically durable, insoluble glass matrix specifically designed and tested to resist wear and corrosion in oral environment.

OSHA Regulatory Status: This MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and made available for employees and other users of this product.

## 3 HAZARDS IDENTIFICATION

**Route of Entry:** Inhalation, Eye contact, Skin contact, Ingestion  
**Target Organs:** Lungs  
**Inhalation:** May irritate respiratory system.  
**Skin Contact:** May irritate skin. May cause dermatitis.  
**Eye Contact:** May irritate eyes.  
**Ingestion:** May irritate digestive system.

## 4 FIRST AID MEASURES

**Inhalation:** Remove to fresh air. Seek medical attention if necessary.  
**Skin Contact:** Rinse with soap and water.  
Consult a physician if irritation occurs.  
**Eye Contact:** Flush with copious amounts of water for at least 15 minutes.  
Consult an ophthalmologist or medical attention if necessary.  
**Ingestion:** Rinse out mouth and then drink plenty of water. Seek medical attention if necessary.

## 5 FIRE FIGHTING MEASURES

Non-flammable.  
Use the correct fire fighting measures for the surrounding area.

## 6 ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8. Isolate area to prevent unnecessary and unprotected personnel from coming in contact with paste. Use absorbent material to pick up material.

## 7 HANDLING AND STORAGE

**Handling Precautions:** Keep out of eyes.  
Avoid excessive contact with skin.  
Do not ingest.  
**Storage Requirements:** Keep in original container.  
Keep container tightly closed when not in use.  
Store at room temperature.  
Store away from heat, flame, and oxidizing agents.

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Use in a well ventilated area or an area with a proper exhaust fan.  
**Protective Equipment:** Protective Gloves: Latex recommended  
Eye Protection: OSHA-approved safety goggles  
Other: Lab coat/apron depending on operation  
**Exposure Guidelines/Other:** This product has not been evaluated as a whole.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Paste in various colors

**Physical State:** Paste

**Odor:** Odorless

**pH:** Not available

**Vapor Pressure:** Not available

**Vapor Density:** Not available

**Bulk Density:** 2.3-2.4 g/cm<sup>3</sup>

**Boiling Point:** Not available

**Freezing/Melting Pt.:** Not available

**Solubility:** Insoluble

**Spec Grav./Density:** 2.40 g/cm<sup>3</sup>

## 10 STABILITY AND REACTIVITY

**Stability:** Stable

**Conditions to avoid:** None known

**Materials to avoid (incompatibility):** None known

**Hazardous Decomposition products:** None known

**Hazardous Polymerization:** None known

## 11 TOXICOLOGICAL INFORMATION

Not available

## 12 ECOLOGICAL INFORMATION

Not available

## 13 DISPOSAL CONSIDERATIONS

This information applies to the material as manufactured; processing, use, or contamination may make the information inappropriate, inaccurate, or incomplete.

Waste must be handled in accordance with all applicable regulations. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state, and local requirements.

## 14 TRANSPORT INFORMATION

Not available

## 15 REGULATORY INFORMATION

Not available

**16**

**OTHER INFORMATION**

The information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed in good faith and believed to be correct as of the date hereof. Ardent, Inc. however, makes no representations as to the completeness or accuracy of this information and supplies it on the condition that the persons receiving same will make their own determinations as to its suitability for their purpose prior to use. In no event will Ardent, Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon this information.

Rev# 0

---

**END OF MSDS DOCUMENT**