



### Material Specification and Analysis

**Manufacturer/Distributor:**

Ortho Technology, Inc.

17401 Commerce Park Boulevard

Tampa, FL 33647

Tel: (813)991-5896

Fax: (813)991-5986

### **Pure Ceramic Brackets**

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**Composition/Information on Ingredients:**

A. Substances which give the product its health-risk properties, if any.

<u>Chemical Name</u>	<u>CAS#</u>	<u>ACGIH TLV</u>
A1 <sup>2</sup> O <sup>3</sup> Synthetic Corundum	1344-28-1	10 mg/m <sup>3</sup> (15 mg/m <sup>3</sup> )

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**Hazardous properties:**

Physical /Chemical Hazards: Not hazardous according to Directive 67/548/EEC. 8h TWA typically 10mg/m<sup>3</sup>

Human Health Hazards:

Environmental Hazards:

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**Physical and chemical properties:**

Physical state and Appearance:	White to Clear
Odor:	Odorless
Boiling Point:	2980°C
Melting Point:	2030°C
Specific Gravity:	3.98 g/cm <sup>3</sup>
Solubility:	Negligible
Flash Point:	N/A
Flammability:	Non-Flammable
Autoignition temperature:	N/A
Explosion Properties:	N/A

# MATERIAL SAFETY DATA SHEET

## 1. Name of product and company:

Product name: **Synthetic Sapphire (Al<sub>2</sub>O<sub>3</sub>) Synthetic Corundum**

Supplier: Ortho Technology  
17401 Commerce Park Blvd.  
Tampa, FL 33647

Emergency Telephone Number: 1-800-999-3161

Date of Issue: 03/10/2008

## 2. Composition/Information on Ingredients:

A. Substances which give the product its health-risk properties, if any.

<u>Chemical Name</u>	<u>CAS #</u>	<u>ACGIH TLV</u>
Al <sub>2</sub> O <sub>3</sub> Synthetic Corundum	1344-28-1	10 mg/m <sup>3</sup> (15 mg/m <sup>3</sup> )

## 3. Hazardous properties:

Physical/Chemical Hazards: Not hazardous according to Directive 67/548/EEC. 8h TWA typically 10mg/m<sup>3</sup>.

Human health Hazards:

Environmental Hazards:

## 4. First aid measures:

### Effects and Symptoms:

Inhalation: Dust may cause irritation of the nose throat, accompanied by cough and discomfort. Dust may cause upper respiratory tract irritation with discomfort of nose and throat. Aluminum oxide does not cause pneumoconiosis in man.

Skin contact: Dust may cause drying of the skin

Eye contact: Dust may cause irritation

Ingestion: No evidence of adverse effects from available information.

### First Aid Measures:

Inhalation: Remove from exposure, seek immediate medical attention.

Skin contact: Wash with soap and water and a large volume of water. Seek medical assistance as necessary, especially if irritation develops or persists.

Eye contact: Flush with copious amounts of water for 15 minutes.

Ingestion: If ingested in large quantities, drink 2 glasses of water and induce vomiting of patient is conscious

# MATERIAL SAFETY DATA SHEET

<b>5. Fire fighting measures:</b>	
<b><u>Extinguishing Media</u></b>	
Suitable / Not Suitable:	Non flammable
Special fire-fighting procedures:	N/A
Unusual fire/explosion hazards:	N/A
Hazardous thermal (de)composition products:	N/A
Protection of fire-fighters:	N/A
<b>6. Accidental release measures:</b>	
Personal precautions:	N/A
Environmental Precautions and Clean-up Methods:	
<b>7. Handling and storage:</b>	
Handling:	To be handled by qualified dental professionals.
Precautions:	Follow the instructions for use.
Storage:	Store at or below room temperature. Keep container dry. Keep container in well-ventilated area.
<b>8. Exposure control/personal protection:</b>	
Personal Protective Equipment	
Respiratory system:	Respiratory protection is recommended when using large amounts.
Skin and body:	Lab Coat
Hands:	Gloves
Eyes:	Safety glasses or splash goggles

# MATERIAL SAFETY DATA SHEET

## 9. Physical and chemical properties:

Physical state and Appearance: White to clear

Odor: odorless

Boiling Point: 2980°C

Melting Point: 2030°C

Specific Gravity: 3.98 g/cm<sup>3</sup>

Solubility: Negligible

Flash Point: N/A

Flammability: Non-flammable

Autoignition temperature: N/A

Explosion Properties: N/A

## 10. Stability and reactivity:

Stability: Stable

Conditions to avoid / Materials to Avoid: Avoid dehydration by keeping container closed. Reactive metals and bases are materials to be avoided. Incompatible with strong acids, strong bases, ethylene oxide, halocarbons, OF<sub>2</sub>, sodium nitrate, vinyl acetate.

Hazardous Reactions: Will not occur

Hazardous Decomposition Products: At flame temperatures, material will emit toxic phosphorus oxide fumes.

## 11. Toxicological information:

Local Effects Not hazardous according to Directive 67/548/EEC. 8h TWA typically 10mg/m<sup>3</sup>.  
Acute oral toxicity: LD<sub>50</sub> = 1530 mg/kg (for 85% phosphoric acid)

Skin Irritation: Irritation to skin can occur.

Eye Irritation: Irritation to the eyes can occur.

## 12. Ecological information:

May cause adverse environmental impact if material reaches waterways.

## 13. Waste disposal:

Methods of disposal; Waste of residues;

Contaminated Packaging: Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations.

# MATERIAL SAFETY DATA SHEET

**14. Transport information:** Corrosive material

**Additional information:**

**15. Regulatory information:**

Symbols of Danger: Corrosive

R-Phrase:

R21/R34: Harmful if swallowed/ Causes burns

S-Phrase:

S36/S39: Wear suitable protective clothing and eye/face

S 24, S 25: Avoid contact with skin or eyes.

S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S 28: After contact with skin, wash immediately with plenty of soap and water.

S 46: If swallowed, seek medical advice immediately and show the container or label.

**16. Other information:**

**Notice to Reader**

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