



## MATERIAL SAFETY DATA SHEET

### SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name: Triad® VLC Custom Tray Material  
Product Number: 89783, 95746, 95752  
MSDS Code Number: 97

Manufacturer: Dentsply Prosthetics  
Address: 570 West College Ave.  
York, PA 17405-0872  
Information Telephone Number: 717-845-7511  
Emergency Telephone Number: 800-424-9300 Chemtrec  
Email: Prosthetics\_MSDS@Dentsply.com

Product Use: Resin used in removable dental appliances.

Date of Last Revision: June 10, 2009

### SECTION 2 HAZARDS IDENTIFICATION

Emergency Overview: CAUTION! May cause eye and skin irritation. May cause skin sensitization. Contains crystalline silica. Inhalation of respirable crystalline silica may cause lung disease and cause cancer. Risk of cancer depends on the level and duration of exposure. The crystalline silica in this product is encapsulated in a resin matrix and no exposure occurs unless a dust is created in the use of the product.

EU Preparation Classification (1999/45/EC): Xi; R36/38, R43, R52/53

### SECTION 3 COMPOSITION INFORMATION ON INGREDIENTS

Ingredient	CAS No./EINECS No.	Percent	EC Substance Classification (67/548/EEC)
Polymethylmethacrylate	Proprietary	10-20	Xi R36/38, R43
Sodium Potassium Aluminum Silicate	68476-25-5/270-666-7	30-60	Not applicable
Crystalline Silica (as Quartz)	14808-60-7/238-878-4	0-15	Xn R48/20
Urethane Diacrylate	Proprietary	20-30	Xi R36/38, R43
1,6-Hexanediol Dimethylacrylate	6606-59-3/229-551-7	1-5	Xi N R36/37/38, R51/53
Amorphous Precipitated Silica	112945-52-5/231-545-4	1-5	Not applicable

See Section 16 for further information on EU Classification.

## SECTION 4 FIRST AID MEASURES

Eye Contact: Immediately flush victim's eyes with large quantities of water for at least 15 minutes, holding the eyelids apart. Get medical attention.

Skin Contact: Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation develops. Launder clothing before re-use. (Discard contaminated shoes).

Ingestion: If conscious, wash mouth out with water. Do not induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Get medical attention.

Inhalation: If irritation develops, remove to fresh air. Get medical attention if symptoms persist.

## SECTION 5 FIRE FIGHTING PROCEDURES

Extinguishing Media: Water fog, foam, and carbon dioxide.

Firefighting Procedures: Firefighters should wear full emergency equipment and an approved positive pressure self-contained breathing apparatus. Cool exposed intact containers with water spray.

Unusual Fire/Explosion Hazards: High temperatures and sunlight may cause a polymerizing reaction to occur. Decomposition may release acrid smoke or fumes.

Known or Anticipated Hazardous Products of Combustion: Carbon oxides and methylmethacrylate.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

Accidental Release Measures Exposure to sunlight or artificial light will cause the paste to polymerize. Spread the paste to maximize the surface area. Once the material is hard, pick up and place into a container for disposal. Spill and release reporting requirements vary. Consult local authorities regarding requirements.

Personal Precautions: Avoid contact with skin, eyes or clothing.

Environmental Precautions: Prevent entry into sewers and waterways.

## SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact with the eyes, skin and clothing. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Avoid creating dust in the processing of this material.

Empty containers retain product residues can be hazardous. Follow all MSDS precautions when handling empty containers.

Storage: Store in a tightly closed container in a cool, well ventilated location away from incompatible materials. Do not store near high temperatures or ignition sources. Prevent contact with moisture. Refrigeration prolongs shelf life. Store away from food or beverages.

## SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

Occupational Exposure Limits:

Polymethylmethacrylate	None Established
Sodium Potassium Aluminum Silicate	5 mg/m <sup>3</sup> (respirable dust), 5 mg/m <sup>3</sup> (total dust) TWA OSHA PEL
Crystalline Silica	0.025 mg/m <sup>3</sup> (Respirable) TWA ACGIH TLV 30 mg/m <sup>3</sup> /%SiO <sub>2</sub> + 2 (Total Dust) TWA OSHA PEL 10 mg/m <sup>3</sup> /%SiO <sub>2</sub> + 2 (Respirable Dust) TWA OSHA PEL 0.3 mg/m <sup>3</sup> TWA UK WEL
Urethane Diacrylate	None Established

1,6 Hexanediol Dimethylacrylate	None Established
Amorphous Precipitated Silica	0.8 mg/m <sup>3</sup> TWA OSHA PEL 6 mg/m <sup>3</sup> TWA, 2.4 mg/m <sup>3</sup> STEL UK WEL

**Engineering Controls:** Use with adequate local exhaust ventilation to maintain exposures below the occupational exposure limits.

**Personal Protective Equipment:**

**Eye Protection:** Chemical safety glasses or chemical splash goggles.

**Skin Protection:** Wear impervious gloves as rubber to prevent skin contact.

**Respiratory Protection:** None under normal use conditions. If the product is heated and ventilation is inadequate, wear a NIOSH approved respirator appropriate for the exposure conditions. When polishing or grinding, there is a chance to overexposure to crystalline silica to occur. Use local exhaust ventilation and a NIOSH approved respiratory if needed.

**Other Protective Clothing or Equipment:** Impervious clothing as needed to prevent contact. A safety shower and eye wash should be available in the immediate work area.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**Appearance and Odor:** Blue paste with mild ester odor.

**Boiling Point:** N/A (polymerizes)

**Freezing Point:** Not available

**Solubility in Water:** Negligible

**Vapor Pressure (mmHg):** <1

**Evaporation Rate:** Not available

**% Volatile by Volume:** Negligible

**Flammable Limits in Air:**

LEL: N/A

UEL: N/A

**Melting Point:** N/A

**Specific Gravity:** 1.6

**pH:** Not determined

**Vapor Density:** >1

**Viscosity:** Not determined

**Flashpoint:** Not applicable

**Autoignition Temperature:** Not applicable

## SECTION 10 STABILITY AND REACTIVITY

**Stability:** Stable

**Conditions to Avoid:** . Polymerizes to form hard plastic in 2 hours at 100°C (212°F) with low exotherm.

Avoid high temperatures and direct sunlight.

**Incompatibility with Other Materials:** Oxidizing agents, reducing agents, tertiary amines, heavy metals, peroxides, free radical initiators

**Hazardous Decomposition Products:** Carbon oxides and methylmethacrylate.

## SECTION 11 TOXICOLOGICAL INFORMATION

**Potential Health Effects:**

**Eyes:** May cause irritation, redness, rash and swelling.

**Skin:** May cause irritation, redness, rash and swelling. May cause allergic skin reaction (sensitization).

**Ingestion:** Swallowing may cause gastrointestinal irritation and diarrhea. Large amounts may cause central nervous system depression, intoxication, unconsciousness and coma.

**Inhalation:** None expected under normal use. When grinding or polishing, respirable crystalline silica may be generated.

**Chronic Health Effects:** Repeated inhalation of crystalline silica may cause lung damage and silicosis. The crystalline silica in this product is encapsulated in a resin matrix and no exposure occurs unless a dust is created in the use of the product.

**Carcinogenicity:** Crystalline silica is classified as a Group 1 carcinogen by IARC, and “known to be a human carcinogen” by NTP. None of the other components is listed as a carcinogen by IARC, NTP, the EU Directive or OSHA.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing skin disorders may be at increased risk from exposure.

Acute Toxicity Data:

Polymethylmethacrylate	No data available
Sodium Potassium Aluminum Silicate	No data available
1,6-Hexanedioldimethylacrylate	Oral rat LD50: >2000 mg/kg
Urethane Diacrylate	No data available
Amorphous Precipitated Silica	Oral rat LD50: >10,000 mg/kg; Inhalation rat LC50: >0.139 mg/l/4h; Skin rabbit LD50: >5000 mg/kg
Crystalline Silica (as Quartz)	No data available

**SECTION 12 ECOLOGICAL INFORMATION**

Polymethylmethacrylate	No data available
Sodium Potassium Aluminum Silicate	No data available
1,6 Hexanediol Dimethylacrylate	96h/LC50 fish: 4.5 mg/l
Urethane Diacrylate	No data available
Amorphous Precipitated Silica	96h/LC50 fish: >10,000 mg/l; 24h/EC50 daphnia magna: >10,000 mg/l
Crystalline Silica (as Quartz)	No data available

**SECTION 13 DISPOSAL CONSIDERATIONS**

Dispose in accordance with national and local regulations. Exposure to sunlight or artificial light will cause the material to polymerize into a hard plastic.

**SECTION 14 TRANSPORT INFORMATION**

DOT Shipping Name: Not Regulated  
DOT Hazard Class: N/A  
UN Number: N/A  
DOT Labels Required (49CFR172.101): N/A

IATA Shipping Name: Not Regulated  
IATA Hazard Class: N/A  
UN Number: N/A  
IATA Hazard Labels Required: N/A

IMDG Shipping Name: Not Regulated  
IMDG Class: N/A  
UN Number: N/A  
IMDG Label: N/A

**SECTION 15 REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS:**

**CERCLA:** Report spills required under federal, state and local regulations.

**SARA TITLE III:**

Hazard Category For Section 311/312: Acute Health, Chronic Health

Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: This product is a medical device and not subject to chemical notification requirements.

**U.S. STATE REGULATIONS**

California Proposition 65: This product contains the following substances known to the State of California to cause cancer: Crystalline Silica as Quartz: 0-15%

**INTERNATIONAL REGULATIONS:**

Canadian WHMIS Classification: This product is a medical device and exempt from labeling under WHMIS.

Canadian Environmental Protection Act: This product is a medical device and not subject to chemical notification requirements.

European Community Labeling:



Irritant

R36/38 Irritating to eyes and skin  
R43 May cause sensitization by skin contact.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical attention  
S36/37 Wear suitable protective clothing and gloves.  
S61 Avoid release to the environment. Refer to Safety data sheets.

European Inventory of New and Existing Chemicals Substances (EINECS): This product is a medical device and not subject to chemical notification requirements.

Australian Inventory of Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

China Inventory of Existing Chemicals and Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

Japanese Existing and New Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

Korean Existing Chemicals List: This product is a medical device and not subject to chemical notification requirements.

Philippine Inventory of Chemicals and Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

<b>SECTION 16 OTHER INFORMATION</b>
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HMIS Hazard Rating:

Health – 2      Fire Hazard – 1      Reactivity – 1

EU Classes and Risk Phrases for Reference (See Sections 2 and 3):

N Dangerous for the environment.

Xi Irritant

Xn Harmful

R36/38 Irritating to eyes and skin.

R36/37/38 Irritating to eyes, respiratory system and skin.

R43 May cause sensitization by skin contact.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Revision Summary:

Switched Sections 2 and 3. Added e-mail address to Section 1. Updated exposure limits. Updated Canadian WHMIS classification.

Revision Date: 06/10/2009

Supercedes: 07/14/2006