TECHNICAL BULLETIN
INSTRUCTIONS

Made in USA

ORION
CORE BUILD-UP MATERIAL
CHEMICAL AND LIGHT CURE

CONTENTS:

10 g-Part A Restorative Paste Natural Self-Cured
10 g-Part A Restorative Paste Contrast Self-Cured
20 g-Part B Paste Activator
4.5g-Restorative Paste Natural Light-Cured
4.5g-Restorative Paste Contrast Light Cured
Accessories, Instructions

OUTSTANDING FEATURES OF THE MATERIAL

- Virtually unlimited working time in light cure form, and convenient working time in self cure (chemical) form.
- Two shades: One contrasting for easy distinguishability from tooth structure; the other tooth coloring for use under shell crowns.
- Moldable, non-sticky yet has adhesive consistency.
- Contains moderately hard filler for easier carving and shaping.
- Long shelf life.
- Well-balanced X-ray opacity permits easy distinguishability from tooth structure, as well as, from pins and posts.
- Substantial chair-time savings.

GENERAL INFORMATION

Today the composite type core restoratives are most frequently used in dentistry. They offer the advantage of superior mechanical strength and ease of handling over the glass ionomer cements, and greater versatility in use, combined with better adhesion to tooth structure, in comparison to dental amalgam.

Composite type core restoratives are available in either natural or contrast shades, the former being indicated for use under semi transparent ceramics, the latter, provides the convenience of easy distinguishability from tooth structure. From the point of view of the curing technique, the composite materials are available in either self- or light cure versions, each of them offering certain advantages, but also imposing certain limitations. The self-cure materials are more popular because they provide unlimited depth of cure, and may be used in places where light of sufficient intensity might not penetrate. The light cure materials offer convenience of handling, and virtually unlimited working time.

Dent Zar's Orion represents a convenient combination of self cure core restorative and light cure, which gives the clinician the choice to elect either light cure form or self cure, in either natural or contrast shade. While light cure form may be preferred because of simplicity of the one component system, and convenience of working without time pressure, the self cure will allow the use of the restorative in areas inaccessible to light, and to make larger restorations without the necessity of curing in layers.

Orion differs significantly from the conventional restoratives as it was optimized to meet specific requirements, and provide features most desirable for core build-up materials. This includes well-balanced X-Ray Opacity, ability to distinguish the material form tooth structure and posts, carvability, outstanding depth of cure (to maximize the advantage of light cure form), and convenient working time in self-cure form.

***** CHARACTERISTICS OF THE MATERIAL *****

ORION SELF-CURE CORE BUILD UP MATERIAL

1. Mixing time at room temperature for self-cure material	0.5 minute
2. Working time*	2.5 minutes
3. Setting time	0.5-1 minute
4. Compressive Strength	103.10 MPa
5. Diametral Tensile Strength	49.70 MPa
6. Compressive Strength	253.70 MPa

*Working time may be extended by mixing pastes just after removal from refrigerator or by using a cold slab.

Revision #2. Revised on 1-5-15

ORION LIGHT CURE CORE BUILD UP MATERIAL

1. Curing time*	40-60 sec.
2. Flexual Strength	98.28 MPa
3. Diametral Tensile Strength	48.01 MPa
4. Compressive Strength	218.50 MPa

*Depending on the characteristics of the light.

DIRECTIONS FOR USE
SELF CURE FORM

Dispense equal amount of Part A Paste (in either contrast or natural shade) and Part B catalyst on mixing pad. Use the proper ends of spatula to avoid contaminating of the paste.
Spatulate the two pastes together for approximately 20 seconds. Make certain the two pastes are well blended with no residual streaks of each paste evident in the mixture.

LIGHT CURE FORM

Regular Orion kit comes with light cure core build-up material in natural and contrast shade.
NOTE: Contrast will change the color from blue to pink during the curing process. The color change insures deep light penetration and thorough curing of the material. (Once the material is completely polymerized, it will return to its original color in 3 to 7 days). This enables it to be easily distinguishable from the tooth structure.
After placement, cure light cure Orion Core Build-Up material for 40-60 seconds from facial, lingual and occlusal aspects.

FUNDAMENTAL RULES

*Orion may be used in conjunction with pins and posts or without. On vital teeth it is recommended conservative cavity preparation; with rounded retentive areas, it is also recommended to use Calcium hydroxide base liner especially in situations involving proximity of the pulp, and over soft and decay-prone dentin, in order to provide an additional measure of protection against secondary decay.
*Conventional canal preparation, including toiletry with 5% sodium hypo chloride solution and through drying of the preparation, is critical for providing maximum retentive strength. An alternative method of cavity preparation may include the use of polycarboxylic acid solutions with, or in place of, the sodium hypo chloride solution.
*In order to achieve micro mechanical retention for maximum bond strength it is recommended to etch any enamel present.
*Use of bonding systems, of your choice, is recommended.
*Orion is Bis-GMa composite material an ingredient that in some people can cause an allergic reaction or result in skin or tissue irritation. Avoid contact with the core build-up pastes. If contact occurs, wash immediately with soap and warm water. Improper use may result in allergic reaction of skin or tissue irritation, in which case discontinue use of the product.

CUSTOM ORION KITS AVAILABLE
Orion all contrast, all natural, or any combinations desired.
All kit components are available separately.

STORAGE

Do not store or expose kit to temperatures over 72ºF (22ºC).

DENT ZAR INTERNATIONAL, INC.

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Material Safety Data Sheet
May be use to comply with
OSHA's Hazard Communication Standard,
29 OFA 1910, 1200, Standard must be
consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Heath Administration
(Non-Mandatory From)
Form approved
0MB No 121 8-0072

IDENTITY (As Used on Label and List)

Note: Blank spaces are not permitted If any item is not applicable or no information is available, the space must be marked to indicate that

ORION CHEMICAL CURE CORE BUILD-UP MATERIAL

Section I

Manufacturer's Name: DENT ZAR, INC.
Address (Number Street, City, State and Zip Code)
19643 TRULL BROOK DRIVE
TARZANA CALIFORNIA 91356

Emergency Telephone Number (800) 444-1241 or 818-857-3010
Telephone Number for information (800) 444-1241 or 818-857-3010
Date Prepared 05-17-94
Signature of Preparer (optional)

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s)	OSHA PEL	ACGIH TLV	Other Limits Recommend % (optional)
SILICON DIOXIDE			
BARIUM GLASS			
METHACRYLATE MONOMERS			
BENZOYL PEROXIDE OR AMINE			
OTHER INGREDIENTS ARE LESS THAN 2% EACH			

Section III - Physical/Chemical Characteristic

Baling Point N/A
Specific Gravity (H_2O=1) N/A
Vapor Pressure (mm Hg) N/A
Melting Point N/A
Vapor Density (AIR=1) N/A
Evaporation Rate (Butyl Acetate-1) N/A
Solubility in Water INSOLUBLE
Appearance and Odor TINTED PASTE, CHARACTERISTIC ODOR

Section III - Fire and Explosion Data

Rash Point (Method-Used) N/A
Flammable Limits N/A **LEL** **UEL**
Extinguishing Media CHEMICAL FOAM, CARBON DIOXIDE OR DRY CHEMICAL
Special Fire Fighting Procedures None
Unusual Fire and Explosion Hazards NOT KNOWN AS TO DATE

Section V - Reactivity Data

Stability **Unstable** **Conditions to Avoid** EXREME HEAT, SUN LIGHT, OR VISIBLE LIGHT
Stable X
Incompatibility **Materials to Avoid** PEROXIDE FOR BASE PASTE AND AMINE FOR CATALYST PASTE
Hazardous Decomposition or Byproducts
Hazardous **May Occur** X **Conditions to Avoid** EXTREME HEAT, EXPOSURE TO LIGHT
Polymerization **Will Not Occur**

Section VI - Health Hazard Data

Route(s) of Entry **Inhalation?** YES **Skin?** YES **Ingestion?** YES
Health Hazards **(Acute arid Chronic**) MAY OCCUR FOR SPECIAL ALLERGIC PEOPLE OR OVER EXPOSED PEOPLE SEE A PHYSICIAN PROMPTLY
Carcinogenicity N/A **NTP** N/A **IARC Monographs?** N/A **OSHA Regulated?** N A
Signs and Symptoms of Exposure N/A
Medical Conditions Generally Aggravated By Exposure N/A
Emergencies and First Aid Procedures IF SKIN IS CONTACTED WASH OFF WITH SOAP AND WATER IMMEDIATELY
SEE A PHYSICIAN PROMPTLY SHOULD INGESTION OCCUR

Section VII - Precautions for Safe Handling Use

Steps to be taken in Case Material is Released or Spilled CLEAN UP USING GLOVES AND DISPOSE OF IN AN APPROVED MANNER
Waste Disposal Method DISPOSE OF ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS
Precautions to Be Taken in Handling and Storing AVOID CONTACT WITH SKIN TISSUE GUM AND EYES
Other Precautions KEEP CLOSED WHEN NOT IN USE

Section VIII - Control Measures

Respiration Protection **(Specify Type)** GENERALLY NOT NECESSARY
Ventilation **Local Exhaust** RECOMMENDED **Special**
Mechanical (General) **Other**
Protection Gloves ALWAYS RECOMMENDED **Eye Protection** RECOMMENDED
Other Protective Closing or Equipment
Work/Hygienic Practices NORMAL SAFE PRACTICES USE ONLY IN A HIGHLY PROFESSIONAL MANNER

The information contained herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty either expressed or implied is made for the completeness or accuracy of this information.

Material Safety Data Sheet
May be use to comply with
OSHA's Hazard Communication Standard,
29 OFA 1910, 1200, Standard must be
consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Heath Administration
(Non-Mandatory From)
Form approved
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IDENTITY (As Used on Label and List)

Note: Blank spaces are not permitted If any item is not applicable
or no information is available, the space must be marked to indicate that

ORION VISIBLE LIGHT CURE CORE BUILD-UP MATERIAL

Section I

Manufacturer's Name: DENT ZAR, INC.
Address (Number Street, City, State and Zip Code)
19643 TRULL BROOK DRIVE
TARZANA CALIFORNIA 91356

Emergency
Telephone Number for information
Date Prepared
Signature of Preparer (optional)

Telephone Number (800) 444-1241 or 818-857-3010
(800) 444-1241 or 818-857-3010
05-17-94

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s)	OSHA PEL	ACGIH TLV	Other Limits Recommend % (optional)
SILICON DIOXIDE			
BARIUM GLASS			
METHACRYLATE MONOMERS			
PHOTOINITIATOR			
AMINE			
OTHER INGREDIENTS ARE LESS THAN 1% EACH			

Section III - Physical/Chemical Characteristics

Boiling Point N/A
Vapor Pressure (mm Hg) N/A
Vapor Density (AIR 1) N/A
Solubility in Water INSOLUBLE
Appearance and Odor TINTED PASTE, CHARACTERISTIC ODOR

Specific (gravity (H20 = 1) N/A
Melting Point N/A
Evaporation Rate (Butyl Acetate- 1) N/A

Section IV - Fire and Explosion Data

Rash Point (Method Used) N/A **Flammable Unites** N/A **LEL** **UEL**
Extinguishing Media CHEMICAL FORMS CARBON DIOXIDE OR DRY CHEMICAL
Special Fire Fighting Procedures None
Unusual Fire and Explosion Hazards NOT KNOWN AS TO DATE

Section V- Reactivity Data

Stability	**Unstable**		**Conditions to Avoid** EXTREME HEAT SUN LIGHT OR VISIBLE LIGHT
	Stable	X	

Incompatibility **(Materials to Avoid)** PEROXIDES; STRONG OXIDIZING AGENTS.
Hazardous Decomposition or Byproducts

Hazardous Polymerization	**May Occur**		**Conditions to Avoid** EXTREME HEAT SUN LIGHT OR VISIBLE LIGHT
	Will Not Occur	X	

Section VI - Health Hazard Data

Rout(s) of entry **Inhalation** YES **Skin** YES **ingestion** YES
Health Hazards **(Acute and Chronic)** MAY OCCUR FOR SPECIAL ALOERGIC PEOPLE OR OVER EXPOSED PEOPLE SEE A PHYSICIAN PROMPILY
Carcinogenicity N/A **NTP** N/A **IARC Monographs?** N/A **OSHA Regulated?** NA
Signs and Symptoms of Exposure N A
Medical Conditions Generally aggravated by exposure N/A
Emergency and First Aid Procedures IF SKIN IS CONTACTED WASH OFF WITH SOAP AND WATER IMMEDIATELY EE A PHYSICIAN PROMPTLY SHOULD INGESTION OCCUR

Section VII - Precautions for Sate Handling Use

Steps to be taken in case Material is Released or Spilled CLEAN UP USING GLOVES AND DISPOSE OF IN AN APPROVED MANNER
Waste Disposal Method DISPOSE OF ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS
Precautions to Be Taken in Handling and Storing AVOID CONTACT WITH SKIN, TISSUE GUM AND EYES
Otter Precautions KEEP CLOSED WHEN NOT IN USE

Section VIII - Control Measures

Respiration Protection (Speedy Type) GENERALLY NOT NECESSARY
Ventilation **Local Exhaust** RECOMMENDED **Special**
Mechanical (General) **Otter**
Protective Gloves ALWAYS RECOMMENDED **Eye Protection** RECOMMENDED
Otter Protective Clotting or Equipment
Work/Hygienic Practices NORMAL SAFE PRACTICES USE ONLY IN A HIGHLY PROFESSIONAL MANNER

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