

Made in USA

**TECHNICAL BULLETIN  
INSTRUCTIONS**

**L-SHA  
VISIBLE LIGHT-CURED PAINT-ON RESTORATIVE**

A new, highly polishable restorative, which offers the handling convenience of Light-Cured materials, combined with outstanding aesthetics, color stability, durability and versatility.

**CONTENTS**

3 g-Shade A-1 (Light)  
3 g-Shade A-2 (Universal)  
3 g-Universal Opaque  
3 g-Shade A-3.5 (Brown)  
3 g-Shade B-3 (Yellow)  
3 g-Shade C-1 (Light Grey)  
5 g-Porcelain Conditioner  
12 g-Enamel Conditioner  
Accessories and Instructions

This product is recommended for cementing fabricated laminate veneers, restoring acrylic veneers, minor defects in porcelain veneers, and for use in Class III and Class V restorations and for limited use in Class I restorations in premolars and selected Class IV restorations where aesthetics is of primary importance.

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### OUTSTANDING FEATURES OF THE MATERIAL

- High adhesive strength to etched enamel without the use of bonding agents.
- Superior aesthetics due to well balanced opacity and light reflectance.
- Excellent color stability.
- Reduced oxygen inhibited layer contributes to the ease of finishing.
- Does not require refrigeration. Shelf life in excess of two years.
- Fast in application – one component restorative system.
- Excellent flow of the material facilitates application.
- May be cured with any dental curing instrument operating in the visible range.

### PROPERTIES OF THE MATERIAL

L-Sha is a flowable light cure restorative composite material based on BIS-GMA.

#### FILLER SPECIFICATIONS

**COMPOSITION:** Blend of radiopaque and fluoride releasing glass

**PARTICLE SIZE:** Blend of micro and sub micron particles.

**PERCENT MASS:** 62-72 %.

#### PHYSICAL PROPERTIES

Compressive Strength	220 MPa
Diametral Tensile Strength	43 MPa
Flexural Strength	110 MPa
Water Absorption	<10 µg/mm <sup>3</sup>
Water Solubility	< 1 µg/mm <sup>3</sup>

### INSTRUCTIONS

#### RESTORATION OF DEFICIENT ENAMEL

1. Prepare the surfaces of the teeth by prophylaxis, using anon-fluoride prophy paste. Wash and dry. Apply enamel conditioner with a cotton pledget to the enamel area to be restored.

**CAUTION:** *Avoid contact with soft tissue or exposed dentin. If accidental spill occurs, wash immediately.*

2. Wait 90 seconds. Wash the tooth (teeth) and evacuate. Dry with oil-free air or with any commercial dental drying agent. Properly conditioned (etched) teeth should have a dull, chalky-white appearance. Highly mineralized teeth may require an additional one to two-minute etching to achieve this effect.

3. Isolate the tooth (teeth) to be restored. Select the desired shade of the restorative and dispense onto a mixing pad.

4. Using a disposable brush, apply a thin, smooth layer over the etched, dry enamel and cure for 20 seconds\*, holding the tip of the light no farther than 2mm from the tooth surface.

5. Wait two minutes before finishing. Abrasives for composites, cones, points, and discs with fine corundum are especially recommended.

#### HEAVILY DISCOLORED TEETH

On heavily discolored teeth (for example, in cases involving discoloration caused by radiological treatment, tetracycline stains, fluorosis, etc.), the application of an opaque, masking layer is recommended. A universal shade opaque is enclosed in the L-Sha kit. After cleaning and etching as described above, a thin layer of the opaque is painted on as an under layer and cured for 20 seconds, followed by the application of the final coating. The final coating should be applied over the piquing layer immediately after the cure of the latter. For best adhesion, the piquing layer should be left unfinished or its surface should be roughened.

### **RESTORATION OF ACRYLIC VENEERS**

1. Roughen the surface to be restored. Wash away the debris and dry with oil-free air. If a relatively large area of metal base of the cast restoration is exposed, the use of the APOLLO is not recommended.
2. Proceed as outlined in points 3-5 of the instructions for restoring enamel (above).

### **RESTORATION OF PORCELAIN VENEERS**

1. Roughen the porcelain to be restored with a diamond bur. If gold or non-precious alloy is exposed, extend the restoration over a relatively large area of porcelain, ground down to a featheredge around the chipped area. Wash away the debris and dry with oil-free air or a dental drying agent.
2. Using a disposable brush, apply a thin layer of Porcelain Conditioner to the prepared porcelain and wait two minutes. Dry with a gentle stream of oil-free air.

\*Any commercial curing instrument is suitable for use with L-Sha. Some curing instruments have, however, a very small diameter tip. The area covered by the light emitted from such tip may be smaller than the area of the restoration. In such cases, the tip of the light should be moved from place to place in order to assure that every fragment of the restoration has been directly irradiated for at least 20 seconds.

3. Proceed as outlined in points 3-5 of the instructions for restoring enamel.

### **CEMENTING OF FABRICATED LAMINATE VENEERS**

#### **Appointment 1**

1. Select the shade for the veneer.
2. Place gingival deflection cord on facial areas of teeth.
3. Decide on amount of enamel to be removed.
4. Make an impression using any elastomer-type impression material or reversible hydrocolloid. Polyvinylsiloxane impressions are preferred, because the refractory material may be cast directly into them.

**Comment:** Temporary coverage of teeth is usually not needed. However, when used, do not use Eugenol-containing cements.

#### **Appointment 2**

1. Make any necessary correction in the veneer to assure good fit. Carefully wipe the surface of the veneer to be bonded with acetone, in order to remove oily impurities, which can interfere with bonding.
2. Place deflection cords to block tissue fluids from oozing into gingival margins.
3. Prepare tooth surface by following steps 1 and 2 for Restoration of Deficient Enamel.
4. In case of the use of a ceramic veneer, apply a thin layer of Porcelain Conditioner to the clean surface of the veneer and wait one minute. Blow dry.
5. Place mylar strips on both side of the tooth. If the tooth is heavily discolored, mask the discoloration with L-SHA opaque. Follow instructions for placing and curing the opaque. Apply a thin layer of the selected shade of L-Sha over the internal surface of the veneer.
6. Place the veneer on the tooth, adjust the position of the veneer and carefully remove the excess.
7. Cure for 30 seconds, placing the tip of the light directly over the veneer. Make sure the entire area of the veneer has been directly irradiated, as described in the instruction for Restoration of Deficient Enamel.
8. Perform final trimming, cleaning and polishing, as necessary.

### **STORAGE**

L-SHA should be preferably stored at temperatures not exceeding 73°F (23°C). Under such conditions, its shelf life is at least two years. Short periods of exposure to temperatures up to 105°F (40°C) are allowable. **DO NOT FREEZE.**

All kit components, accessories and auxiliaries are available separately.

Revision #2. Revised on 1-5-15

**Material Safety Data Sheet**  
May be used to comply with  
**OSHA'S Hazard Communication**  
**Standard 29 CFR 1910.1200,**  
Standard must be consulted for specific requirements

**U.S. Department of Labor**  
**Occupational Safety and Health**  
**Administration**  
**(Non-Mandatory Form)**  
Form Approved  
OMB No. 1218-0072

**Identity (as Used on Label and List) L-Sha Paint-On Restorative.**

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.

**Section I**

Dent Zar, Inc.

Emergency Telephone Number: 323-465-3621

Address (Number, Street, City, State and Zip Code) 19643 Trull Brook Dr. Telephone Number for Information: 323-465-3621

Tarzana, CA 91356

Date Prepared: 01-30-96

Signature of Prepare(Optional)

**Section II Hazardous Components (Specific Chemical Identity, Common names(s):**

CAS NO	OSHA PEL	ACGIH TLV	OTHER LIMITS
GLYCOL, METHACRYLATE	NONE ESTABLISHED	NONE ESTABLISHED	
MULTIFUNCTIONAL METHACRYLATES	NONE ESTABLISHED	NONE ESTABLISHED	
BARIUM GLASS	NONE ESTABLISHED	NONE ESTABLISHED	
BLEND OF SILICATES	NONE ESTABLISHED	NONE ESTABLISHED	
PHOTO INITIATORS	NONE ESTABLISHED	NONE ESTABLISHED	

**Section III - Physical/Chemical Characteristics**

Boiling Point N/A

Specific Gravity (H20=1)

Vapor Pressure (mm Hg) NEGLIGIBLE

Melting Point N/A

Vapor Density (AIR=1) N/A

Evaporation Rate (Butyl/Acetate=1) N/A

Solubility in Water VERY SLIGHTLY SOLUBLE

Appearance and Odor SOFT, FLOWING SELF-LEVELING PASTE WITH A VERY SLIGHT ODOR

**Section IV - Fire and Explosion Data**

Flash Point (Method Used) N/A Flammable Limits LEL N/A UEL N/A

Extinguishing Media CARBON DIOXIDE; FOAM, DRY CHEMICAL

Special Fire Fighting Procedure NONE

Unusual Fire and Explosion Hazards IRRITATING FUMES MAY BE PRODUCED DURING A FIRE.

**Section V - Reactivity Data**

Stability Unstable Conditions to Avoid HIGH TEMPERATURES & DIRECT SUNLIGHT OR HIGH INTENSITY LIGHT

Incompatibility (Material to Avoid) PEROXIDES; STRONG OXIDIZING AGENTS; STRONG ACIDS.

Hazardous Decomposition or by products INCOMPLETE COMBUSTION CAN PRODUCE CARBON MONOXIDE.

Hazardous May Occur Conditions to Avoid EXTREME HEAT, EXPOSURE TO STRONG LIGHT.

Polymerization Will Not Occur X

## Section VI - Health Hazard Data

Route (s) of Entry      Inhalation?      Skin? YES      Ingestion? YES

### Health Hazards (Acute and Chronic)

**SKIN CONTACT:** PROLONGED OR REPEATED CONTACT WITH PRODUCT MIGHT CAUSE IRRITATION.

**EYE CONTACT:** DIRECT CONTACT WITH PRODUCT MAY CAUSE IRRITATION.

**INGESTION:** LARGE AMOUNT MAY CAUSE MOUTH, THROAT, STOMACH IRRITATION, NAUSEA, AND VOMITTING

**CARCINOGENICITY NTP?** NE      **IARC Monographs?** NE      **OSHA Regulated?** NE

NO CARCINOGENS PRESENT

**Signs and Symptoms of Exposure**      **SEE HEALTH HAZARD**

**Medical Conditions Generally** NOT KNOWN

**Aggravated by Exposure**

### Emergency and First Aid Procedures

**SKIN CONTACT:** WIPE OFF PASTE FROM SKIN, REMOVE CONTAMINATED CLOTHING, WASH AFFECTED SKIN, WITH SOAP AND WATER. IF IRRITATION PERSISTS CONSULT A PHYSICIAN.

**EYE CONTACT:** FLUSH PROMPTLY WITH COPIOUS AMOUNT OF WATER FOR A LEAST 15 MINUTES AND CONSULT A PHYSICIAN.

**INGESTION:** CONSULT A PHYSICIAN IMMEDIATELY.

## Section VII - Precautions for Safe Handling and Use

**Steps to be taken in case Material is Released or Spilled** CONTAIN SPILLAGE WITH INERT ABSORBENT. CLEAN UP USING GLOVES AND DISPOSE IN AN APPROVED MANNER. AVOID BREATHING VAPORS. VENTILATE AREA.

**Waste Disposal Method** DISPOSE ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS.

**Precautions to be taken in handling and storing** AVOID CONTACT WITH SKIN. KEEP AWAY FROM DIRECT SUNLIGHT, FROM FOOD STUFF, AND FROM OTHER CONTAMINANTS. DO NOT STORE ABOVE 38° C. DO NOT FREEZE.

**Other Precautions.** DO NOT TAKE INTERNALLY. WASH HANDS AFTER USING.

## Section VIII - Control Measures

**Respiration Protection (specify type)** GENERALLY NOT NECESSARY

**Ventilation Local Exhaust** NORMAL ROOM AIR EXCHANGE      **Special** NONE

**Mechanical (General)** NORMAL VENTILATION      **Other** NONE

**Protective Gloves** RECOMMENDED      **Eye Protection** RECOMMENDED

**Other Protective Clothing or Equipment** NONE NORMALLY REQUIRED

**Work/Hygienic Precaution** NORMAL SAFE PRACTICES. USE ONLY IN A HIGHLY PROFESSIONAL MANNER.

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or method of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. The MSDS was prepared and is to be used only for this product. If the product is used as a component in another product or used in a way other than recommended by Dent Zar, this MSDS information may not be applicable