

Clinical Preparation and Handling Guidelines for
Dentists and Dental Labs

Lava™ Ultimate Restorative



Beautiful Results
Easy Handling



3M ESPE



Beautiful results
Easy handling

Lava™ Ultimate Restorative

Lava Ultimate Restorative is a “new to the world” CAD/CAM material utilizing 3M’s revolutionary nanoceramic technology. This new material, called a Resin Nano Ceramic is unique in durability and function. Its innovative characteristics make it especially impressive for implant-supported crowns. And if it’s reliable in that tough role, just imagine how it will perform in other challenging single-unit indications.

This guide outlines the recommendations for the clinical use and handling for Lava Ultimate Restorative.



Preparation

For Lava Ultimate Restorative, follow these recommended guidelines. Do not undercut. All internal edges and line angles should be rounded. Non-beveled shoulder finish lines are recommended.

Full Crown

Onlay

Inlay

Veneer

5-6°

Ensure 5–6° taper, rounded edges and a shoulder margin.

Tooth Preparation

DO

- For crowns, **prep tooth with 5–6° taper, rounded edges and a shoulder margin**
- **Mechanically clean** any contamination (e.g. debris, scan spray, temp cement) from the tooth prep with a strong stream of water
- **Slightly air dry** (surface should appear glossy)

DON'T

- Do not use any chemical agents after preparation, (e.g. H₂O₂, EDTA, bicarbonates, astringents, desensitizers, solvents, CHX [Chlorhexidine])
- Do not use laser etching
- Do not use eugenol cement for cementation of temporary restoration

Polishing

Extraoral Polishing

Materials and Instruments for Extraoral Finishing and Polishing

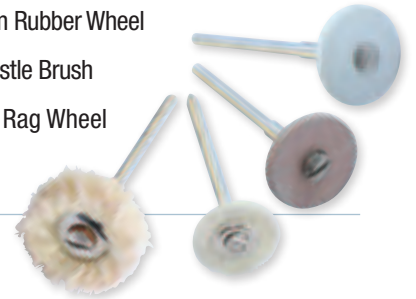
Polishing Agent Options:

- VH Technologies Diashine Fine Soft Extraoral Polishing Paste
- Premier Diamond Twist SCL
- Shofu Direct Dia Paste
- Renfert Opal Ref 520-0000



Instruments:

- Coarse Rubber Wheel
- Medium Rubber Wheel
- Soft Bristle Brush
- Muslin Rag Wheel



Extraoral Polishing Procedure

1 Trial Fit Clean polished restoration in an ultrasonic cleaner or steam cleaner; gently blow dry with an air syringe. Trial fit the final restoration to the preparation. If desired, gently adjust contacts, occlusion and accentuate grooves using a fine needle diamond.



Grind off sprue with coarse rubber wheel or medium-to-fine bur.



Finish sprue area with medium rubber wheel or cup.



Using a soft Robinson bristle brush, spin brush in polishing agent to incorporate paste into brush.



Apply with low speed hand piece working slowly into surface.



The luster quickly appears as the restoration is polished.



Buff with a muslin rag wheel.



Comparison of a polished restoration to an unpolished restoration.

Intraoral Polishing

Materials and Instruments for Intraoral Polishing

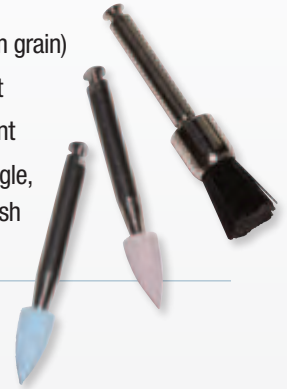
Polishing Agent Options:

- VH Technologies
Diashine Intraoral
Polishing Paste
- Shofu Direct Dia Paste
- Premier Diamond Twist, SCO



Instruments:

- Diamond Bur (30 µm grain)
- Coarse Rubber Point
- Medium Rubber Point
- Soft Black, Latch Angle, Intraoral Prophy Brush



Intraoral Polishing Procedure



Before polishing, make any necessary adjustments with a diamond bur.



Finish with diamond impregnated points/cups.



Apply intraoral polishing paste directly to unpolished restoration.



Work paste slowly into surface using soft black, latch angle prophy brush.

Polishing

Characterization

Characterization — Pit and Fissure Staining

To fully maintain the excellent polish retention and stain resistance of Lava Ultimate resin nano ceramic material, only pit and fissure staining is recommended. Applying light-cure glazes or cervical painting is not recommended.



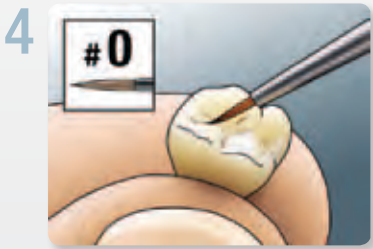
1 Roughen area where you want to add stain. If needed, use a thin bur to carve space for stain. Minimum wall thickness as per IFU has to be maintained after carving.



2 Apply Scotchbond™ Universal Adhesive for 20 seconds. Apply air for 5 seconds.



3 Light cure.



4 Apply Sinfony™ Magic Stains (or other methacrylate-based, light-cured stains).



5 Light cure. Follow the stain manufacturer's Instructions for Use.

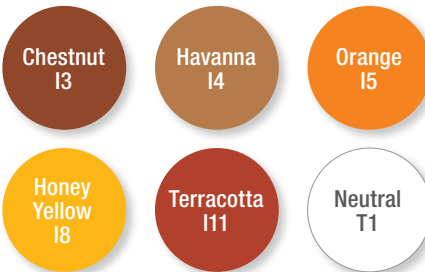


6 Polish with a bristle brush and polishing paste as described in the polishing section.



7 Final restoration.

Sinfony™ Magic Shades*




*Not available in all countries.



General Pre-Treatment of Restoration

As with any restoration, the material must be cleaned, roughened and primed before cementation.

1 Do Clean

 Clean polished restoration in an ultrasonic cleaner or steam cleaner. Gently blow dry with air. Do not use phosphoric acid to clean the restoration.


Don't Use Acid

Do not use phosphoric acid to clean the restoration.

DO



2 Do Air Abrade

 Sandblast with aluminum oxide grain size $\leq 50 \mu\text{m}$ at two bars (30 psi) until intaglio surface appears matte.

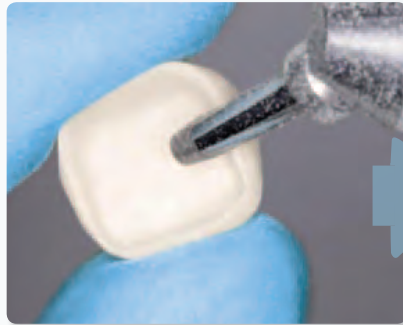
For Dentists: 3M ESPE also recommends CoJet™ Silicate Ceramic Surface Treatment System for pre-treatment of restoration surface.

For Labs: 3M ESPE recommends using Rocatec™ Soft 30 μm blasting media used with the Rocatec™ Junior Bonding System for pre-treatment of restoration surface.

Don't HF Etch

HF etching does not roughen the surface of a resin nano ceramic.

DO



For Dentists




For Labs



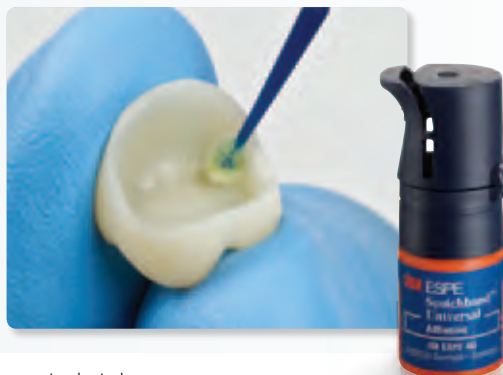
DON'T



3 Do Prime*

 Apply the primer recommended by your cement. If no primer is recommended, apply Scotchbond™ Universal Adhesive or silane to the bonding surface of the restoration.

DO



* Follow the instructions for resin-based materials provided by the cement selected.

Cementation

Lava™ Ultimate Restorations must be bonded with an adhesive resin cement. 3M ESPE recommends **RelyX™ Ultimate Adhesive Resin Cement with Scotchbond™ Universal Adhesive, a primer and adhesive in one bottle**. The flexibility of this system enables the dentist to etch the tooth preparation using a self-etch, selective-etch or a total-etch all with one system.



Cementation with RelyX™ Ultimate Adhesive Resin Cement and Scotchbond™ Universal Adhesive

- 

1 Clean polished restoration in an ultrasonic cleaner or steam cleaner. Gently blow dry with air.
- 

2 **Sand $\leq 50\mu\text{m}$**
Sandblast with aluminum oxide grain size $\leq 50 \mu\text{m}$ (e.g. Cojet Sand or Rocatec Soft) at two bars (30 psi) until intaglio surface appears matte.
- 

3 **Air**
Clean with alcohol and dry with air.
- 

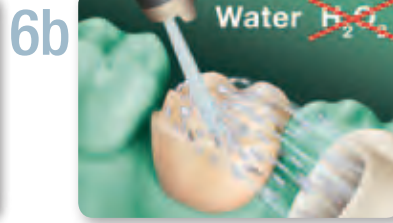
4 **20 sec.**
Apply Scotchbond™ Universal Adhesive to the bonding surface of the restoration and **rub it in for 20 seconds**.
- 

5 **Air**
5 sec.
Air thin with oil and moisture-free air for 5 seconds until the solvent is evaporated and the resin no longer flows over the surface.

6a
Selective-etch Technique
Recommended when enamel is present



Selectively etch enamel for 15 seconds.



Rinse with water.



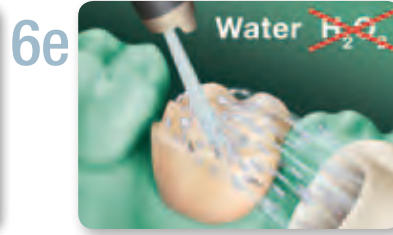
Lightly air dry.

or

6d
Total-etch Technique



Totally etch enamel and dentin for 15 seconds.



Rinse with water.



Lightly air dry.

or

6g
Self-etch Technique



Rinse with water.



Lightly air dry.



Apply Scotchbond Universal Adhesive and rub it in for 20 seconds.



Lightly air dry for 5 seconds.



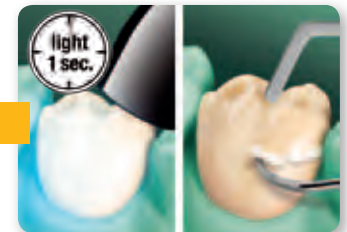
Apply RelyX Ultimate cement evenly to the surface of the restoration.



Seat the restoration and use a suitable instrument to hold the restoration in place until fully set.



Removal of Excess: **Option 1** — While holding the restoration in place, remove excess using a sponge pellet or floss. Cover margins with glycerine gel.



Removal of Excess: **Option 2** — While holding the restoration in place, chip away excess cement after brief tack light cure for 1 second (hand waving technique).

or



Final cure 20 seconds per surface.



Finish and polish the marginal area.

Before using RelyX™ Ultimate Adhesive Resin Cement, please refer to the instructions for Use provided with the product package.

! Important Cementation Summary

Follow the tooth prep and restoration design guidelines for each indication.

Prepare the tooth for cementing as follows:

- Properly isolate the prep area, preferably using a rubber dam or Isolite.
- Remove loose preparation debris by spraying with water.
- Clean the stump or the cavity thoroughly, rinse with a water spray, and lightly air dry in only 2–3 bursts of water-free and oil-free air, or use cotton pellets or similar materials to dry it off.
 - Do not overdry. The cavity should be just dry enough that the surface has a slightly glossy appearance. As with any permanent cement, over drying can lead to post-operative sensitivity.
- Do not use substances such as desensitizers, disinfectants, astringents, dentin sealants, rinsing solutions containing EDTA, etc., after the final cleaning — their residues may have a detrimental effect on the bond strength and setting reaction of the adhesive.

Prepare the restoration for cementing as follows:

- Prior to try-in, clean with alcohol and dry restoration. Ensure surface is free of contamination (e.g., milling debris, milling fluids, saliva, grease, acetone, fit checker).
- Roughen the intaglio surface of the restoration as follows: Sandblast (air abrade) bonding surface with aluminum oxide of $\leq 50 \mu\text{m}$ at 30 psi (2 bars).
- Clean the restoration in an ultrasonic cleaner or steam cleaner; gently blow dry with an air syringe.
- Use silane or Scotchbond™ Universal Adhesive as directed.
 - Do not use HF Etch with Lava™ Ultimate Restorative** because it will not roughen the surface.



- **ALWAYS** use an adhesive resin cement system like Scotchbond Universal adhesive and RelyX™ Ultimate Adhesive Resin Cement.
- **ALWAYS** Light cure the cement and adhesive, 20 seconds per surface.

Serviceability

It's easy to add on with Light-Cured Restoratives.

Lava™ Ultimate Restorative is a Resin Nano Ceramic that enables reliable characterization and re-sealing.



Roughen the Lava™ Ultimate restoration site.



Use Scotchbond™ Universal Adhesive or apply silane and adhesive according to the Instructions for Use.



Light cure bonding agent according to the Instructions for Use.



Apply Filtek™ Supreme Ultra Universal Restorative (or other methacrylate-based, light-cured restorative).



Light cure restorative material according to the Instructions for Use.

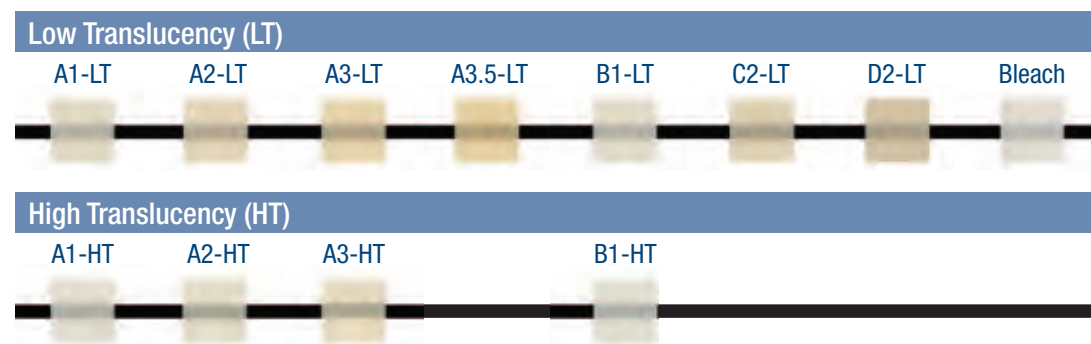


Polish the added restorative with a disc. For final polish, apply polishing compound with bristle brush.



Shade Selection

Lava™ Ultimate Restorative is available in eight shades and two translucencies.



Ordering Information

Sinfony™ Magic Shade Refills, 5g each

Item No.	Product Information
49430	Sinfony™ Magic Shade Refill, Shade I3 Chestnut
49440	Sinfony™ Magic Shade Refill, Shade I4 Havanna
49450	Sinfony™ Magic Shade Refill, Shade I5 Orange
49480	Sinfony™ Magic Shade Refill, Shade I8 Honey Yellow
49492	Sinfony™ Magic Shade Refill, Shade I11 Terracotta
49360	Sinfony™ Magic Shade Refill, Shade T1 Neutral

Scotchbond™ Universal Adhesive

Item No.	Product Information
41254	Scotchbond™ Universal Adhesive Intro Kit 1 – 5ml adhesive vial; 50 disposable mixing wells; 50 disposable microbrushes; 1 – 3ml etchant syringe
41258	Scotchbond™ Universal Adhesive Refill — 5ml adhesive vial
41255	Scotchbond™ Universal Adhesive Intro Kit — Unit Dose 40 – 40 unit dose and 1 – 3ml etchant syringe
41256	Scotchbond™ Universal Adhesive Unit Dose 100 – 100 unit dose and 1 – 3ml etchant syringe



RelyX™ Ultimate Adhesive Resin Cement

Item No.	Product Information
56891	RelyX™ Ultimate Introductory Kit (includes 4 color shades) 1 – 5ml bottle Scotchbond™ Universal Adhesive; 1 – 3ml etchant syringe; 25 – dispensing tips for etchant syringe; 50 – mixing wells; 50 – microbrushes; 1 – 8.5g syringe each of cement in shades A30, B0.5, A1 and Translucent; 30 – mixing tips (regular); 10 – mixing tips (wide) + 10 endo tips; 10 – mixing tips (wide); 10 – mixing tips (intraoral); Technique Guide; Instructions for Use
56892	RelyX™ Ultimate Trial Kit (Translucent) 1 – 1.5ml bottle Scotchbond™ Universal Adhesive; 1 – 3ml etchant syringe; 25 – dispensing tips for etchant syringe; 50 – microbrushes; 1 – 8.5g syringe cement Translucent; 10 – mixing tips (regular); 5 – mixing tips (wide); 5 – mixing tips (intraoral); Technique Guide; Instructions for Use
56894	RelyX™ Ultimate Trial Kit (A1) 1 – 1.5ml bottle Scotchbond™ Universal Adhesive; 1 – 3ml etchant syringe; 25 – dispensing tips for etchant syringe; 50 – microbrushes; 1 – 8.5g syringe cement (A1); 10 – mixing tips (regular); 5 – mixing tips (wide); 5 – mixing tips (intraoral); Technique Guide; Instructions for Use

RelyX™ Ultimate Adhesive Resin Cement Refills

Item No.	Product Information
56887	Shade A1
56888	Shade A30 Opaque
56889	Shade B0.5 Bleach
56890	Shade Translucent
	Refills include 1 – 8.5g syringe cement; 10 – mixing tips (regular); 5 – mixing tips (wide) + 5 intra-oral tips

Availability

Lava™ Ultimate Restorative is available for CEREC® and E4D® systems. Each refill box contains five blocks of a single shade in size 12 or 14L.

Lava™ Ultimate Restorative for CEREC®—REFILLS

SHADE	LOW TRANSLUCENCY		HIGH TRANSLUCENCY	
	SIZE 12 Item #	SIZE 14L Item #	SIZE 12 Item #	SIZE 14L Item #
A1	2912A1-LT	2914A1-LT	2912A1-HT	2914A1-HT
A2	2912A2-LT	2914A2-LT	2912A2-HT	2914A2-HT
A3	2912A3-LT	2914A3-LT	2912A3-HT	2914A3-HT
A3.5	2912A3.5-LT	2914A3.5-LT		
B1	2912B1-LT	2914B1-LT	2912B1-HT	2914B1-HT
C2	2912C2-LT	2914C2-LT		
D2	2912D2-LT	2914D2-LT		
Bleach	2912BL-LT	2914BL-LT		



Lava™ Ultimate Restorative for E4D®—REFILLS

SHADE	LOW TRANSLUCENCY		HIGH TRANSLUCENCY	
	SIZE 12 Item #	SIZE 14L Item #	SIZE 12 Item #	SIZE 14L Item #
A1	3112A1-LT	3114A1-LT	3112A1-HT	3114A1-HT
A2	3112A2-LT	3114A2-LT	3112A2-HT	3114A2-HT
A3	3112A3-LT	3114A3-LT	3112A3-HT	3114A3-HT
A3.5	3112A3.5-LT	3114A3.5-LT		
B1	3112B1-LT	3114B1-LT	3112B1-HT	3114B1-HT
C2	3112C2-LT	3114C2-LT		
D2	3112D2-LT	3114D2-LT		
Bleach	3112BL-LT	3114BL-LT		



Finished restorations are available from Lava™ Milling Centers, Jensen Milling Centers and Straumann® CARES®.



3M ESPE Customer Care Center: 1-800-634-2249

Visit www.3MESPE.com/LavaUltimate for more information

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