

Clinical Preparation and Handling Guidelines for
Dentists and Dental Labs

Lava™ Ultimate Restorative



Beautiful Results
Easy Handling



3M ESPE

Lava™ Ultimate Restorative

Lava Ultimate Restorative is a next generation CAD/CAM material utilizing 3M's revolutionary nanoceramic technology. This new material, called a Resin Nano Ceramic is unique in durability and function.

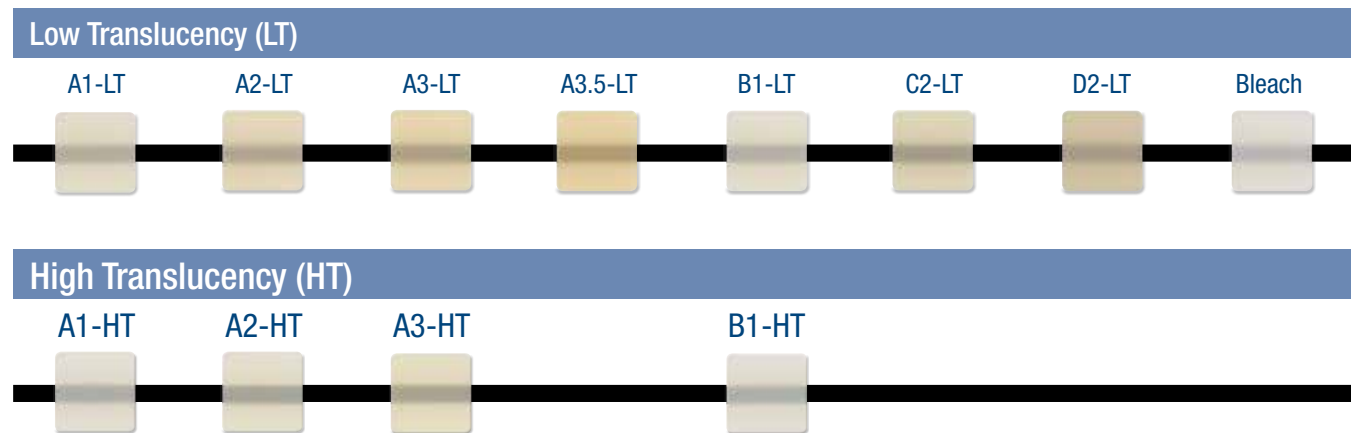
Lava Ultimate restorative is indicated for permanent, adhesive single unit indications:

- Full Crowns
- Onlays
- Inlays
- Veneers



Shade Selection

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



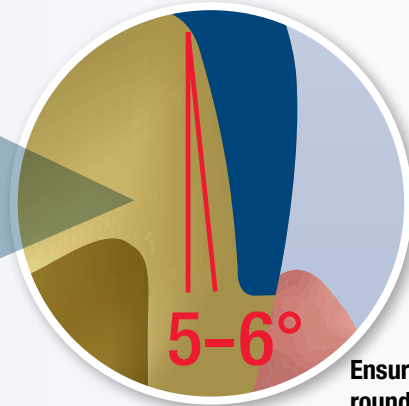
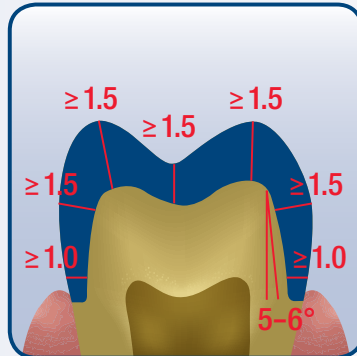
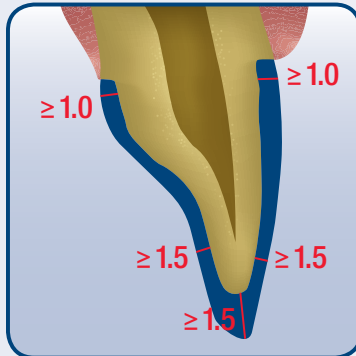
Beautiful results Easy handling

Preparation

Preparation

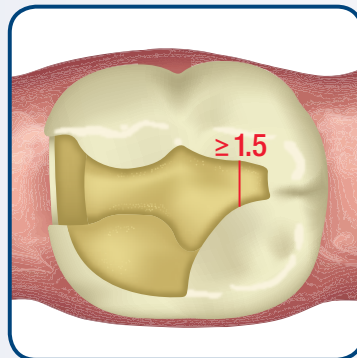
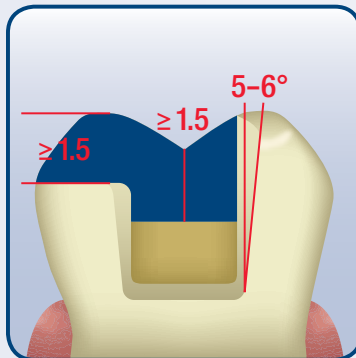
Prepare tooth for maximum mechanical retention according to the Lava™ Ultimate Restorative Instructions for Use.

Full Crown

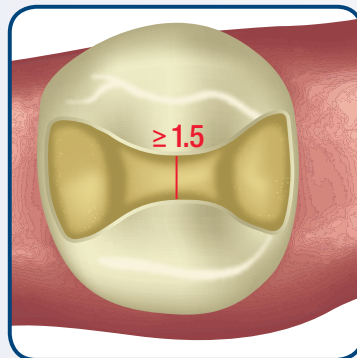
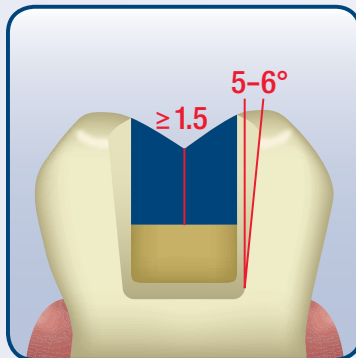


Ensure 5–6° taper, rounded edges and a shoulder margin.

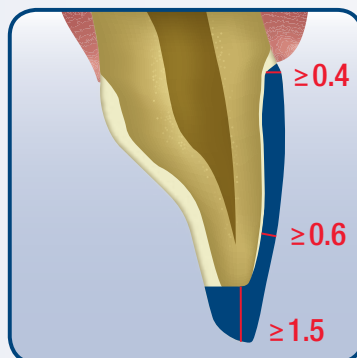
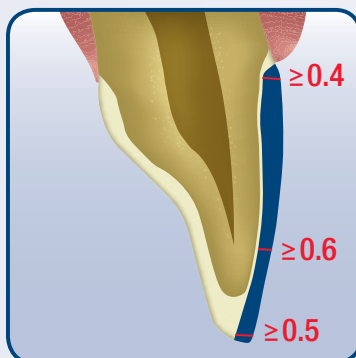
Onlay



Inlay



Veneer



Tooth Preparation

DO

- For crowns, **prep tooth with 5–6° taper**
- All internal edges and line angles should be rounded
- Non-beveled shoulder finish lines are recommended
- **Mechanically clean** any contamination (e.g. debris, powder, temp cement) from the tooth prep and rinse with a strong stream of water
- **Slightly air dry** (surface should appear glossy)



DON'T

- Do not undercut
- Do not use any chemical agents after preparation, (e.g. H₂O₂, EDTA, bicarbonates, astringents, desensitizers and solvents)
- 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

Meisinger Tool Set for Lava™ Ultimate Restorative (Item No. 3M000)



Polishing Agent Options:

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



Extraoral Polishing Procedure

1 Trial Fit Clean 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 tool.



Pre-polish with fine rubber tool.



Using a soft 15 mm 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.

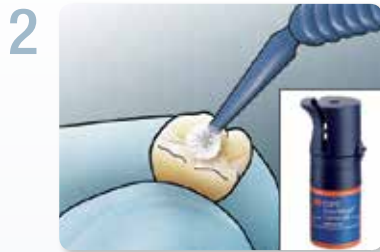
Characterization

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.



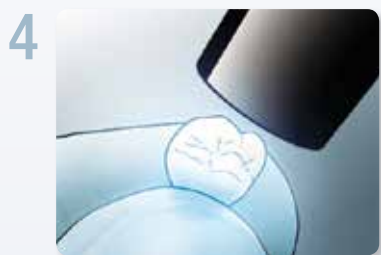
1 Use a bur or sandblast to roughen the restoration surface. If additional grooves are desired, carve with a fine bur. Maintain minimum wall thickness per the Lava™ Ultimate Restorative Instructions for Use.



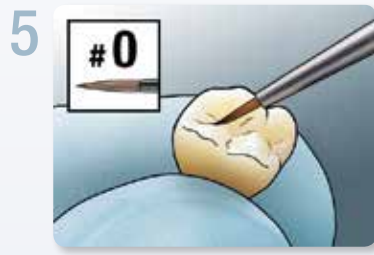
2 Apply Scotchbond™ Universal Adhesive to the surface of the restoration and **scrub it in for 20 seconds**. Alternatively use a Silane followed by a bonding agent as per manufacturer's Instructions for Use.



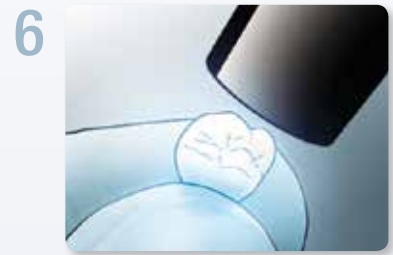
3 Air thin with oil-free, moisture-free air until the solvent is evaporated and the adhesive no longer moves over the surface.



4 Light cure.



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



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



7 Finish with rubber instruments and polish with a bristle brush and polishing paste as described in the extra-oral polishing section.



8 Final restoration with characterized fissures.

Sinfony™ Magic Shades*

Chestnut
I3

Havana
I4

Orange
I5

Honey
Yellow
I8

Terracotta
I11

Neutral
T1



*Not available in all countries.

Bonding

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

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. RelyX Ultimate cement with Scotchbond Universal adhesive form a highly versatile bonding system that works for many materials and indications.

This guide illustrates the protocol for this bonding system as recommended for Lava Ultimate Restorative.



Prepare tooth for maximum mechanical retention. It is important to maximize bond strength as described on the following pages.

Key Steps:

- Sandblast the restoration
- Etch (selective or total etch) the tooth surface
- Light cure the adhesive on the prep
- Carefully remove excess cement while holding the restoration in place
- Light cure restoration 20 seconds per surface for final curing

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

1. Pre-Treatment of Lava™ Ultimate Restoration

Note: Complete all try-in, adjustment, finishing and polishing steps before starting the bonding pre-treatment.



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



Sandblast with aluminum oxide grain size $\leq 50\mu\text{m}$ (e.g. Cojet™ Sand or Rocotec™ Soft) at two bars (30 psi) until entire bonding surface appears matte. Use suction to prevent dusting. **Do not etch with HF or phosphoric acid.**



Remove sand with alcohol and dry with oil-free, moisture-free air. Do not use other chemical agents.



Apply Scotchbond™ Universal Adhesive to the bonding surface of the restoration and **scrub it in for 20 seconds.**



Air thin with oil-free, moisture-free air until the solvent is evaporated and the adhesive no longer moves over the surface.



Priming for adhesive resin cements other than RelyX™ Ultimate Adhesive Resin Cement:

Apply the primer, recommended by your cement. If no primer is recommended, apply Silane (e.g. RelyX™ Ceramic Primer) to the bonding surface of the restoration as per silane manufacturer's instructions.

Bonding

2. Pre-Treatment of Tooth

Note: Prepare tooth according to the Instructions for Use for maximum retention (refer to page 3 of this guide). Ensure complete hemostasis and optimum gingival retraction for a dry bonding environment. Do not use any chemical agents to disinfect, clean or seal the dentin.



To remove debris, thoroughly clean all bonding surfaces with a slurry of pumice and water, rinse and dry.



Apply rubber dam to isolate the tooth.



Selectively etch enamel for 15 seconds.



Etch enamel and dentin for 15 seconds.



Rinse with water.



Lightly air dry or blot dry leaving a slightly moist surface. Do not over dry.



Apply Scotchbond™ Universal Adhesive and **scrub it in for 20 seconds.**



If you have pooled adhesive, use a dry microbrush to remove it.



Blow a gentle stream of air over the liquid for about 5 seconds until it no longer moves and the solvent has evaporated completely.



For maximum adhesion light cure the adhesive for 10 seconds.

3. Seating

Note: Use a **high power light**. Make sure the light guide is **clean** and light is delivering **full intensity**. Proper curing technique is crucial for bonding success: for each curing cycle hold light guide steady at **minimum distance** to the restoration surface.



1 Mount mixing tip to RelyX™ Ultimate Automix Syringe and discard the initial amount.



2 Apply a uniform layer of RelyX™ Ultimate Adhesive Resin Cement to the tooth or the restoration to ensure a void-free interface.



3 Completely seat the restoration using a suitable instrument.



4 While holding the restoration firmly in place, wipe off excess using sponge pellets and floss. Cover margins with glycerin gel.

or



4 Wait 90 seconds or tack light cure for 1 second for cement to reach gel state. While holding restoration firmly in place remove excess cement with a sharp instrument.



5 Light cure 20 seconds per surface. Total cure time should be at least 60 seconds depending on number of surfaces.



6 For dark shades or thick restorations, allow 6 minutes of total self-cure time from the start of mixing.



7 Finish margins after cure is fully established.



8 Final restoration. If desired polish intraorally as described in intraoral polishing section.

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

Intraoral Adjustment

Adjustment and Repolishing



1 Make any necessary adjustments with a diamond bur.



2 Finish with Sof-Lex™ Spiral Finishing Wheel.

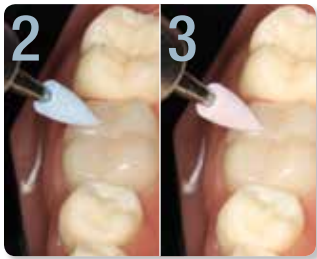


3 Polish with Sof-Lex™ Spiral Polishing Wheel.

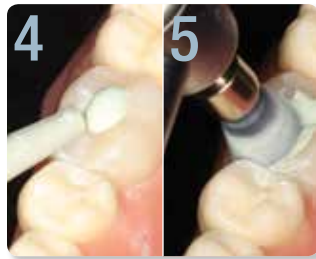
Intraoral Polishing Materials and Instruments

- Diamond Bur (30 µm grain size)
- Sof-Lex™ Spiral Finishing and Polishing Wheels
- Coarse Rubber Point
- Medium Rubber Point
- Soft Black, Latch Angle, Intraoral Prophy Brush
- Polishing Agent Options:
VH Technologies Diashine
Intraoral Polishing paste,
Shofu Direct Dia Paste,
Premier Diamond Twist, SCO

or



2 Finish with diamond impregnated points/cups.



3 Apply intraoral polishing paste. Work paste slowly into surface using soft black, latch angle, intraoral prophy brush.



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.



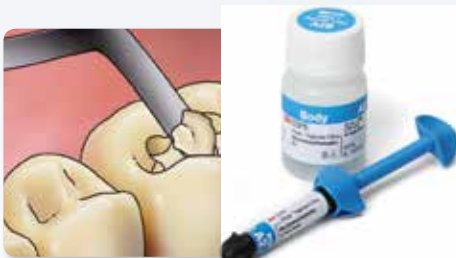
Roughen the Lava™ Ultimate restoration site.



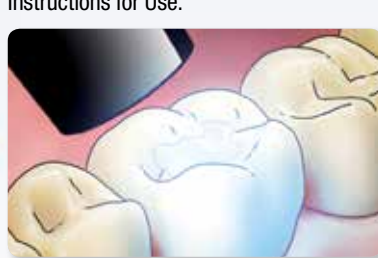
Use Scotchbond™ Universal Adhesive or apply silane and adhesive according to the Instructions for Use.



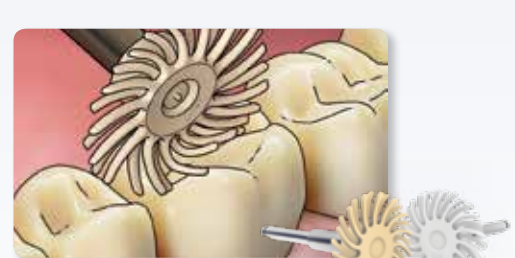
Light cure bonding agent according to the Instructions for Use.



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 Sof-Lex™ Spiral Finishing and Polishing Wheels.

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

Filtek™ Supreme Ultra Universal Restorative

SYRINGE SHADE REFILLS include 1 – 4g syringe;
CAPSULE SHADE REFILLS Enamel Shade Refills include 10 – 0.2g capsules; Body Shade Refills include 20 – 0.2g capsules; Instructions for Use.

Body Shade Refills

Shades	Syringe	Capsule
A1B	6028A1B	6029A1B
A2B	6028A2B	6029A2B
A3B	6028A3B	6029A3B
A3.5B	6028A3.5B	6029A3.5B
A4B	6028A4B	6029A4B
A6B	6028A6B	6029A6B
B1B	6028B1B	6029B1B
B2B	6028B2B	6029B2B
B3B	6028B3B	6029B3B
B5B	6028B5B	6029B5B
C1B	6028C1B	6029C1B
C2B	6028C2B	6029C2B
C3B	6028C3B	6029C3B
D2B	6028D2B	6029D2B
D3B	6028D3B	6029D3B
White	6028WB	6029WB
Extra White	6028XWB	6029XWB

Enamel Shade Refills

Shades	Syringe	Capsule
A1E	6028A1E	6029A1E
A2E	6028A2E	6029A2E
A3E	6028A3E	6029A3E
B1E	6028B1E	6029B1E
B2E	6028B2E	6029B2E
D2E	6028D2E	6029D2E
White	6028WE	6029WE
Extra White	6028XWE	6029XWE

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

REFILLS include 1 – 8.5g syringe cement; 10 – mixing tips (regular); 5 – mixing tips (wide) + 5 intra-oral tips

Item No.	Product Information
56887	Shade A1
56888	Shade A30 Opaque
56889	Shade B0.5 Bleach
56890	Shade Translucent

Sof-Lex™ Spiral Finishing and Polishing Wheels

Item No.	Product Information
5080	Sof-Lex™ Spiral Finishing Wheel Refill 30 – Sof-Lex Spiral Finishing Wheels (beige)
5081	Sof-Lex™ Spiral Polishing Wheel Refill 30 – Sof-Lex Spiral Polishing Wheels (white)
5082I	Sof-Lex™ Spiral Wheels — Introductory Kit 10 – Sof-Lex Spiral Finishing Wheels (beige); 10 – Sof-Lex Spiral Polishing Wheels (white); 1 – RA Mandrel

Lava™ Ultimate Restorative is available for chairside milling systems or fabricated through a lab.

To find the latest Lava Ultimate restorative ordering information:

For chairside milling systems, please visit www.3MESPE.com, keyword search “Lava Ultimate” or contact your local representative.

For lab fabrication, contact your lab or your local representative.

3M ESPE Customer Care Center: 1-800-634-2249
Visit www.3MESPE.com/LavaUltimate for more information

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