### 3M™ ESPE™ Lava™ Plus High Translucency Zirconia Discs

Lava™ Plus Zirconia is available in 98 mm diameter discs in 14, 18 and 25 mm thicknesses.



#### With Step

Item No.	Thickness	Diameter
69271	14 mm	98 mm
69272	18 mm	98 mm
69273	25 mm	98 mm



### Lava™ Plus High Translucency Zirconia Dyeing Liquids

The precise colour match of the eighteen pre-mixed Lava™ Plus Zirconia Dyeing Liquids ensures predictable and precise results.



Item No.	Dyeing Liquids – 100 ml bottles
69203	Lava™ Plus Zirconia Dyeing Liquid A1
69204	Lava™ Plus Zirconia Dyeing Liquid A2
69205	Lava™ Plus Zirconia Dyeing Liquid A3
69206	Lava™ Plus Zirconia Dyeing Liquid A3.5
69207	Lava™ Plus Zirconia Dyeing Liquid A4
69208	Lava™ Plus Zirconia Dyeing Liquid B1
69209	Lava™ Plus Zirconia Dyeing Liquid B2
69210	Lava™ Plus Zirconia Dyeing Liquid B3
69211	Lava™ Plus Zirconia Dyeing Liquid B4
69212	Lava™ Plus Zirconia Dyeing Liquid C1
69213	Lava™ Plus Zirconia Dyeing Liquid C2
69214	Lava™ Plus Zirconia Dyeing Liquid C3
69215	Lava™ Plus Zirconia Dyeing Liquid C4
69216	Lava™ Plus Zirconia Dyeing Liquid D2
69217	Lava™ Plus Zirconia Dyeing Liquid D3
69218	Lava™ Plus Zirconia Dyeing Liquid D4
69219	Lava™ Plus Zirconia Dyeing Liquid W1
69220	Lava™ Plus Zirconia Dyeing Liquid W3

Item No.	Dyeing Liquids – 300 ml bottles
69176	Lava™ Plus Zirconia Dyeing Liquid A1
69177	Lava™ Plus Zirconia Dyeing Liquid A2
69178	Lava™ Plus Zirconia Dyeing Liquid A3
69179	Lava™ Plus Zirconia Dyeing Liquid B1
69180	Lava™ Plus Zirconia Dyeing Liquid C1
69181	Lava™ Plus Zirconia Dyeing Liquid W1

#### Lava™ Plus High Translucency Zirconia Effect Shades

Lava™ Plus Zirconia Effect Shades are offered in 8 shades, including fluorescent, bringing individual artistry into every restoration.



Item No.	Effect Shades
69224	Lava™ Plus Zirconia Effect Shade Kit:  Lava™ Plus Zirconia Effect Shade Orange (8 ml)  Lava™ Plus Zirconia Effect Shade Grey (8 ml)  Lava™ Plus Zirconia Effect Shade White (8 ml)  Lava™ Plus Zirconia Effect Shade Pink (8 ml)  Lava™ Plus Zirconia Effect Shade Yellow (8 ml)  Lava™ Plus Zirconia Effect Shade Brown (8 ml)  Lava™ Plus Zirconia Effect Shade Purple (8 ml)  Lava™ Plus Zirconia Effect Shade Fluorescence (8 ml)  Lava™ Plus Zirconia Effect Shade Liquid Thinner (100 ml)
69260	Lava™ Plus Zirconia Effect Shade – Fluorescence (8 ml)
69261	Lava™ Plus Zirconia Effect Shade – Grey (8 ml)
69262	Lava™ Plus Zirconia Effect Shade – Brown (8 ml)
69263	Lava™ Plus Zirconia Effect Shade – Orange (8 ml)
69264	Lava™ Plus Zirconia Effect Shade – Yellow (8 ml)
69265	Lava™ Plus Zirconia Effect Shade – Purple (8 ml)
69266	Lava™ Plus Zirconia Effect Shade – Pink (8ml)
69267	Lava™ Plus Zirconia Effect Shade – White (8 ml)

Item No.	Enamel Liquids
69226	Lava™ Plus Zirconia Enamel Liquid EL (100 ml)
69227	Lava™ Plus Zirconia Enamel Liquid EM (100 ml)
69228	Lava™ Plus Zirconia Enamel Liquid EB (100 ml)
69229	Lava™ Plus Zirconia Enamel Liquid Intro Kit:  · Lava™ Plus Zirconia Enamel Liquid EL (100 ml)  · Lava™ Plus Zirconia Enamel Liquid EM (100 ml)  · Lava™ Plus Zirconia Enamel Liquid EB (100 ml)  · Applicator (150 pieces)  · Lava™ Plus Zirconia Enamel Shade Guide
69301	Applicator (50 pieces)

Item No.	Shade Guide	The state of the s
69225	Lava™ Plus Zirconia Shade Guide (Dyeing Liquids & Effect Shades)	tital -
69300	Lava™ Plus Zirconia Enamel Shade (	Guide Commonwealth

### Lava™ Plus High Translucency Zirconia Colour Markers Kit

Lava™ Plus Zirconia Colour Markers can be added to the Lava™ Plus Zirconia Dyeing Liquid to visualize application on the pre-sintered restoration, allowing full control over custom shading.



Item No.	Colour Marker	
69223	Lava™ Plus Zirconia Colour Marker Kit:	
	· Lava™ Plus Zirconia Colour Marker BLUE (10 ml)	
	· Lava™ Plus Zirconia Colour Marker RED (10 ml)	

### www.3MESPE.ca/LavaPlus



Available through

3M Canada Post Office Box 5757 London, Ontario N6A 4T1 Canada 1-888-363-3685

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## Lava<sup>™</sup> Plus





# Lava<sup>™</sup> Plus High Translucency Zirconia from 3M ESPE – Now Available in Disc Format

High Translucency Zirconia Disc Carl-Schurz-Str. 1 41453 Neuss - German

The 3M™ ESPE™ Lava™ Brand is widely acknowledged as the trusted brand that built the market for zirconia restorations through the Lava™ Milling Centre network. Millions of cases have been produced worldwide since the brand's introduction in 2001. Now 3M ESPE makes its complete system for high translucency zirconia restorations, including its patented shading liquids, available for open-source milling.

### Dental labs can now access:

- Lava™ Plus High Translucency Zirconia Discs (98 mm) in three thicknesses: 14 mm, 18 mm and 25 mm.
- 3M ESPE's patented shading system with Dyeing Liquids available in 18 shades.
- Three new Enamel Liquids to create a naturally flowing, esthetic transition from the cervical to the incisal edge.
- Special Effect Shades and Colour Markers.

### Lava<sup>™</sup> Plus Indications

Restorations can either be monolithic full contour or with a partial or full veneer.

























For full Indication details, please refer to the Lava™ Plus Zirconia Instructions for Use.

### True Colours – an A2 is an A2

3M ESPE patented shading technology delivers consistent colour. Developed specifically for a consistent colour match to VITA® Classical shades, 3M™ ESPE™ Lava™ Plus High Translucency Zirconia Dyeing Liquids are available in each VITA® Classical shade plus two bleach shades. For popular VITA 3D-Master® shades, 3M ESPE provides a conversion chart to ensure you can deliver an accurate match for your dentist. Your high strength, translucent restorations will have a warm and natural esthetic appearance because the shading liquid is completely absorbed and provides coloration throughout the restoration.



Initial Situation: Preparation of a lower molar with root treatment.



Final situation: A2 custom shaded with 3M™ ESPE™ Lava™ Plus Enamel Dyeing Liquid EL in the incisal area.

# Consistent VITA® Classic Colour Match



# Choose the Shading Option That's Best for You

Two shading options, Dip and Natural gradient, give you flexibility and total control of the esthetic level. A glaze application may help to achieve a better match of the selected shade and provide a more natural esthetic appearance.

### Fast & Easy: Monochrome Dip Shading.

FAST & EASY



Frameworks, cut backs and full contour all-zirconia can be produced with monochrome dip shading, a fast and easy 2-minute process in which the shading liquid is evenly and completely absorbed throughout the zirconia. This means no "white spots" will appear if adjustments are made.

### Individual & Artisan: Natural Gradient Shading.

INDIVIDUAL & ARTISAN



Dentists receive highly customized esthetics in an all-zirconia restoration when you use the natural gradient technique. The comprehensive Lava™ Plus Shading System – including Lava™ Plus High Translucency Zirconia Dyeing Liquids, Enamel Liquids and Effect Shades – allows for a high level of individualization and a natural look.





YouTube.com/3MESPEDental

You can find more shading technique details in the 3M™ ESPE™ Lava™ Plus Zirconia Step-by-Step Shading Guide or in the Lava™ Plus Zirconia Shading Technique Video on YouTube.

## What Makes 3M™ ESPE™ Lava™ Plus High Translucency Zirconia Unique?

### An Excellent Colour Match Reduces Remakes.

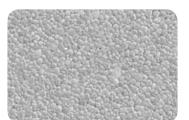
3M ESPE has made shade matching simple. The new Enamel Liquids can now be used to achieve a natural transition from the cervical to the incisal edge.



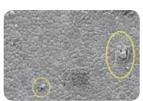
### A Plus in Translucency.

In order for Lava™ Plus Zirconia to obtain its desired optical properties it must allow light to pass with a minimal amount of scattering. Scattering occurs when light strikes structural defects inside the sintered zirconia.

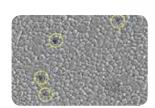
3M ESPE's high quality processing of zirconia minimizes these effects. Lava Plus zirconia will sinter to a highly dense polycrystalline microstructure with an average grain size of below 0.5 µm.



a) 3M™ ESPE™ Lava™ Plus High Translucency



b) Generic zirconia – highlighted impurity and pore



c) Branded competitive zirconia – highlighted segregated alumina grains

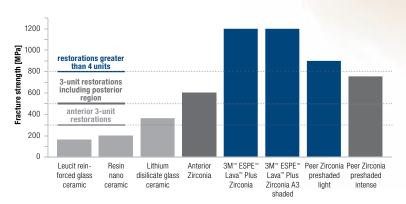
SEM images, Magnification 10,000 fold. (3M ESPE internal data.)

### Strength That Exceeds.

This same microstructure that gives Lava Plus zirconia its high translucency is also responsible for its high strength and fracture toughness, which is a measurement of a material's ability to resist fracture.

Weaker materials overcome their strength limitation by increasing the minimum wall thickness required for the finished restoration.

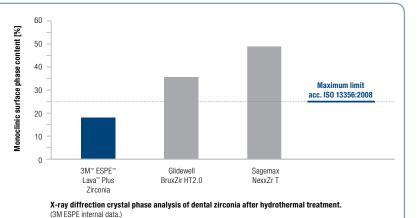
Lava Plus zirconia's high strength and toughness have translated into demonstrated clinical performance on multi-unit posterior bridges with a minimum wall thickness of 0.5 mm.



Fracture strength data of various dental materials. Recommendations acc. ISO 6872:2008 regarding strength and indication range. (3M ESPE internal data.)

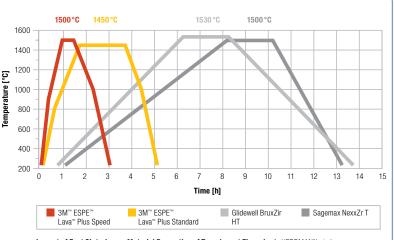
### **Excellent Aging Stability.**

Lava Plus zirconia's unique microstructure and chemical formulation also resists degradation that can be observed in zirconia ceramics when they are exposed to elevated temperatures in humid environments. The higher the aging stability, the lower the monoclinic phase content at the surface of a zirconia after hydrothermal treatment.



### High Throughput Speed Sintering Cycle.

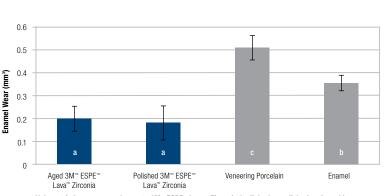
The same unique blend of raw materials that contributes to the Lava Plus zirconia's excellent translucency, strength and aging stability enables the use of a Speed Sintering Cycle. This high throughput sintering schedule allows for a sintering time of 160 min., without compromising strength or translucency. This allows for up to three batches a day.



Impact of Fast Sintering on Material Properties of Translucent Zirconia. A. HERRMANN et al,

### Low Antagonist Wear.

The average grain size of less than 0.5 µm and the material properties found in Lava Plus zirconia yields a surface that is also kind to opposing dentiton. Long-term enamel wear behaviour of Lava zirconia material after accelerated aging was investigated at the University of Alabama at Birmingham. The study revealed that "Aged zirconia had similar roughness and produced similar wear of opposing enamel as polished zirconia. Both zirconia groups produced less enamel wear than the veneering porcelain or natural enamel."



Volumetric human enamel wear to 3M™ ESPE™ Lava™ Zirconia (polished or polished and aged by autoclaving for 5 h at 135 °C, 2 bars), human incisor enamel and a veneering porcelain (Modified Alabama wear testing device). Burgess et al, Dent Res 91 (Spec Iss A): 418, 2012.