Vericore ZR PRO ML MultiLayer Zirconia

The Extra Strong, Extra Esthetic Zirconia

Zirconia Type	Flexural Strength	Chemical Solubility	Thermal Expansion (25 – 500°C)	Density
Vericore ZR PRO ML	Up to 1,130 MPa	≤31.5µg/cm^2	Approx. 10.4 x 10^{-6}/K	6.07 g/cm^3

Instructions for Use for Vericore ZR PRO ML

The milling operation will add up to 25% to the original size to compensate for shrinkage during the final sintering process. The exact enlargement factor is on the side of the disc. It is advisable to keep large frames attached to a bar/sprue of surrounding zirconia material; on (at least) one side; this prevents distortion during the sintering process.

Indications For Use

Vericore zirconia blanks are made from pre-sintered zirconium oxide intended to be used with CAD/CAM or manual milling machines. Vericore zirconia blanks are biocompatible and designed to fabricate zirconia structures for:

- Single unit anterior and posterior restorations such as crowns, inlays, onlays and veneers.
- Single unit crowns in the anterior and posterior regions including implant-supported structures.
- Bridges involving four or more units in the anterior and posterior regions including implant-supported structures.
- Up to two (2) pontics allowed between two (2) abutment teeth.

Contraindications

- Not recommended for cantilevered pontics.

Pre-Sinter Treatment (after milling)

Finishing

Remove supports, then shape and contour restoration using diamond-coated burs.

Cleaning

Clean the milled zirconia units by removing excess zirconia powder with a small brush, then placing unit(s) in distilled water in an ultrasonic cleaner. Remove, then blow off excess water with oil-free air. Dry the zirconia under an infrared lamp or in an oven. Make sure it is completely dry before introducing into the sintering furnace.

Sintering Process

- Use a vented sintering tray
- Place zirconia units on 1–2 layers of high purity zirconia beads.
- Select program for desired sintering parameters (Normal, Slow, or Speed) and start the sintering process.

Sintering Parameters

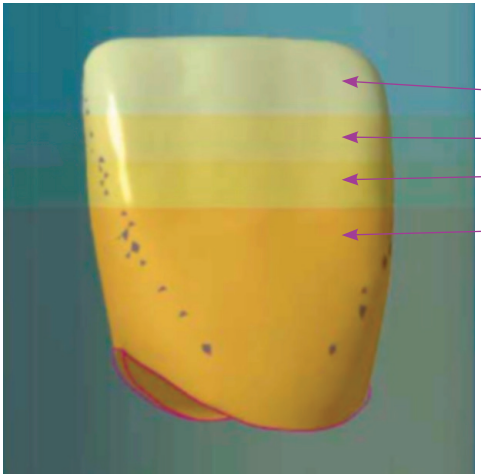
	Normal	Slow*	Speed**
Start	Room Temp	Room Temp	Room Temp
Heat Rate 1	10°C/min	5°–10°C/min	25°C/min
Temp 1	1,000°C	900°C	1,000°C
Heat Rate2	3°C–5°C/min	3°C/min	16°C/min
Temp 2	1,500°C	1,500°C	1,500°C
Hold Time	2 Hours	2 Hours	1 Hour
Cool* **	Natural	Natural	Fast 20°C/min

* For long-span bridgework and complex cases

** May affect chroma and translucency. Total sintering time is dependent on furnace's speed sintering capabilities.

*** Do NOT remove the sintered unit until temperature is below 300°C.

Continued on back side.



Example of Nesting in Software

Transition Table:

Disc thickness before sintering (after sintering)

22 mm (17.7mm)	18 mm (14.5mm)	14 mm (11.8mm)
4mm	4mm	2mm
2mm	1.6mm	1.6mm
2mm	1.6mm	1.6mm
14mm	10.8mm	8.8mm

Position disc in mill with notches facing upward.

Nesting steps if your CAM software *ALLOWS* layer visualization:

1. Import STL files.
2. Select the appropriate disc with layer visualizations.
3. Look at the disc from a side angle.
4. Rotate the units so that the transition layers are oriented correctly.
5. Move the unit up or down vertically in the disc to position the transition layer height in the desired location.
6. Make sure that the disc is placed in the milling machine with the correct side (notches) facing up.
7. Proceed with milling

Position disc in mill with notches facing upward.

Nesting steps if your CAM software *DOESN'T ALLOW* layer visualization:

1. Import STL files.
2. Select your disc in the software.
3. Look at the disc from a side angle.
4. Rotate the units so that the incisal/occlusal side is at the top and parallel to the disc surface.
5. Move the unit up so that the incisal/occlusal side is at the top surface of the disc.
6. Move the units down the desired amount based on the desired transition position. You can reference the transition table to see the exact thickness of each transition layer.

Whip Mix

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