

VERICORE ZR PRO ZIRCONIA

THE EXTRA STRONG, EXTRA TRANSLUCENT ZIRCONIA

Zirconia Type	Flexural Strength	Chemical Solubility	Thermal Expansion (25 – 500°C)	Density
Vericore ZR PRO	Up to 1,140 MPa	≤31.5µg/cm ²	Approx. 10.4 x 10 ⁻⁶ /K	6.07 g/cm ³

Instructions for Use for Vericore ZR PRO

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.

Shading/Coloring

Unshaded disc (White)

A coloring solution may be used before sintering to establish the restoration's base shade. The restoration may be dipped into the liquid colorant for a general monochromatic shade, or colorants may be strategically brushed onto specific areas of the zirconia to achieve a gradient effect. Follow the colorant manufacturer's recommended technique or visit www.whipmix.com's Resource Library, CAD CAM section, and select **Vericore Zirconia Color Guide**.

Pre-shaded Discs

The ZR PRO pre-shaded discs are monochromatic, meaning they are one color throughout the entire crown or bridge. Specific areas can be modified by surface stains or shading pastes to achieve the desired effect. If the

incisal area needs to lose some of its color intensity (saturation), it is often difficult to do with stains. One suggestion would be to choose a shade with a lower chroma (ex: A2, instead of A3) and apply the appropriate stain/paste to the cervical and middle areas to raise the chroma in those areas only.

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 Rate 2	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.

Post Sintering

- ▶ After sintering, the piece can be adjusted *lightly* with a wet grinding process using diamond-coated burs, if necessary. Avoid overheating.
- ▶ Either polish the zirconia using a rubber wheel and polishing compound, or apply and fire glaze powder.

Porcelain Veneering

All known brands of zirconia veneering porcelains can be used.

- ▶ Clean the sintered unit(s) with hot steam.
- ▶ Follow the porcelain manufacturer's instructions.

