

Controlled Medical Device - Zirconia Blank for Dental Milling and Machining

# KZR-CAD Zirconia Laxio

**[Contraindications and Prohibitions]**

Do not use this product outside the scope of recommended indications, effects or efficacy.  
Do not use this product on patients who have a history of allergy, such as irritation to this product.  
Do not use this product on patients who exhibit bruxism/dental parafunction.

**[Product Description]**

[Intended purpose]  
This device is a ceramic material used for CAD/CAM processing of dental restorations or prostheses.

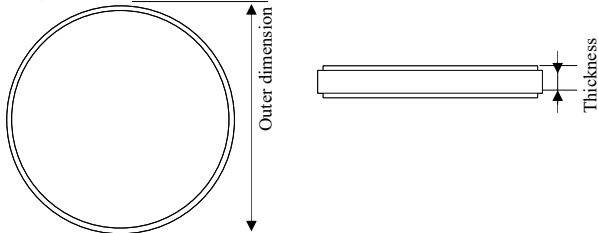
[Indications]  
Fabrication of dental restorations such as inlay, onlay, veneers, crowns and bridges (up to 14 unit), etc.

[Intended users]  
Dental professionals only: dentists and dental technicians

[Clinical benefit]  
Repair a patient's teeth by replacing the damaged part of the teeth as a dental restoration.

**[Shape, Composition and Principles]**

Shape:



Outer dimension (φ): 98.5mm  
Thickness: 14, 18, 22 mm  
Shade: White, A1, A2, A3

Composition:  
This product is a ceramic body formed by applying pressure to its main component, Zirconium Oxide, and then sintering it.

Principle:  
This product is a Zirconia Disc for producing dental restorations to be sintered after milling with use of computer-aided design and computer-aided manufacturing unit.

**[Intended Use and Effects/Efficacy]**

This product is a dental material designed for milling with use of computer-aided design and computer-aided manufacturing unit, enabling dental laboratories to produce a dental prosthesis made of ceramics.

**[Instructions for Use]**

- (1) Preparation  
Mount the disc according to the instruction manual of the computer-aided design and computer-aided manufacturing unit for dental laboratories (CAD/CAM system), and input the setting value.
- (2) Milling  
Mill the disc by following the instruction manual of the CAD/CAM system.
- (3) Sintering  
After milling, place it in a furnace and sinter according to the following program:

<Sintering Program>				
	Heating	Heating	Holding	Cooling
Temperature (°C)	1,000	1,450	1,450	Cooling in furnace
Time (hour)	2	4.5	2	

- (4) Shape correction  
If needed, correct the shape with a diamond bur in accordance with normal practice.
- (5) Build-up  
Build up the zirconium oxide with porcelain in accordance with normal practice.
- (6) Placement  
Mount it on the restoration point in accordance with normal practice.

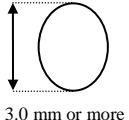
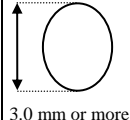
**【Technical Directions and Key Considerations】**

- (1) Prepare a rounded shoulder margin or a deep chamfer margin. Round the corner angles of the incisal portion and the margin to eliminate sharp angles. Aim for an axial plane angle between 5°-15°.
- (2) When preparing teeth, avoid deep shoulders, J-margins, knife edges, rough margins, non-tapered abutments, undercuts, guide grooves, the formation of retentive holes, and sharp corners.
- (3) Round the outer shape of the inlay/onlay cavity, ensuring the margins do not contact opposing teeth.
- (4) Maintain a minimum cavity isthmus of 1.5 mm for inlays/onlays.
- (5) Clean the fixing jig and fix the disc so that force is applied evenly. Excessive force may cause chipping.
- (6) Do not use a CAD/CAM system whose size does not conform to this product.
- (7) Design in accordance with the magnification rate indicated for this product.
- (8) Mill this product with a dry process.
- (9) Remove refuse on the frame thoroughly after milling.
- (10) The sintering temperatures and times given are intended as a general guide. However, Furnace conditions differ depending on the type and shape of the furnace. Test your electric furnace before actual use to confirm that the sintering temperature is appropriate.
- (11) When correcting the shape, use a diamond bur with careful attention to avoid chipping and cracking by local heating.
- (12) Use porcelain powder for zirconia.
- (13) When placing a dental restoration, conditioning is needed. Also, do not use an autoclave, as Zirconia oxide is subject to low-temperature hydrothermal deterioration.
- (14) When placing a dental restoration, use appropriate dental cement material.
- (15) Do not place this product in an ultraviolet curing unit.

(16) The minimum frame thickness should be designed based on the table below.

Type	Design	Anterior Region		Posterior Region	
		Axial surface/Margin	Incisal edge	Axial surface/Margin	Incisal edge
GR-A1 GR-A2 GR-A3 GR-White	Crown Bridge	0.5 mm	0.7 mm	0.7 mm	1.0 mm
	Inlay Onlay	-	-	0.7 mm	1.0 mm
	Veneer	0.5 mm	-	0.5 mm	-

(17) When creating a bridge, use the table below to guide the cross-sectional area of the connecting parts.

Type	Anterior Region		Posterior Region	
	Cross-sectional area of the connecting part	Height of the connecting part	Cross-sectional area of the connecting part	Height of the connecting part
GR-A1 GR-A2 GR-A3 GR-White	12mm <sup>2</sup> or more	 3.0 mm or more	16 mm <sup>2</sup> or more	 3.0 mm or more

(18) The number of pontics in a bridge should be limited to two consecutive teeth.

(19) The number of extension pontics in a bridge should be limited to one tooth.

#### 【Warning and Safety Instructions】

##### 1) Important Precautions

- ① During the sintering process of this material, avoid direct contact with the fabricated product because of its high temperature.
- ② When milling and polishing the sintered product, use a dust-removing device and an anti-dust mask to avoid inhaling dust.
- ③ When milling and polishing the sintered product, wear safety goggles to protect the eyes.

#### 【Disposal】

Dispose of this product in accordance with the law.

#### 【Storage and Expiry Date】

[Storage Method]

- Store in a dry place indoors in its original packaging.
- Do not subject this product to strong impacts.
- Keep out of reach of personnel other than dental staff.

#### 【Package】

- Disc: x 1

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