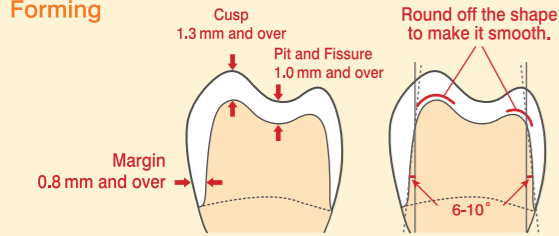


Operations of KZR-CAD Hybrid Ceramics Block 2

1 Key Points of Forming Abutment Tooth

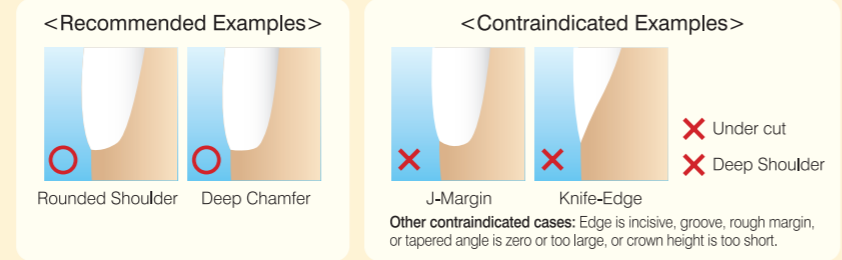
Important Note of Forming



Please prepare a sufficient thickness depending on the case.

Clearance and shape when forming an abutment are also important points for attention. Contraindicated cases should be avoided, as inaccurate or insufficient fitting increases the risk of detachment.

Forming Margin Area

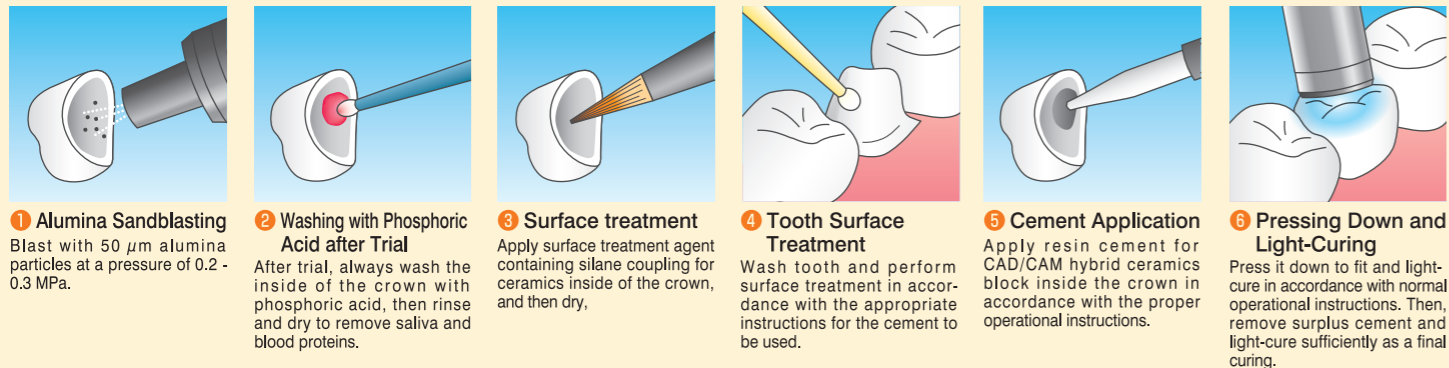


2 Flow of Making CAD/CAM Crowns

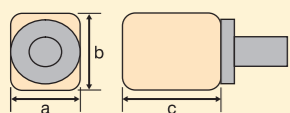


*1 *2
Polishing of KZR-CAD HR 2 can be performed to a high level of glaze not only with diamond polisher for hybrid resin but also with general alumina polisher.

3 Key Points of Setting



Lineup



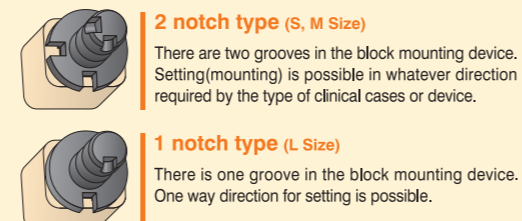
The product Line-Up has 3 sizes, S, M and L.

(a: width, b: depth, c: height unit: approx.mm)

| Shade | Quantity | Size | | |
|-------|----------|----------------------|----------------------|--------------------------|
| | | S (a10, b12, c15) | M (a12, b14, c18) | L (a14.5, b14.5, c18) |
| A1 | 5 pcs | ○ | ○ | ○ |
| A2 | | ○ | ○ | ○ |
| A3 | | ○ | ○ | ○ |
| A3-LT | | ○ | ○ | ○ |
| A3.5 | | ○ | ○ | ○ |
| A4 | | ○ | ○ | ○ |

The mounting jig comes with two notch, for S and M size and with one notch for L size.

The Features of Mounting Device



2 notch type (S, M Size)
There are two grooves in the block mounting device. Setting (mounting) is possible in whatever direction required by the type of clinical cases or device.

1 notch type (L Size)
There is one groove in the block mounting device. One way direction for setting is possible.

Manufacturer

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Hybrid Ceramics Block for CAD/CAM Use KZR-CAD HR 2

Shades: A1, A2, A3, A3-LT, A3.5, A4

New shades have been added to the line-up to be more user-friendly! Keeping outstanding Physical Properties, High-Speed Polishing and Fuluoride Sustained Release.



Made in JAPAN

YAMAKIN's BLOCK became one of Japan's best selling CAD/CAM Hybrid Ceramics/Resin blocks.

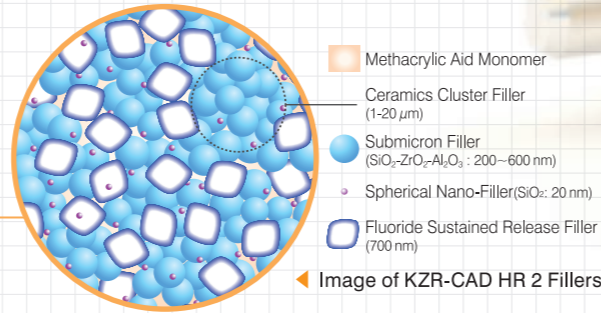


Hybrid Ceramics Block for CAD/CAM Use

KZR-CAD HR 2

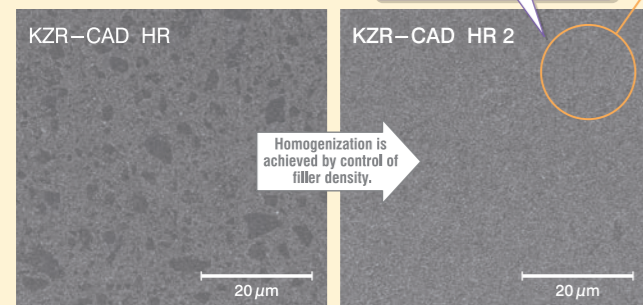
YAMAKIN has improved our unique materials technology even further and developed an even better CAD/CAM Block.

At YAMAKIN, we have been pushing forward to evolve our in-house-developed Ceramics Cluster Filler even further, to expand its range with new functions. As a result, we have completed KZR-CAD HR Block 2 (HR 2) which has outstanding strength and durability. At the same time, it also has excellent processability and polishability and fluoride sustained release. KZR-CAD HR Block 2 helps to streamline operations not only in the laboratory but also at the clinic, to make polishing operations go smoothly after occlusal adjustment. It is less likely to wear natural teeth and maintains glaze. KZR-CAD HR 2 is the CAD/CAM block that perfectly meets user's needs.



● The Evolution of Ceramics Cluster Filler

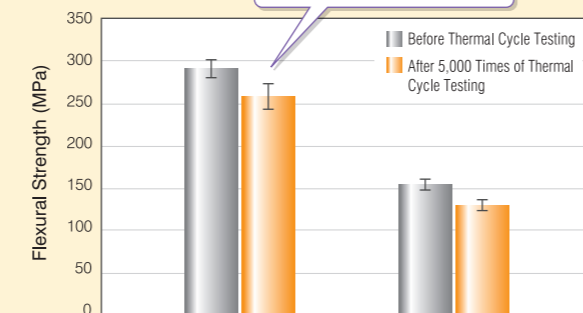
SEM Image (×1,000)



The particle density of the ceramics cluster filler used for KZR-CAD HR 2 is controlled to be 1 to 20 μm and have almost the same density as the matrix area shown in the picture on the right. As a result, the surface is so homogenized that the filler cannot be recognized even under 1,000 magnification. While it maintains outstanding strength and durability, it also succeeds in dramatically improving polishability and abrasion resistance.

● Outstanding Strength and Durability

Flexural Strength



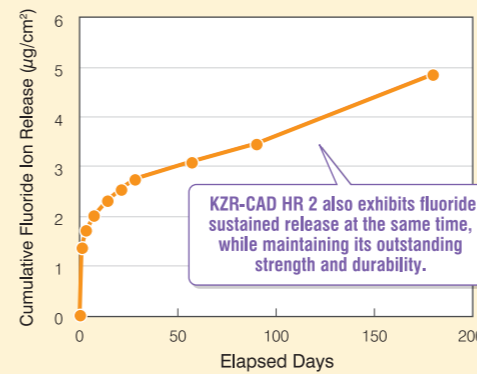
(Test method: double-axis flexural test in accordance with ISO 6872; applicable pitch circle diameter: 12 mm)
(*1: Indirect Composite Resin)

KZR-CAD HR 2 has maintained high flexural strength of over 250 MPa and it has the excellent durability even after thermal cycle testing (5,000 times at 4-60 °C, equivalent to about 1 year and a half *2).

*2) Assuming 10 thermal changes a day.

● Long-term Sustained Release of Fluoride

Fluoride Sustained Release

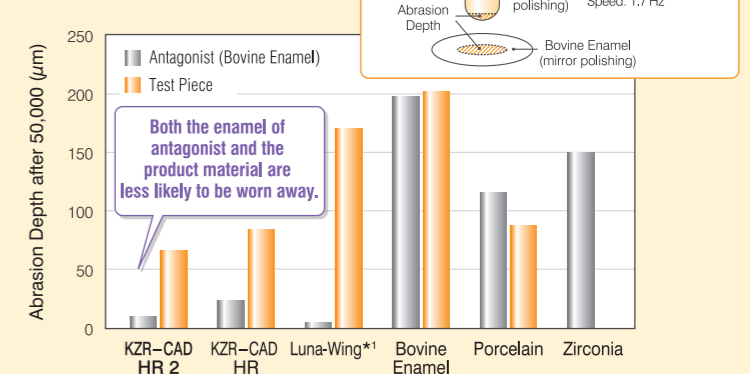


(*Test Method: In-House Test)

KZR-CAD HR 2 continuously releases fluoride ion securely, and stably maintains its strength by optimization of the surface-treatment conditions of fluoride ion release filler.

● High Abrasion Resistance

Abrasion Test of Opposing Tooth

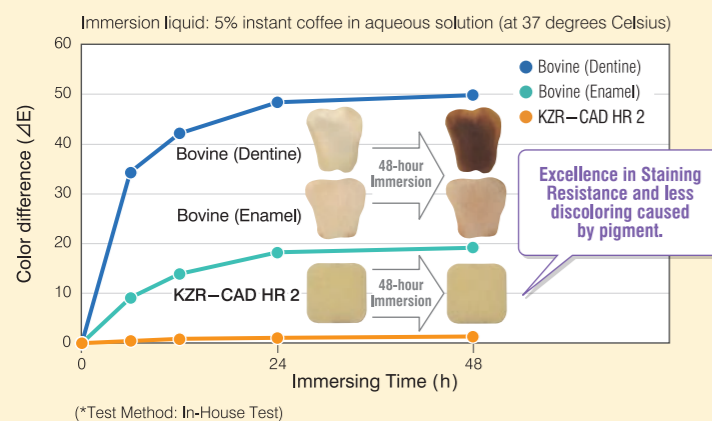


(*Test Method: In-House Test) (*1: Indirect Composite Resin)

KZR-CAD HR 2 is less likely to be worn away. At the same time, it is less likely to damage the opposing tooth, and the problems caused by losing occlusion balance are rendered less likely to occur by the way the product keeps a moderate level of abrasiveness.

● Excellent Discoloring Resistance and Staining Resistance

Evaluation of Staining Resistance by Coffee



(*Test Method: In-House Test)

Since KZR-CAD HR 2 is polymerized to a high degree by heat processing, its excellent staining resistance is confirmed; it is hard to discolor in the long term and long-term endurance of aesthetic quality can be expected. This has been confirmed by studies comparing extracted teeth of bovine (Enamel and Dentine).

● Shade



Properties (reference value)

| Flexural Strength (MPa) | | Vickers Hardness (HV0.2) | X-Ray Imaging Characteristic/Fluorescence | Fluoride Sustained Release | Combatting Bacteria Adherence |
|---|---|--------------------------|---|----------------------------|-------------------------------|
| Three Point Flexural Test ^{*1} | Double-Axis Flexural Test ^{*2} | | | | |
| 235 | 290 | 85 | Yes | Yes | Yes |

The figures given are for reference purposes and are not specifications.

*1 Three-point bending test: JIS T 6517

*2 Two-point bending test: ISO6872 (Diameter of supporting disc: 12 mm)