kuraray

Noritake

FREQUENTLY ASKED QUESTIONS
KATANA™ ZIRCONIA BLOCK

KATANA™ Zirconia Block

Use our new KATANA™ Multi-Layered Zirconia Block with Dentsply Sirona's CEREC® System and fabricate full natural zirconia restorations in 45 Minutes.* Full contour Zirconia prosthectics is now Chair Side.

MULTI LAYERED

For optimal adhesion
ADHESIVE RESIN CEMENT SYSTEM
PANAVIA™ V5

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GENERAL INFORMATION

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When will it be launched? (EU)	September, 2018 for both 12Z and 14Z.
What's the advantage of one-time treatment?	As a restoration can be made right away in the dental clinic after designing, it is possible to cement it in the patient's mouth the same day of their visit. In this way it reduces the number of patient appointments while achieving predictably high levels of success and patient comfort.
Why is the KATANA zirconia block offered as STML (Super Translucent Multi-Layered), not UTML (Ultra Translucent Multi-Layered)?	We believe that STML is easier to use chairside, because it has a well-balanced combination of translucency, chroma and mechanical properties. Because of this more indications can be covered with this single material.
What sizes does the product come in?	It comes in two sizes, 12Z and 14Z. Please refer to the product catalogue for details.
How long does it take for each process?	Approx. 5 minutes for intraoral scanning, 5 minutes for design, 15 minutes for milling, 30 minutes for sintering (in a case involving a single full crown after dry milling), and 20 minutes for polishing or 10 minutes for glaze baking.
How many shades are there?	Total 15 shades: Super Translucent Multi Layered 14 Shade(NW, A1, A2, A3, A3.5, A4, B1, B2, B3, C1, C2, C3, D2, D3) Super Translucent shade (CL). Please refer to the product catalogue for details. *CL is not multi-layered material.
What are the product's main features?	With this product zirconia restorations can be made during one visit when it is used with our recommended Sirona's CEREC SpeedFire sinteroven. It is possible to speed sinter a full zirconia restoration (30min). Kuraray Noritake technologies for zirconia and multi-layering lets the user fabricate zirconia restorations with natural color gradation and translucency close to those of natural teeth.
How many layers does the product consist of?	The product consists of four layers of zirconia in graduated shades. Translucency is gradually decreased from the incisal to the cervical region, to increase the masking level in the cervical region. They are arranged in the order of 35% (Enamel Layer), 15%, 15%, (Transition Layer 1 and 2) and 35% (Body Layer). Please refer to the product catalog for details.
What is the difference between this product and e.max CAD? What are the advantages and disadvantages of this product over e.max CAD?	This product has a higher mechanical strength (763 MPa) than e.max CAD (500 MPa), which is a lithium disilicate glass ceramic. This product has a multi-layered structure, color gradient, so it is easier to fabricate a more natural looking restoration than with e.max CAD (a single shade block). Because thinner restorations are possible the procedure will be less invasive for the dental tissue.
How is it different from InCoris and ZirCad?	The product has higher translucency than InCoris and ZirCad, as well as a multi-layered structure, thereby making it easier to fabricate a more natural looking restoration, even by polishing only.
Can the competitor's high translucent zirconia for laboratory-use be sintered in a short time?	It takes a longer sintering time to achieve the same level of translucency as our product. Our product is made with our proprietary Kuraray Noritake zirconia raw materials , which allows for a short sintering time.

GENERAL INFORMATION

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What are the product's indications?	This product is indicated for anterior full single crowns, posterior full single crowns, veneers, inlays and onlays. Please refer to the product catalog for details.
How thick does it have to be?	With this product you need a minimum wall thickness of 0.8 mm for anterior restorations and 1.0 mm for posterior ones; with e.max CAD you need 1.0 to 1.2 mm for anterior restorations and 1.0 to 1.5 mm for posterior ones; and with InCoris you need a minimum thickness of 0.4 mm for anterior restorations and 0.5 mm for posterior ones. Please refer to the product catalog for details.
What's the maximum crown length that can be fabricated?	For 12Z, up to 12 mm and for 14Z it's up to 14 mm. After sintering, the actual size of the restoration will be changed to roughly 80% of each block size. Refer to the product catalogue.
How to determine between 12Z and 14Z?	As 12Z provides 12mm height after sintering, more than 90% of crowns will be covered when using the 12Z size. 12Z is compatible for the size 14 of e.max. KATANA Zirconia 14Z can be used for larger anterior crowns.
What can cause an opaque result with KATANA Zirconia Block?	If it occurred during "wet milling/grinding", it was more than 90% caused by ceramic dust contamination. The following are common reasons which may cause the block to have low translucency or be opaque looking: 1) Low sintering temperature: Calibration of the SpeedFire is recommended through the dealer or Dentsply Sirona. 2) Furnace contamination: Purging and calibration of the SpeedFire is recommended. 3) Silicone contamination (if the customer performed grinding or polishing with silicone points before sintering, or put the crown on a silicone tray): Post-polishing and keeping the block away from a silicone tray are recommended. 4) Using glazing powder or spray before sintering (there is a possibility of having a misunderstanding, (for example a mixture for e.max crystallization, which can possibly have glazing together). 5) Water contact before sintering (if there is water before sintering, rapid veiled water can collect up inside the Speedfire. Even if using dry milling, if the crown is contacted with water, it is important to select "Pre-drying and sintering" when the SpeedFire operates in the sintering mode.
How is the "ST" CL block used?	STML(multi-layer block) is the best selection for fabricating crowns which have a natural look. ST (mono color) clear block would be used when a brighter color inlay is desired. On the other hand, there is a hidden explanation in case the customer wants to use a competitors dipping color on the white zirconia. This dipping option includes a patent issue; therefore, we can only communicate this verbally.

PROCESSING

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Is sintered zirconia milled?	Katana zirconia block is milled and then fully sintered afterwards with SpeedFire.
Which milling method, wet or dry, is used to mill this product?	We strongly recommend using dry milling. It is possible to mill this product using wet milling with clean cooling water but tank cleaning and filter changing are necessary before using if you change to zirconia milling from another material. Furthermore, because the drying process is necessary, the sintering time becomes 43 minutes.
Which points should be kept in mind when using wet milling?	Debris from glass ceramic (e.g. e.max CAD) has a negative effect in color and translucency for all Zirconia; therefore, preparing separate cooling tanks the milling chamber for zirconia and cleaning are highly recommended when wet-milling. If you are using this product with a glass block and resin in the same machine, you have to wash the milling chamber and filter, as well as replace the cooling water. We recommend using three tanks: the glass ceramic cooling-water tank, the zirconia cooling-water tank and the wash water tank.
What kind of equipment do you need to introduce a complete system for using this product?	For drymilling on possible items include: AC Omnicam, CEREC Milling units, SpeedFire for dry milling. An additional Suction unit is necessary. Consult with your local Sirona. for detailed information.
Which version of CEREC software is necessary for using this product?	This product can be used with Software 4.5.2. (as of Feb. 2018).
When should the milling burs be replaced with a new one?	It depends on clinical cases; however, we recommend that it is done after approximately 20 to 25 blocks have been milled.
What to do if the block comes off the holder?	Please check that the block is set at the desired position. If screwing is insufficient, the block will move from desired position and unreasonable force will be applied. If the fixation of the block causes problems, please contact your distributor.
Is the processing (milling) time influenced by block size?	No. If it is the same size, the processing (milling) time is the same.
What should I do if the barcode scanning fails?	When the barcode scanning fails, please manually add the 7 numbers on the block. If there are only six numbers, please add a "_: space" at the end.
What is the differnce between Dry-Milling, Wet-Milling, and Wet-Grinding?	KND recommends Dry-milling with a carbide bur. Milling is done by using a Carbide bur under both Dry and Wet conditions. Grinding is done with a Diamond bur under Wet conditions. If the customer selects the Milling option, and the machine is a properly equiped Dry-milling units, the CEREC machine will automatically start with the Dry-milling condition. If there is a mismatching between the "milling/ grinding'" selection, and the "Wet/Dry bur" selection, the machine does not allow the customer to have the milling option to avoid problems.

PROCESSING

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What burs are suitable for each process?	Milling: Dry: Carbide (Shaper 25 and Finisher 10) Wet: Carbide (Shaper 25RZ and Finisher 10) Grinding: Only Wet (no dry-mode): Diamond (Step Bur 20 and Cylinder Pointed Bur 20)
Can tap/pure water be used as cooling water?	KND only recommends the use of the CEREC official additive into the cooling water tank using the proper cleaning process.
Can the DENTATEC additive be used?	Yes. The use of DENTATEC is not contraindicated; therefore, the user should follow the instructions from Sirona.
Does the block dictate how the CEREC is used?	CEREC gives the customer almost a one-way procedure. The customer is responsible just for selecting the block size after pushing a series of pre-programmed buttons. As long as the correct software is installed and the correct block size is selected, the process requires very little operator participation.
How long is the lifetime of burs? How many crowns can be milled with one set of burs?	The case and conditions of use will dictate the lifetime of the burs. CEREC will actually inform customer when its time to change the burs. From our own internal experience, a minimum of 20-30 crowns with one milling/grinding bur set would be a reasonable conclusion under all milling conditions (wet/dry).
What is the advantage of rotating the crown position within block?	The initial positioning calculated by the machine is the best milling time /stable milling condition from a milling strategy point of view. In some cases, it is necessary to have proper adjustments between the tooth shape and multi-layer position later on from an esthetic point of view.
Is the sintering time sometimes different from the indication time?	The sintering time is influenced by the temperature in the furnace. When the temperature in the furnace is higher than the default starting temperature, some time for cooling is necessary, thereby increasing the total time.

SINTERING

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Is it possible to use any other sintering furnace than SpeedFire?	You may apply the same sintering schedule as KATANA Zirconia STML Disk for lab-use.
Sintering time is sometimes different from the indication time.	Sintering time is influenced by the temperature in the furnace. When the temperature in the furnace is higher than the default starting temperature, some time for cooling is necessary, thereby increasing the total time.
Can I change the setting parameter of the speedfire furnace ?	No.
As for the baking temperature (baking time), is it different by block shade ?	For all shades the same program is utilized.
How is the SpeedFire sintering program determined?	The SpeedFire automatically selects a suitable sintering program with/without pre-drying. In cases where the customer has a CEREC “Dry-milling unit”, if the customer selects “milling” and the machine is equipped with a “Dry milling bur”, the screen of the SpeedFire shows just “sintering” in RED. On the other hand, if the procedure is done under wet condition, the screen of the SpeedFire shows “Pre-drying and sintering” in RED.
What are the instruction for sintering a crown? When would it be turned around?	In the case of a molar crown, it is recommended to put the occlusal surface face down to set crown in as stable a position as possible during sintering. In the case of a small molar or anterior crown, it is recommended to put the lingual surface down.
Is it possible to use another company’s furnace, such as Ivoclar’s CS4 ?	It is not recommended. The baking process is an important factor in influencing translucency and strength.

FINISHING

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Can CZR (including FC Paste Stain) or CZR LF be layered on the restoration?	Yes, it can be layered. CZR FC Paste Stain can be fired by SpeedFire.
What is the finishing step after sintering?	After occlusal adjustment and polishing, apply glaze (with spray or FC paste) and bake or polishing.
What points should be kept in mind when adjusting restorations after sintering?	Corrections should be made carefully, by using a diamond bur or silicone points containing diamond particles. Use a copious spray of water or work on the prosthesis while it is wet. Be careful not to apply undue force, since this may cause a fracture, breakage or micro-cracks from local spot heating.
How do I minimize the wear of the Antagonist?	After occlusal adjustment, polish the opposing areas using a silicone point containing diamond particles and a polishing paste containing the same (ex. Pearl Surface Z), followed by spray or paste glazing.
What glaze product do you recommend?	We recommend FC Paste Stain.
Is it possible to use this product with a competitor's spray glaze?	It is possible to use Sirona's SpeedGlaze or VITA Akzent Glaze. We do not have any data regarding the use of Ivoclar's glaze material.
What is the application time for the glaze?	About 3 minutes with CZR FC Paste Stain (10 minutes for baking); about 1 minute with Sirona's SpeedGlaze (10 minutes for baking).
What is the polishing process?	After occlusal adjustment, polish the entire restoration with silicone points containing diamond particles, using three levels of polishing, starting from coarse to medium to fine. Afterwards, use a zirconia polishing material (Pearl Surface Z, etc.), then brush or buff the restoration (for about 10 to 20 minutes).
Which polishing tool or material do you recommend when finishing the restoration?	After using silicone points containing diamond particles, we suggest Edenta's Star Gloss, and a polishing paste containing diamond particles, such as Pearl Surface (KND).
What should I keep in mind when polishing?	Please select a shade one level brighter than the targeted shade, because the restoration color will be little darker. The block is designed to deliver the specified color when finishing by glazing.
Is it possible to perform color adjustment or staining of the restoration after sintering?	It is possible to use with CZR FC Paste Stain.
Can competitors' Stain be used?	We are not sure. Please check for the compatibility of the stain.
Can restorations be stained with a color liquid?	No.

FINISHING

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Does this product have fluorescence?	The product itself doesn't have fluorescence, but it is possible to add fluorescence into the restoration with CZR FC Paste Stain . When you expect stronger fluorescence, please use Fluoro from FC paste Stain.
Is it possible to polish before baking ?	It is not recommended. There is a possibility of breakage. Due to the remaining abrasive dust on the restoration surface, mechanical properties, such as strength and translucency, may decrease.
Is the color the same as the polishing and glaze method ?	The restoration color will be little darker, based on the method used.

CEMENTATION

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What cement do you recommend for use with this product?	Please use cements which contain MDP, such as PANAVIA V5 or PANAVIA SA Cement Plus.
How do you treat the internal surface of the restoration?	After sandblasting (30-50 micron alumina; 0.1-0.4 MPa air pressure), clean it; then apply CLEARFIL Ceramic Primer Plus and air dry. Another option is use PANAVIA SA Cement Plus after sandblasting.
How do you treat the tooth surface?	Apply PANAVIA V5 Tooth Primer and air dry. When you use PANAVIA SA Cement Plus, no primer is necessary.
Is it possible to cement the restoration temporarily?	Yes, you can.