

kuraray

Noritake

**The cutting edge
of natural beauty**

**KATANA™ ZIRCONIA
MULTI-LAYERED SERIES**

|||||
MULTI
LAYERED

THAT'S NATURAL! THE NEW POTENTIAL OF ZIRCONIA

Naturalness for all your prosthetics.

Our KATANA™ Zirconia Series brings naturalness to all your prosthetics. So, no more zirconia that looks too opaque and white? Absolutely! Just make natural veneers and natural full contour prosthetics out of zirconia. Plus large dentin-like frameworks.

KATANA™ Zirconia UTML is perfect for anterior prosthetics, such as veneers. Thanks to its natural translucency. And natural color gradient. In fact, it's the zirconia with the one of the highest translucency levels in the market¹.

With KATANA™ Zirconia STML your full contour prosthetics will look truly natural for the first time. Thanks to its color and natural translucency gradient. This means that you get more opacity in the cervical area. And more translucency in the incisal area. You can now feel confident of achieving first-rate results – regardless of the abutment color.

Research and studies on the translucency of different ceramic material have shown that the light transmission of KATANA™ Zirconia STML in the enamel layer is comparable to IPS e.max CAD LT². KATANA™ Zirconia UTML showed a higher translucency level on all layers as that of lithium disilicate³.

KATANA™ Zirconia ML, the pioneer of zirconia with a natural color gradient, is made for large dentinal frameworks. Its natural opacity makes it the ideal base to cover it with hand-made ceramics. So with KATANA™ Zirconia UTML, STML and ML you can enjoy the new potential of zirconia.

¹ Source: a comparison test of KATANA™ Zirconia (H10, ST10, UT10), e.max Press* (LT A1) and Prettau Anterior*(TO) by Kuraray Noritake Dental Inc.

* Not a trademark of Kuraray Co., Ltd

² IPS e.max CAD LT is a registered trademark of Ivoclar Vivadent GmbH.

³ Source: F. Beuer, J. Schweiger, ConsEuro 2015 London, Kuraray Satellite Symposium, May 14th 2015





KATANA™ Zirconia UTML



KATANA™ Zirconia STML



KATANA™ Zirconia ML

MILLED ZIRCONIA PRECISION. EVEN FOR VENEERS NOW.

Made possible by the KATANA™ Zirconia Multi-Layered series.

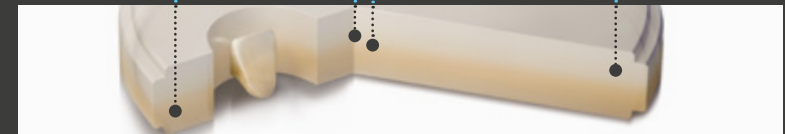
The beauty of milling zirconia is based on its economics, speed and precision. With the KATANA™ Zirconia Series digital dentistry finally moves to the anterior region too. From now on you don't have to hide your zirconia prosthetics anymore. Or under your veneering ceramics.

To give you one example of its new potential. Just mill and sinter your veneers. It's that simple. Apply stain, glaze and you're done.

NATURAL COLOR GRADIENT LIES WITHIN MULTI-LAYERED DISCS (UTML/STML/ML)

Thickness colors: ● dentin layer 35% ● transition layer 1 15% ● enamel layer 35%.

● transition layer 2 15%



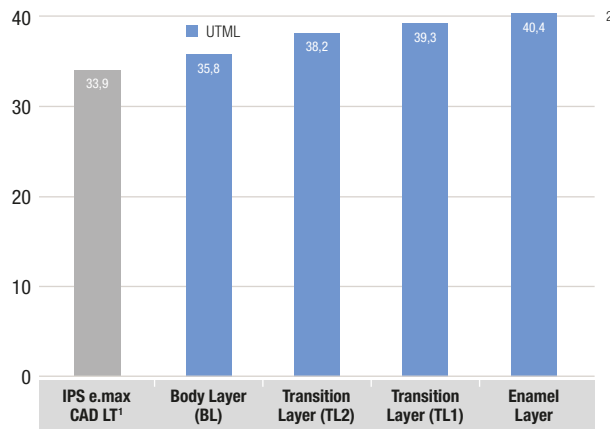
This illustration may differ from the real product.

MULTI
LAYERED

INSPIRED BY ENAMEL – KATANA™ ZIRCONIA UTML

Let natural beauty shine through.

Making natural veneers and other anterior prosthetics from zirconia? Yes. KATANA™ Zirconia UTML is so translucent that light reaches the original tooth color. And brings you the natural result you need. This zirconia has one of the highest translucency levels on the market¹. Plus a natural color gradient. So the next time you plan a veneer, think about milling KATANA™ Zirconia UTML. You will be thrilled using zirconia in a totally new way.

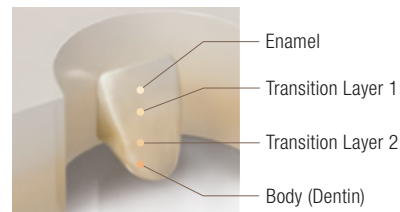


* Source: F. Beuer, J. Schweiger, ConsEuro 2015 London, Kuraray Satellite Symposium, May 14th 2015

¹ IPS e.max CAD LT is a registered trademark of Ivoclar Vivadent GmbH.

² Method: After sintering, samples are made of each material, with a thickness of 1 mm + 0.05mm. Light transmission within the range of 400 - 700 nm is measured. The permeability is given a value between 100% (transparent) and 0% (opaque). K. Ueda, J.F. Güth, K. Erdelt, M. Stimmelmayer, H. Kappert, F. Beuer: Light Transmittance by a Multi-coloured Zirconia Material. Dent Mater J 2015; 34(3): 310-314.; D. Awad, B. Stawarczyk, A. Liebermann, N. Ilie: Translucency of Esthetic Dental Restorative CAD/CAM Materials and Composite Resins with Respect to Thickness and Surface Roughness. J Prosthet Dent 2015; 113(6): 534-540.; J.F. Güth, T. Zuch, S. Zwinge, J. Engels, M. Stimmelmayer, D. Edelhoff: Optical Properties of Manually and CAD/CAM-fabricated Polymers. Dent Mater J 2013; 32(6): 865-871.

NATURAL TRANSLUCENCY KATANA™ Zirconia UTML



This illustration may differ from the real product.

Standard shades

Translucency of A1~D4³



Enamel shades

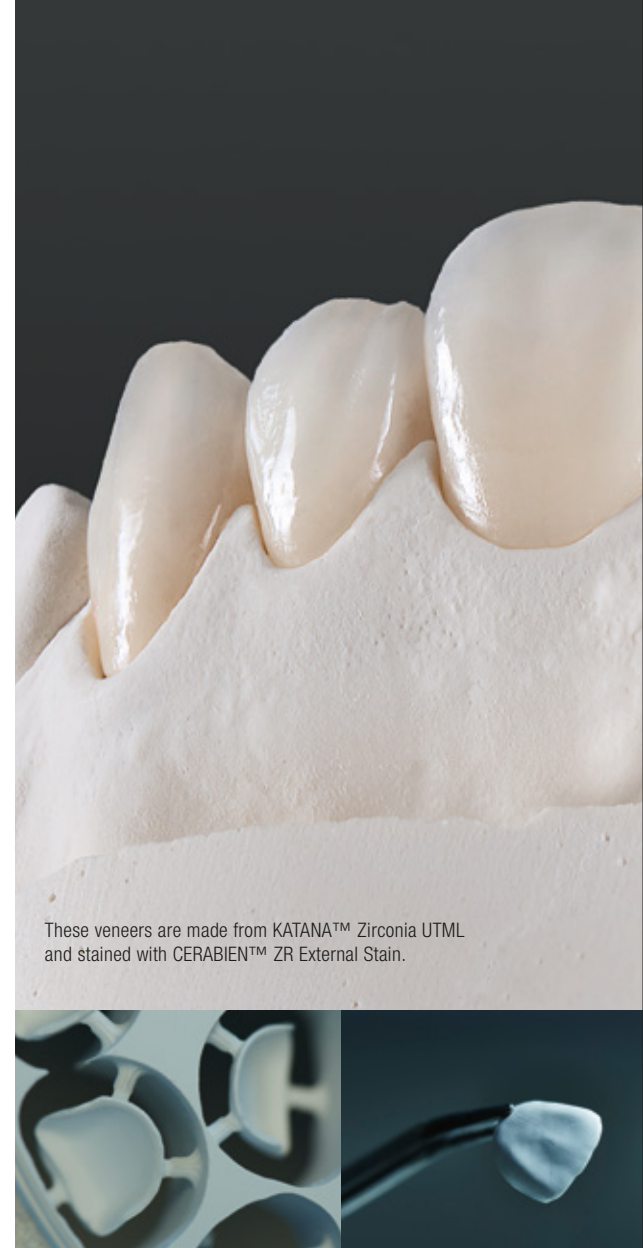
Translucency of ENW, EA1-EA3



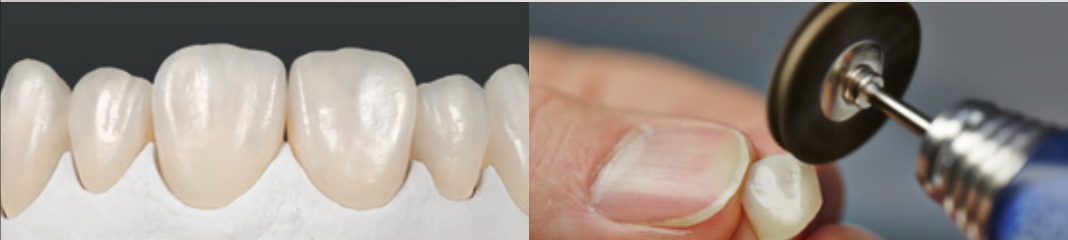
All layers have the highest translucency level available.

- ① The enamel shades show a lower color intensity in the following layers.

³ According to VITA® classical Shade Guide (not a trademark of Kuraray)



These veneers are made from KATANA™ Zirconia UTML and stained with CERABIEN™ ZR External Stain.



GIVE YOUR BRUSH A BREAK

Just mill enamel thanks to natural translucency.

Usually, your brush is the perfect instrument to create natural esthetics. But for the first time all prosthetics can be milled in a natural way. In one step. Just sinter it. That's all. You can also choose to characterize your work with your brush. Apply external stains to get an even more natural look.

TRANSLUCENCY¹

43 %

FLEXURAL STRENGTH²

557 MPa

¹ Wavelength of light: 700 nm - sample thickness: 0.5 mm. White-color zirconia (base material) is used as testing material.

Source: Kuraray Noritake Dental

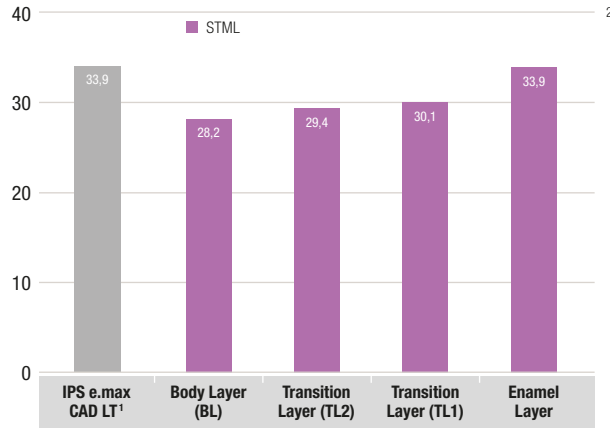
² Three point bending test according to ISO 6872:2008 - sample size 3 x 4 x 40 mm. White zirconia is used as testing material.

Source: Kuraray Noritake Dental

INSPIRED BY TEETH - KATANA™ ZIRCONIA STML

Natural beauty in all forms.

Do full contour zirconia prosthetics look natural? Yes! With KATANA™ Zirconia STML light is transmitted in the incisal area and blocked in the cervical area. Giving you the flexibility to make beautiful full contour prosthetics - regardless of the abutment color. The light transmission* of KATANA™ Zirconia STML in the enamel layer is comparable to IPS e.max CAD LT.¹ It's a pioneer of zirconia with a color and natural translucency and color gradient. Use KATANA™ Zirconia STML for your next full contour prosthetics. They'll be so beautiful, you'll be longing to make more.

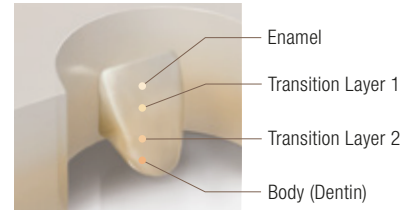


* Source: F. Beuer, J. Schweiger, ConsEuro 2015 London, Kuraray Satellite Symposium, May 14th 2015

¹ IPS e.max CAD LT is a registered trademark of Ivoclar Vivadent GmbH.

² Method: After sintering, samples are made of each material, with a thickness of 1 mm + 0.05mm. Light transmission within the range of 400 - 700 nm is measured. The permeability is given a value between 100% (transparent) and 0% (opaque). K. Ueda, J.F. Güth, K. Erdelt, M. Stimmelmayer, H. Kappert, F. Beuer: Light Transmittance by a Multi-coloured Zirconia Material. Dent Mater J 2015; 34(3): 310-314.; D. Awad, B. Stawarczyk, A. Liebermann, N. Ilie: Translucency of Esthetic Dental Restorative CAD/CAM Materials and Composite Resins with Respect to Thickness and Surface Roughness. J Prosthet Dent 2015; 113(6): 534-540.; J.F. Güth, T. Zuch, S. Zwinge, J. Engels, M. Stimmelmayer, D. Edelhoff: Optical Properties of Manually and CAD/CAM-fabricated Polymers. Dent Mater J 2013; 32(6): 865-871.

NATURAL TRANSLUCENCY GRADIENT KATANA™ Zirconia STML.



This illustration may differ from the real product.

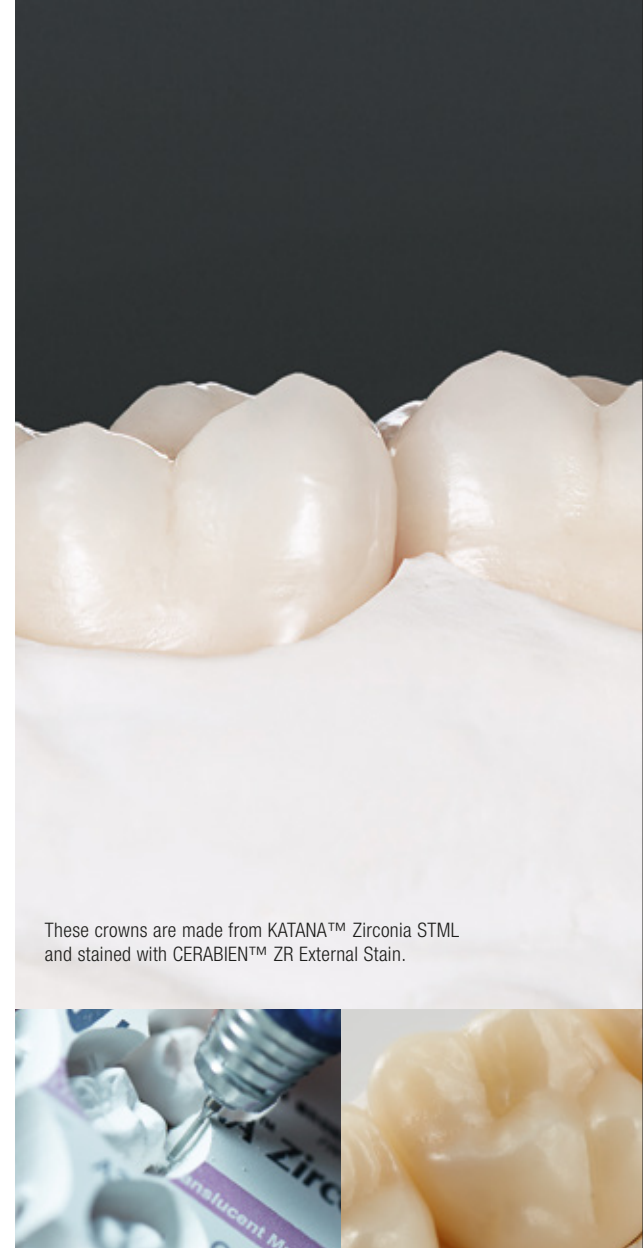
Standard shades

Translucency of NW. A1-A3,5³



The translucency gradient moves from the incisal to the cervical area. (proper opacity in the cervical area)

³ According to VITA® classical Shade Guide (not a trademark of Kuraray)



These crowns are made from KATANA™ Zirconia STML and stained with CERABIEN™ ZR External Stain.





GIVE YOUR MILLING MACHINE MORE TO DO

Milling full contour prosthetics thanks to natural color and opacity gradients.

You can choose two strategies for finishing your milled full contour work. Just glaze. Or if you like to make it even more natural, stain the buccal surface with External Stain (CERABIEN™ ZR) or LF External Stain (CZR PRESS LF). Cover it with FL Glaze (CERABIEN™ ZR) to protect the stains and bring your prosthetic to life with natural fluorescence. Making beautiful full contour prosthetics means more business for your milling machine.



TRANSLUCENCY GRADIENT¹

38%

FLEXURAL STRENGTH²

748 MPa

¹ Wavelength of light: 700 nm - sample thickness: 0.5 mm. White-color zirconia (base material) is used as testing material.

Source: Kuraray Noritake Dental

² Three point bending test according to ISO 6872:2008 - sample size 3 x 4 x 40 mm. White zirconia is used as testing material.

Source: Kuraray Noritake Dental

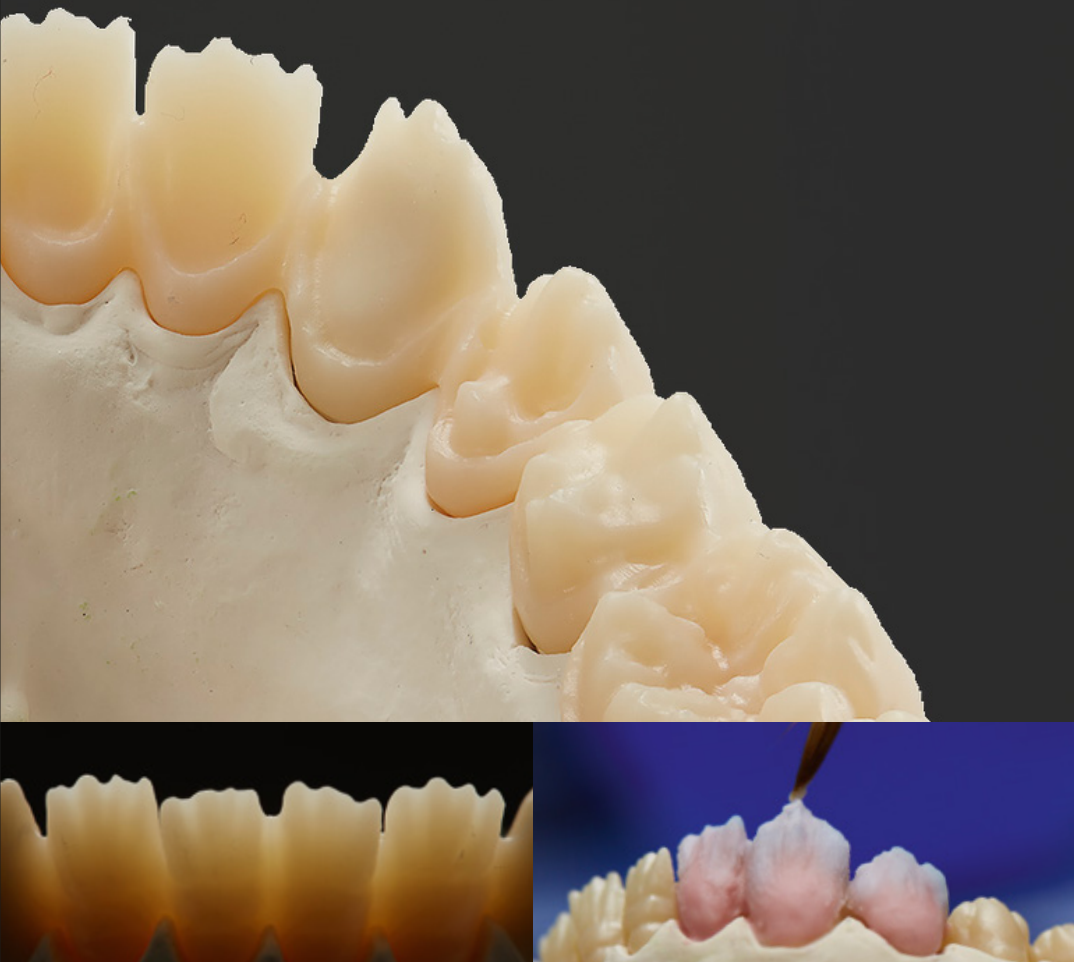
INSPIRED BY DENTIN - KATANA™ ZIRCONIA ML

Natural beauty reflects from within.

Dentin-like frameworks from zirconia? Yes. With KATANA™ Zirconia ML, light reflects its natural opacity. And the veneering ceramic on top gives the most natural result. This zirconia comes with natural color gradient too. The opacity increases from the incisal area to the cervical area as in a real (natural) tooth.¹

So the next time you plan to hide your framework, think about using KATANA™ Zirconia ML for a dentin-like base.





GIVE YOUR VENEERING CERAMICS A KICK-START

Just mill dentin-like frameworks thanks to a natural opacity gradient.

KATANA™ Zirconia ML gives you an excellent base to reproduce any natural color. Such a base deserves an enamel-like veneering ceramic and some stains. CERABIEN™ ZR line-ups or CZR PRESS LF line-ups are the perfect match.

Afraid of grayness? Not with our luster porcelain! The layer of the LF Luster (CZR PRESS LF) gives your work its natural depth. Individual Characterizations? With the LF Internal Stain (CZR PRESS LF) you paint your dentin-like framework as if on a canvas. Bringing your work closer to nature.

TRANSLUCENCY¹

31%

FLEXURAL STRENGTH²

1125 MPa

¹ Wavelength of light: 700 nm - sample thickness: 0.5 mm. White-color zirconia (base material) is used as testing material.
Source: Kuraray Noritake Dental

² Three point bending test according to ISO 6872:2008 - sample size 3 x 4 x 40 mm. White zirconia is used as testing material.
Source: Kuraray Noritake Dental

ZIRCONIA BONDING WITH PANAVIA™ V5

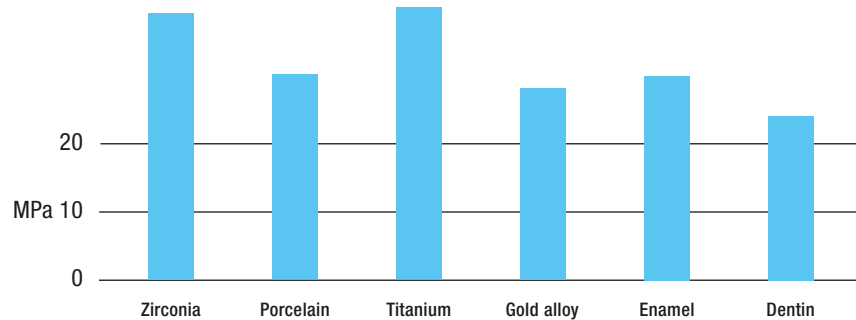
SIMPLY CEMENT YOUR ZIRCONIA WITH PANAVIA™ V5

One cement. All cement indications. One prime procedure.

From now on you cement all your prosthetics with one predictable procedure. And just relax while cementing even precious veneers or bonding to zirconia. With our revolutionary PANAVIA™ V5 that's possible.

But PANAVIA™ V5 is not a cement only for your dentist. It's also the best way to cement your prosthetics in your lab, e.g. implant abutments and frameworks.

PANAVIA™ V5 SHEAR BOND STRENGTH TO MULTIPLE MATERIALS¹



¹ Pretreatments: Zirconia, Gold Alloy - sandblast; Porcelain - HF; Titanium, Enamel, Dentin - polished with # 1000 SiC Paper; Source: Kuraray Noritake Dental.



PANAVIA™ V5



THE ORIGINAL MDP MONOMER

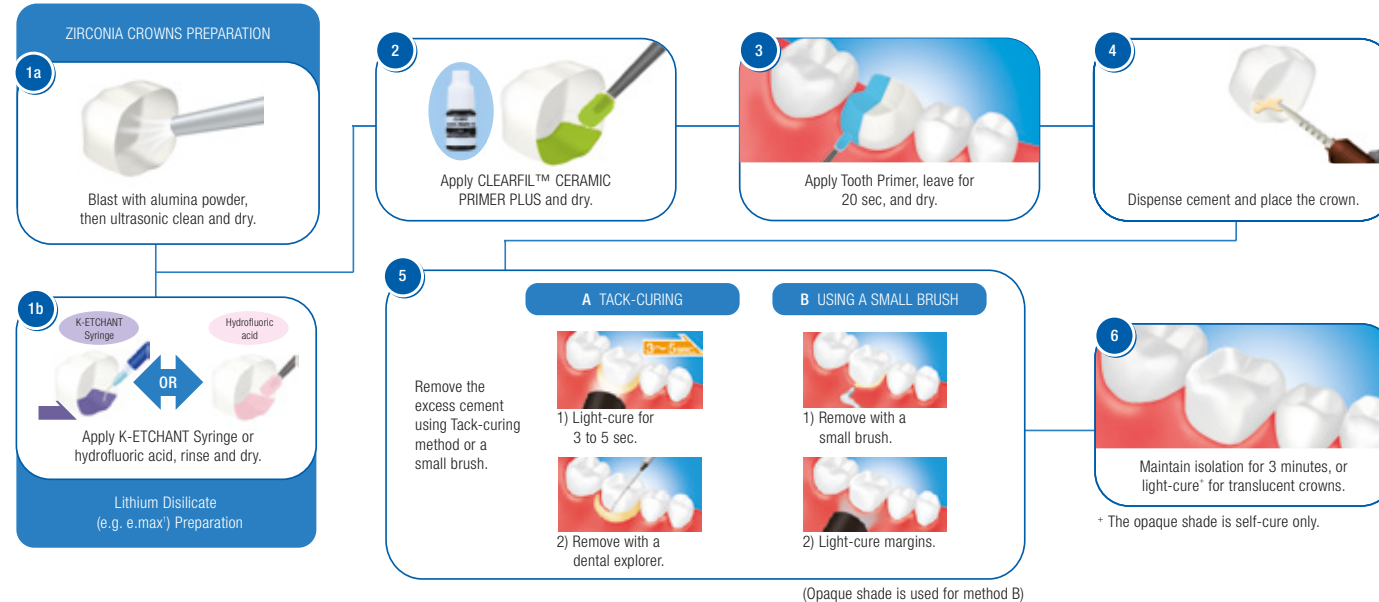
Since 1983, with the introduction of PANAVIA™ EX resin cement and the original MDP monomer, Kuraray has provided innovative and exceptional technologies that have improved the quality of adhesive dentistry and influenced the dental industry.

EXCEPTIONAL ZIRCONIA BOND STRENGTHS

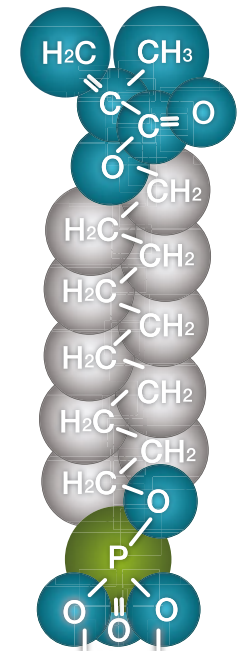
Based on Research gathered over 15 years: "...regardless of the conditioning methods, MDP-monomer based cements presented the most favorable bond values compared to those of other resin cements."

Systematic Review of Adhesion Studies on Zirconia; M. Özcan, J Dent Res Vol# 90 A: 374, 2011
www.iadr.org

BASIC PROCEDURE FOR ZIRCONIA & LITHIUM DISILICATE (E.MAX[®]) RESTORATIONS WITH PANAVIA™ V5



MDP MOLECULAR STRUCTURE



M-O-M-O-M-O-M

Surface of base metal alloy (e.g. Zirconia, Alumina, Ni-Cr Alloy, Ti Alloy, SUS)

TECH SPECS

WIDE INDICATION RANGE

- Cementation of crowns, bridges, inlays and onlays
- Cementation of veneers
- Cementation of adhesion bridges and splints
- Cementation of prosthetic restorations on implant abutments and frames
- Cementation of posts and cores
- Amalgam bonding

Filler loading:	61 wt % (38 vol %)
Flexural strength ^{3,4} :	127 MPa
Flexural modulus ^{3,4} :	6.3 GPa
Compressive strength ³ :	310 MPa
Water sorption ^{3,4} :	21 µg / mm ³
Film thickness ^{3,4} :	12 µm
Radiopacity ⁴ :	180 % Al
Fluoride releasing (28 days) ³ :	58 µg/g
Working time (23 °C):	2 min.

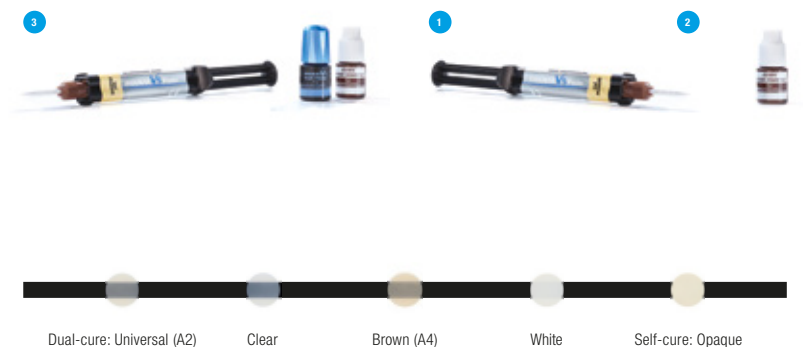
³Dual curing of the paste (combination of self- and light-curing) ⁴According to ISO 4049:2009
Source: Kuraray Noritake Dental Inc. The final result may be influenced by minor evaluation conditions.
See ISO regulations.

ORDER INFO PANAVIA™ V5

1 PANAVIA™ V5 Paste (4.6 ml / 8.1 g), 20 Mixing tips
Universal (A2) **#3611-EU**, Clear **#3612-EU**, Brown (A4) **#3613-EU**,
White **#3614-EU**, Opaque **#3615-EU**

2 CLEARFIL™ CERAMIC PRIMER PLUS (4 ml), **#3637-EU**

3 INTRODUCTORY KIT - Universal (A2) #3604 EU - Clear #3605 EU
PANAVIA™ V5 Tooth Primer (2 ml) CLEARFIL™ CERAMIC PRIMER PLUS (2 ml)
PANAVIA™ V5 Paste [one syringe per shade (2.4 ml / 4.2 g): Universal (A2), Clear],
10 Mixing tips, 50 Applicator brushes (fine<silver>), 1 Mixing dish (FPN)



The actual shades may differ from the printed shades here.

TECH SPECS

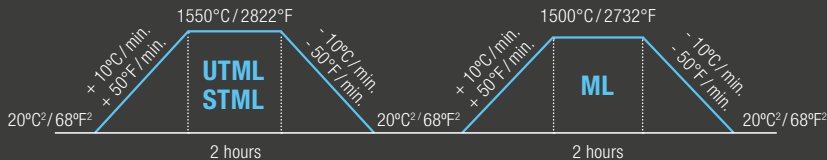
COMPATIBLE PRODUCTS

Layering Porcelain¹: CERABIEN™ ZR
CZR PRESS LF

Glaze: CERABIEN™ ZR (FL Glaze)
CERABIEN™ ZR (VC Glaze)
CZR PRESS LF (Glaze)
CZR PRESS LF (LF Glaze)

Stain: CERABIEN™ ZR (External Stain)
CERABIEN™ ZR (Internal Stain)
CZR PRESS LF (LF External Stain)
CZR PRESS LF (LF Internal Stain)

Composition: ZrO_2 , Y_2O_3 , etc.
Thermal expansion coefficient UTML: $9.7(\pm 0.2) \times 10^{-6}/K$
Thermal expansion coefficient STML: $9.8(\pm 0.2) \times 10^{-6}/K$
Thermal expansion coefficient ML: $9.9(\pm 0.2) \times 10^{-6}/K$
(25-500°C / 77 - 932°F)



¹ Excluding glazing and staining materials listed below. ² Or start at room temperature.

KATANA™ ZIRCONIA 90 Minutes Sintering

KATANA™ Zirconia, the innovative multi-layered zirconia, known for specialized fabrication of Full Contour Zirconia prosthetics is now speed capable. Fast sintering furnaces can now be used with KATANA™ Zirconia in the speed sintering process.¹ You can successfully finish sintering KATANA™ Zirconia in approximately 90 minutes.²

Fast sintering furnaces

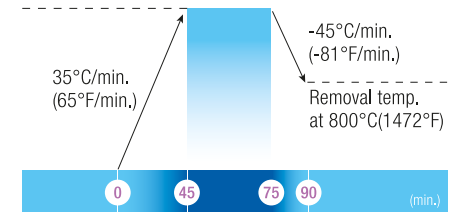


AUSTRUMAT 674i (DEKEMA Dental-Keramiköfen GmbH)
inFire HTC speed (Dentsply Sirona)
Sintra Plus (Shenpaz Dental Ltd.)

Sintering schedule

STML/UTML series: 1560°C(2840°F)
ML/HT series: 1515°C(2759°F)

Hold for 30min.

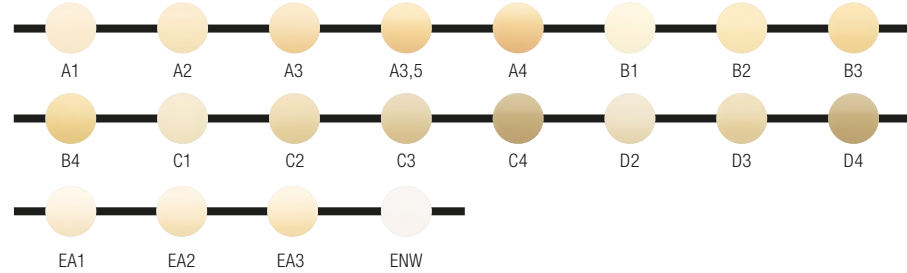


¹ Only for single unit

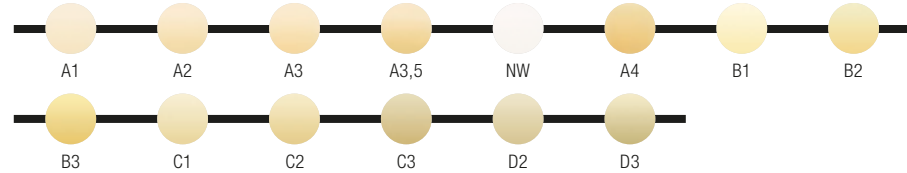
² The total sintering time may be affected depending on: furnace condition, surrounding temperature, voltage and electrical current, etc.

SHADES FOR KATANA™ ZIRCONIA DISCS

UTML



STML



ML



KATANA™ ZIRCONIA UTML (Ø98.5mm)

Shade	Size	Article No.	Shade	Size	Article No.
A1 COLLAR	T:14mm	125-3842EU	B4 COLLAR	T:14mm	125-4082EU
A1 COLLAR	T:18mm	125-3853EU	B4 COLLAR	T:18mm	125-4093EU
A1 COLLAR	T:22mm	125-3864EU	B4 COLLAR	T:22mm	125-4104EU
A2 COLLAR	T:14mm	125-3872EU	C1 COLLAR	T:14mm	125-4112EU
A2 COLLAR	T:18mm	125-3883EU	C1 COLLAR	T:18mm	125-4123EU
A2 COLLAR	T:22mm	125-3894EU	C1 COLLAR	T:22mm	125-4134EU
A3 COLLAR	T:14mm	125-3902EU	C2 COLLAR	T:14mm	125-4142EU
A3 COLLAR	T:18mm	125-3913EU	C2 COLLAR	T:18mm	125-4153EU
A3 COLLAR	T:22mm	125-3924EU	C2 COLLAR	T:22mm	125-4164EU
A3,5 COLLAR	T:14mm	125-3932EU	C3 COLLAR	T:14mm	125-4172EU
A3,5 COLLAR	T:18mm	125-3943EU	C3 COLLAR	T:18mm	125-4183EU
A3,5 COLLAR	T:22mm	125-3954EU	C3 COLLAR	T:22mm	125-4194EU
A4 COLLAR	T:14mm	125-3962EU	C4 COLLAR	T:14mm	125-4202EU
A4 COLLAR	T:18mm	125-3973EU	C4 COLLAR	T:18mm	125-4213EU
A4 COLLAR	T:22mm	125-3984EU	C4 COLLAR	T:22mm	125-4224EU
B1 COLLAR	T:14mm	125-3992EU	D2 COLLAR	T:14mm	125-4232EU
B1 COLLAR	T:18mm	125-4003EU	D2 COLLAR	T:18mm	125-4243EU
B1 COLLAR	T:22mm	125-4014EU	D2 COLLAR	T:22mm	125-4254EU
B2 COLLAR	T:14mm	125-4022EU	D3 COLLAR	T:14mm	125-4262EU
B2 COLLAR	T:18mm	125-4033EU	D3 COLLAR	T:18mm	125-4273EU
B2 COLLAR	T:22mm	125-4044EU	D3 COLLAR	T:22mm	125-4284EU
B3 COLLAR	T:14mm	125-4052EU	D4 COLLAR	T:14mm	125-4292EU
B3 COLLAR	T:18mm	125-4063EU	D4 COLLAR	T:18mm	125-4303EU
B3 COLLAR	T:22mm	125-4074EU	D4 COLLAR	T:22mm	125-4314EU

KATANA™ ZR UTML (Ø98.5mm)

Shade	Size	Article No.
EA1 COLLAR	T:14mm	125-3302EU
EA1 COLLAR	T:18mm	125-3313EU
EA1 COLLAR	T:22mm	125-3324EU
EA2 COLLAR	T:14mm	125-3332EU
EA2 COLLAR	T:18mm	125-3343EU
EA2 COLLAR	T:22mm	125-3354EU
EA3 COLLAR	T:14mm	125-3362EU
EA3 COLLAR	T:18mm	125-3373EU
EA3 COLLAR	T:22mm	125-3384EU
ENW COLLAR	T:14mm	125-3392EU
ENW COLLAR	T:18mm	125-3403EU
ENW COLLAR	T:22mm	125-3414EU

KATANA™ ZIRCONIA STML (Ø98.5mm)

Shade	Size	Article No.	Shade	Size	Article No.
A1 COLLAR	T:14mm	125-3122EU	B3 COLLAR	T:14mm	125-5322EU
A1 COLLAR	T:18mm	125-3133EU	B3 COLLAR	T:18mm	125-5333EU
A1 COLLAR	T:22mm	125-3144EU	B3 COLLAR	T:22mm	125-5344EU
A2 COLLAR	T:14mm	125-3152EU	C1 COLLAR	T:14mm	125-5352EU
A2 COLLAR	T:18mm	125-3163EU	C1 COLLAR	T:18mm	125-5363EU
A2 COLLAR	T:22mm	125-3174EU	C1 COLLAR	T:22mm	125-5374EU
A3 COLLAR	T:14mm	125-3182EU	C2 COLLAR	T:14mm	125-5382EU
A3 COLLAR	T:18mm	125-3193EU	C2 COLLAR	T:18mm	125-5393EU
A3 COLLAR	T:22mm	125-3204EU	C2 COLLAR	T:22mm	125-5404EU
A3,5 COLLAR	T:14mm	125-3212EU	C3 COLLAR	T:14mm	125-5412EU
A3,5 COLLAR	T:18mm	125-3223EU	C3 COLLAR	T:18mm	125-5423EU
A3,5 COLLAR	T:22mm	125-3234EU	C3 COLLAR	T:22mm	125-5434EU
NW COLLAR	T:14mm	125-3242EU	D2 COLLAR	T:14mm	125-5442EU
NW COLLAR	T:18mm	125-3253EU	D2 COLLAR	T:18mm	125-5453EU
NW COLLAR	T:22mm	125-3264EU	D2 COLLAR	T:22mm	125-5464EU
A4 COLLAR	T:14mm	125-5232EU	D3 COLLAR	T:14mm	125-5472EU
A4 COLLAR	T:18mm	125-5243EU	D3 COLLAR	T:18mm	125-5483EU
A4 COLLAR	T:22mm	125-5254EU	D3 COLLAR	T:22mm	125-5494EU
B1 COLLAR	T:14mm	125-5262EU			
B1 COLLAR	T:18mm	125-5273EU			
B1 COLLAR	T:22mm	125-5284EU			
B2 COLLAR	T:14mm	125-5292EU			
B2 COLLAR	T:18mm	125-5303EU			
B2 COLLAR	T:22mm	125-5314EU			

KATANA™ ZIRCONIA ML (Ø98.5mm)

Shade	Size	Article No.
A LIGHT COLLAR	T:14mm	125-2162EU
A LIGHT COLLAR	T:18mm	125-2173EU
A LIGHT COLLAR	T:22mm	125-2184EU
A DARK COLLAR	T:14mm	125-2192EU
A DARK COLLAR	T:18mm	125-2203EU
A DARK COLLAR	T:22mm	125-2214EU
B LIGHT COLLAR	T:14mm	125-2222EU
B LIGHT COLLAR	T:18mm	125-2233EU
B LIGHT COLLAR	T:22mm	125-2244EU
C LIGHT COLLAR	T:14mm	125-2642EU
C LIGHT COLLAR	T:18mm	125-2653EU
C LIGHT COLLAR	T:22mm	125-2664EU
D LIGHT COLLAR	T:14mm	125-2672EU
D LIGHT COLLAR	T:18mm	125-2683EU
D LIGHT COLLAR	T:22mm	125-2694EU
A WHITE COLLAR	T:14mm	125-2702EU
A WHITE COLLAR	T:18mm	125-2713EU
A WHITE COLLAR	T:22mm	125-2724EU

CONTACT INFORMATION

Kuraray Europe GmbH
BU Medical Products
Philipp-Reis-Straße 4
65795 Hattersheim am Main
Germany

Phone DACH	+49 (0) 69-305 35 835
Phone Rest of Europe	+49 (0) 69-305 85 980
Fax	+49 (0) 69-305 98 35 835
E-Mail	dental.eu@kuraray.com
Website	www.kuraraynoritake.eu



Kuraray Noritake Dental Inc.

300 Higashiyama, Myoshi-cho, Miyoshi, Aichi 470-0293, Japan

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