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User Guide

SD CERAM

ZIRCONIA SUPPORTED DENTAL CERAMIC

**Asfarma Medical Dental Products and Pharmaceuticals Ind. Trade.
Incorporated Company/ İstanbul Branch**


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SD CERAM DENTAL CERAMIC ON ZIRCON USER MANUAL

**According to VITA® classical color guide*

MATERIAL AND INDICATION

The coating ceramic SD Ceram is based on zircon, silicate sintered glass ceramic and is colored according to Vita® color guide A1-D4.

SD Ceram zirconia veneer ceramic is only used by specialist physicians in dental practice. Transparency and fluorescence compatibility, quadrangular stabilized zirconia (Y-TZP) with thermal expansion of approximately $0.6 \times 10^{-6} \times K^{-1}$ (25-500° C) and $9.7 - 10.3 \times 10^{-6} \times K^{-1}$ (25-500° C) provides color construction of natural-looking teeth in the form of all-ceramic crowns or bridges made of thermally expanded lithium disilicate glass-ceramic material.

Considerations

- Do not operate in uncalibrated furnaces.
- The deviation value of the specified temperature for each product should not be more than +/- 10 C
- Powder mixed with liquid should not be put back into the box
- Unused product should be at room temperature, humidity value, protected from sunlight
- Should not be used in combination with ceramic materials and/or other manufacturer's materials other than product systems recommended by SD ceram
- Unapproved dam framework materials should not be used
- Avoid sharp edges and corners on the framework or framework shapes that are not anatomically reduced
- Do not use Layner and Margin on lithium disilicate glass ceramics due to high firing temperatures.
- In order to ensure product performance and desired color target, do not start the process before ensuring the environment is clean.

CONTRAINDICATION

Complete ceramic restorations from dental ceramics and glass ceramics are not recommended for patients with teeth grinding or dysfunction.


The final decision should be made by the dentist.

SIDE EFFECTS

Although there are not enough controlled studies on the side effects of dental ceramics on volunteers; It has been observed that the following complications may occur in patients followed up after dental ceramic restorations.

- Fracture in the restoration material
- Loss of vitality in the abutment tooth
- Dental caries
- Restoration losses
- Endodontic problems
- Allergy and hypersensitivity reactions

There is no definitive evidence showing the direct relationship of these conditions with dental ceramics, factors such as the clinician's selection of the right method and material for the patient, the compliance of the procedures performed during preparation in the laboratory with the defined standard methods, the patient's compliance with the recommendations given after the procedure affect the success of the ceramic restoration and the occurrence of complications.

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ZIRCON DENTIN FIRING

Mix the ceramic powder (Dentin and/or Enamel) with the modeling liquid until a creamy consistency is achieved. Apply small amounts of Dentin or Enamel ceramic to the cervical and interdental area and compact with gentle vibration. Depending on the tooth layering, additional amounts of Dentin or Enamel are applied.

Translucent, Opal and Modifier powders can be used to adapt the color of the restoration to the tooth colors and the color characteristics of the patient.

1. Firing

After the dentin application, the crown is placed on a firing tray and placed in the oven at an initial temperature of 450°C. Subsequently, the oven is kept closed for 6 minutes and heated to 810°C with vacuum (vacuum initial temperature: 450°C) at 45°C/min. Waiting Time: 1 minute with vacuum. For multiple prosthesis with a large amount of porcelain, the firing temperature can be increased by approx. 10°C.

After the initial Dentin/Enamel firing is complete, straighten and clean the crown or bridge. After that, apply a second coat of Dentin and Enamel in order to fire the second Dentin.

2. Firing

Repeat the same procedures as done in the first Dentin firing, but reduce the firing temperature by approximately 10°C.

GLAZE COATIN/GLAZE FIRING IN ZIRCONIA

After coating the surface with a diamond tool, thoroughly clean the crown or bridge.

Glaze firing of layered crowns and bridges is done at temperatures of approximately 800°C without applying SD ceram dyes, colors and LFU glaze.

For color characterization, all SD ceram dyes, colors and LFU glazes can be applied and fired.

SD CERAM paints, colors and LFU glazes

After the glaze application, the crown is placed on a baking tray and then in the oven with an initial temperature of 450°C. Subsequently, the oven is closed for 3 minutes and heated to 800°C (firing temperature) at 45°C/min without vacuum. Waiting time: 1 minute without vacuum.

Improved Glazing Powders

SD Ceram porcelain system has a wide variety of different colors of powders to correct the colors of all its coatings and imitates every possible natural tooth color characteristics:


SD Ceram Gingiva: different Gingiva powders can be used whenever it is necessary to compensate for missing gingival tissue in the pontic or cervical area of a restoration.

SD Ceram Enamel, Clear/Neutral, Opal, Opal Enamel, Transparent /Transparent light/Transpa T, Mamelon/Smart Mamelon, BL and Flu are mainly used in the enamel part of a restoration to achieve special color effects on the enamel part of the restoration.

SD Ceram Base, Cuspid and Fosse are special color powders that expand the possibilities of technicians by following special veneer techniques inspired by famous dental technicians and porcelain artists.

All improved coating powders must be fired in the first or subsequent Dentin firing program.



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CLASSIFICATION AND COLOR GROUPS OF ZIRCONIA SUPPORTED DENTAL CERAMIC PRODUCTS

GENERAL DESCRIPTION: Aesthetic Ceramic coating made on sintered refractory infrastructure based on ultra-hard zirconia and yttrium oxide based dental ceramics on Zirconia.

ZR-DENTİN GROUP																				
Opaque Dentin	A0	A1	A2	A3	A3,5	A4	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4		
Dentin	A0	A1	A2	A3	A3,5	A4	BL2	BL1	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4

DESCRIPTIONS

- *Opaque dentin: Increases the opacity of the dentin.
- *Dentin: Imitates the natural transparency of enamel.

ZR-ENAMEL GROUP				
ENAMEL İNTENSİVE	57	58	59	60
ENAMEL OCCUSAL	Neutral	Clear	BL ENAMEL	
ENAMEL OPAL	O1	O2	O3	O4

DESCRIPTION

- *ENAMEL: Imitates the incisal transparency of enamel.


ZR-TRANSLUCENT GROUP								
TRANSLUCENT	White	Yellow	Orange	Light Brown	Light Blue	Blue	Grey	Pink
	Amber	T light - Brown	T- Orange	T- Grey	T-Dark grey	T-light Blue	T- Lemon	T Neutral

DESCRIPTION

- *TRANSLUCENT: Creates special enamel pigments.

ZR-SMART DENTİN



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GROUP											
CHROMA	A	B	C	D	White	Yellow	Orange	Brown	Pink	Violet	Blue
MAMELON	Beech tree	Sunny Beach	Maple	Sandal wood	Teak	Fruit pink	Citron	Cream			
MODIFIER	Base 1	Base 2	Base 3	Base 4	Base 5	Cuspid	Fosse	FLU 1	FLU 2	FLU 3	FLU 4
GINGIVA	1	2	3	4	5	6	Dark	Bright			

DESCRIPTION

*MODIFIER: Creates special enamel pigments.

-CHROMA : Provides color intensity.

-MAMELON: Creates natural color fluctuations in dentin.

-GINGIVA: Imitates the gingiva in order to eliminate the losses and provide an aesthetic appearance in gingival (recession) losses

GLAZE GROUP
Glaze powder Üniversal
Glaze powder LFU

DESCRIPTION

*GLAZE: Glazes porcelain surface.

SHADES GROUP											
STAIN POWDER	Shade A Fluor	Shade B Fluor	Shade C Fluor	Shade D Fluor	White fluor	Vanille fluor	Yellow fluor	Yellow 2 fluor	Orange fluor	Orange 2 fluor	Red Brown intensiv
	Rose pink	Smoke fluor	Pigeon blue fluor	Blue fluor	Red	Brown fluor	Dark Brown fluor	Black fluor	Grey fluor	Safari + fluor	Beige fluor
	Olive fluor	Green fluor	Dark Brown intensiv fluor	Khaki fluor	Champagne fluor	Rose fluor	Orange intensiv fluor	Khaki intensiv fluor	Black intensiv fluor	Violet fluor	Blue pink
	Red / violet	Safari fluor	Tabak intensiv fluor	Transpa 3 fluor	Medium orange fluor	Shade A light fluor	Shade B light fluor	Shade C light fluor	Shade D light fluor		

DESCRIPTION

*SHADES : Color tones in the finished glazing.



COMBINATIONS TABLE OF DENTAL CERAMIC PRODUCTS ON ZIRCON

	A						B	B	B					C				D		
OPAQUE DENTİN	A0	A1	A2	A3	A3.5	A4	-	-	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
DENTİN	A0	A1	A2	A3	A3.5	A4	BL2	BL1	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
ENAMEL INTENSIVE	57	58	58	59	60	60	BL	BL	57	57	59	60	60	58	59	60	60	58	59	60


FIRING PROGRAM (°C)

Note: The firing temperatures given are determined in a Zuber Vario 300 dental oven and are approximate. In other oven types, the firing temperature may need to be adjusted.

Approximate Value : \updownarrow +10°C
-10°C

FIRING TABLE °C	Initial Temperature	Closing Time	Vacuum Start	Heating Rate	Firing	Dwell Time
	°C	Minute	°C	°C / minute	°C	
SD ceram 1. Firing Dentin/Enamel	450° C	6 min	450° C	45 °C min	810°C	1 min
SD ceram 2. Firing Dentin/Enamel	450° C	6 min	450° C	45 °C min	810°C	1 min
SD ceram Glaze	450° C	3 min	---	45 °C min	800°C	1 min

The firing temperature depends on the quantity of products in the oven. Higher quantities require up to 20-30° C higher firing temperatures .

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Technical information

Content Information:

Material: Silicate Glass Ceramic

Chemical content: The main components that bind to the glass ceramic structure are:
SiO₂, Al₂O₃, K₂O, Na₂O, CaO, B₂O₃

Classification according to DIN EN ISO 6872:2015'

SD ceram

Type: 1 Class: 1b

<i>SD ceram zircon Dentin, Enamel, vb.</i>		
Coefficient of Thermal Expansion	DIN EN ISO 6872	2 firings: 9.0 x 10 ⁻⁶ x K ⁻¹ 4 firings: 9.0 x 10 ⁻⁶ x K ⁻¹
Transformation Point	DIN EN ISO 6872	500°C
<i>SD CERAM paints, colors and LFU glazes</i>		
Coefficient of Thermal Expansion	DIN EN ISO 6872	9.8 x 10 ⁻⁶ x K ⁻¹
Transformation Point	DIN EN ISO 6872	455°C

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Warnings

Can be used only by specialist technicians and dentists.

Can be used only in clean working environments. Contamination of any additional material, such as the tabletop, work plate, preheat oven, or wax or liquids, with residues of CoCr alloy can lead to discoloration of restorations.

Safety glasses should be worn when working on ceramic restorations.
Remove dust and particles with vacuum.



Pay attention to high firing and pressing temperatures. Burn danger! Use oven gloves!

Due to the fact that there are different ceramic kilns in the market, the firing conditions may differ. This must be taken into account and the responsibility belongs to the customer!

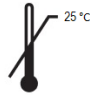
The firing temperatures indicated are APPROXIMATE ONLY.

Approximate Value: \updownarrow
+10°C
-10°C

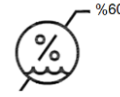
Warning correlated to Investment Materials:

Investment materials include quartz dust. Do not breathe dust, wear a protective mask. Read the warnings written on the investment material package.

Recommended storage conditions:



max 25° C and normal air humidity



















max %60.

Store in closed containers.

Do not pour powder mixed with liquid back into its original container.

Use a clean and dry spoon, spatula or brush to remove dust from containers.

Shelf life of dental ceramic products on zirconia is 5 years.

 Confer with the user manual.	 Store in dry place.
 Attention, pay attention to the warnings in the user manual.	 Fragile, handle with care.
 The product is non-sterile .	 Production date
 Disposable.	 Do not use the product if the packaging is damaged.
 Store on temperatures below 25°C.	 Expiration date
 Protect from direct sunlight.	 Reference number
 Manufacturer	 Lot number
 CE mark	 %60 Keep below 60%.



The recycling mark is suitable for the recycling of the package.

I hereby confirm that this document is translated to English Language in accordance with original document in Turkish Language.

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