

CREATION WILLI GELLER INTERNATIONAL - SIMPLY BRILLIANT

WILLI GELLER
Creation

INSTRUCTIONS FOR USE
CREATION ZIRCONIUM OXIDE CERAMICS

ZI/ZI-F



MDT Christian Berg

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FRAME



Well equipped for the future: Creation ZI and ZI-F are modern veneering ceramics for all kinds of zirconium oxide frameworks – whether sintered or HIP-ed. Owing to their physical properties, they meet the most stringent safety and stability requirements and enable brilliant aesthetics to be achieved.

PREPARATION OF FRAMEWORK

Firstly work the milled or sintered zirconium oxide framework with suitable abrasive instruments. The minimum thickness for frameworks and the thickness of connectors stipulated by the manufacturer should be strictly observed.

Unless stated otherwise by the manufacturer, blast the framework surface with Al_2O_3 (110 μm) at 2 bar pressure, then clean thoroughly.

FRAME SHADE – NECK DENTINE



The four Frame Shades FS-1 to FS-4 were developed to reduce the highbrightness of the framework material zirconium oxide. The mixing of the frame shades is recommended with modelling liquid. They are perfectly matched to the different colour groups from the Vita® Classic shade selection system and reinforce the **natural, fluorescent effect** of the eventual restoration.

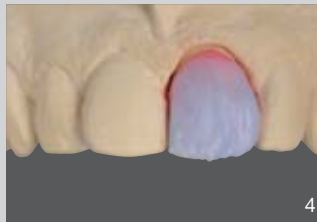
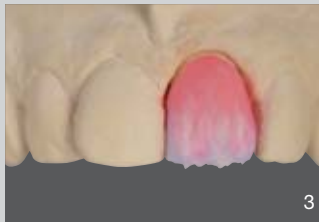
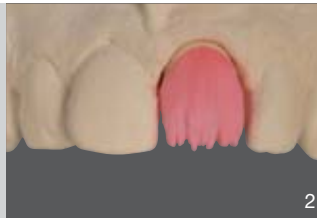
The colour-neutral frame shade FS-IL can be used to create the illusion of depth in places where space is limited (especially in the upper third of the framework).

Apply the frame shade **thinly and evenly** to the zirconium oxide framework, then fire under vacuum at 900 °C.

Thinly apply the neck dentine in the interdental, cervical area and extension of the framework in order to reduce the brightness.

The material must then be over-layered with dentine material.

DENTINE AND ENAMEL BUILD-UP



The labial and occlusal form is first built up with dentine material in the required shade. Once the anatomical form is ready, **reduce the incisal and interdental areas** of the dentine in order to create enough space for further layering. Then complete the missing areas with incisal and transparent porcelains – depending on the individual appearance of the crown required.

Dentine and incisal powders are used for the palatal build-up.

CORRECTION FIRING – GLAZE FIRING



Correct, shiny surface after the first dentine firing.



The second dentine firing is used to **make adjustments and to make up for firing shrinkage.**

The crown should be finished and cleaned again before adding porcelain.



Crown before the glaze firing.

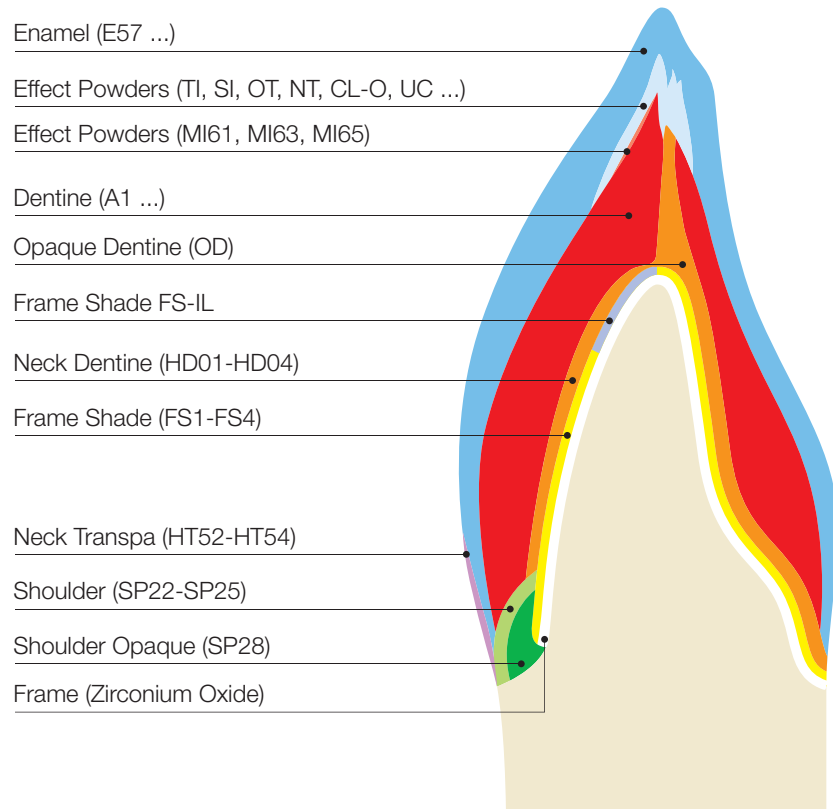
Additional individual characterisation can be done with suitable stains.



Crown after the glaze firing.

The degree of glaze can be matched to the situation in the mouth by means of **mechanical polishing.**

BUILD-UP DIAGRAMME



COLOUR CHART

Vita® Shade		A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Frame Shade	6	FS-1	FS-1	FS-2	FS-2	FS-4	FS-1	FS-1	FS-2	FS-4	FS-1	FS-3	FS-3	FS-4	FS-3	FS-3	FS-3
		FS-IL (Illusion)								FS-G (Gingival)							
Neck Dentine	4	HD-01	HD-02	HD-02	HD-03	HD-04	HD-01	HD-02	HD-03	HD-03	HD-01	HD-01	HD-03	HD-04	HD-03	HD-03	HD-02
Opaque Dentin Modifier	5	OD-32 havanna			OD-37 curry			OD-41 orange			OD-43 ivory			OD-44 cuba			
Dentine	16	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Enamel	4	E58	E58	E59	E59	E60	E57	E59	E59	E59	E60	E59	E59	E60	E60	E59	E59
Clear	2	CL-0								Window UC							
Transpa	7	NT neutral		OT opal		TI-1 blue		TI-2 white		TI-3 pink		TI-4 yellow		TI-5 grey			
Effect Enamel	7	PS-0 white		PS-3 orange		SI-02 medium yellow		SI-04 light orange		SI-06 heavy orange		SO-10 blue		SO-11 orange			
Neck Transpa	4	HT-51 iridescent			HT-52 khaki			HT-53 sand			HT-54 honey						
Shoulder Powders	6	SP-21 neutral		SP-22 flamingo		SP-23 sand		SP-24 gold		SP-25 red brown		Sp-28 opaque yellow					
Make In	3	MI-61 ivory				MI-63 honey yellow				MI-65 gold							
Approximal Dentine	2	AD-1 light yellow						AD-2 orange									
Gingival	8	G1 purple		G2 dark pink		G3 light pink		G4 flamingo		G5 rose		G-6 dark pink opaque		G7 violet		GN neutral	
Glaze	1	Glaze-GL															
Correction Powder	1	Correction Powder-KM															
Bleach Dentine Shade	1	FS-AB															
Bleach Dentine	3	BD-A				BD-B				BD-B0							
Bleach Enamel	1	S-AB															
Bleach Shoulder	1	SP-AB															

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FIRING CHART

	Preheating Temp.	Drying time	Raise of Temp.	V	Final Temp.	Holding Time	Appearance
Frame Shade	450 °C	2 min.	55 °C/min.	+	900 °C	1 min.	Slightly shining
1 st and 2 nd Shoulder Firing	450 °C	4 min.	45 °C/min.	+	860 °C	1 min.	
1 st Dentine Firing	450 °C	6 min.	45 °C/min.	+	810 °C	1 min.	Shining
2 nd Dentine Firing	450 °C	6 min.	45 °C/min.	+	800 °C	1 min.	
Glaze Firing	480 °C	2 min.	45 °C/min.	-	820 °C	-	
Glaze Firing with Glaze Powder	480 °C	2 min.	45 °C/min.	-	790 °C	1 min.	
Correction Powder Firing	450 °C	4 min.	45 °C/min.	+	690 °C	1 min.	

The firing parameters given above are guidelines, which always need to be adjusted to the furnace used for firing and the situation of the furnace. The important thing is to obtain the right firing result.

PHYSICAL PROPERTIES

Properties	Measure	Value	Norm
Coefficient Thermal Expansion (25° – 500 °C)	$10^{-6} \times K^{-1}$	2 Firings: $9,5 \pm 0,3$ 4 Firings: $9,5 \pm 0,3$	
Glass Transition Temperature	°C	550 ± 10	
Solubility	$\mu g/cm^2$	16	max. 100
Density	g/cm^3	2,43	
Flexural Strength	MPa (Nmm ²)	90	min. 50
Median Grain Size	D 50 %	60	

All tested materials conform to EN ISO 9693:2000.

The technical and physical values quoted relate to samples produced in-house and to our own measuring instruments.



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