



The **Profi** ceramic system is manufactured by one of the world leaders in dental ceramics - **Klema Dentalprodukte** (Austria) and meets all the essential requirements of dental technicians: the highest quality at an affordable price.

### Advantages:

- exact Vita A1-D4 shade matching
- easy to work
- low shrinkage
- an affordable price

Leucite-Reinforced porcelain (fused to metal) for frameworks made of precious and non-precious alloys

Synthetic ceramic for layering frameworks made of Profi Press and for frameworks made of precious and non-precious alloys

Ceramic for zircon frameworks

Ingots for pressing single crowns, inlays, veneers, onlays, overlays

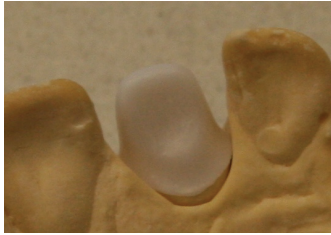
Ingots for press-on-metal

Ingots for press-on-zircon

**Profi Zirkon** is modern ceramics to be applied to a framework made of zircon dioxide of any type. It combines excellent physical properties and magnificent aesthetics.

**CTE:** 9.5. Glass transition temperature: 550°C.

### Framework processing



First, process the framework.



Attention – Processing the framework must be performed with constant cooling, for example, water cooling.



Attention – Unless otherwise specified by the manufacturer of the framework, sandblast the surface for better bond between the ceramics and the framework.

In addition, regenerating firing is recommended after processing the framework.

### Parameters of regenerating firing

T	B	S	t ↑	H	L
1050°C	403°C	18 s	65°C	15 min	750°C

L is the temperature to which the oven must cool down from the temperature T slowly, at a rate of 25°/min.

Even after a small correction, make sure that the framework meets the minimum requirements for thickness.



Attention – Do not “separate” additionally a bridge prosthetics framework with disks after sintering since this can result in undesired break points, which, in turn, decrease the strength of the all-ceramics restoration.

Before lining, wash the framework in running water or process with steam and dry.

### Profi Zirkon Margin

Where shoulder ceramics must be used, first apply and fire it, then apply and fire Profi Zirkon Liner. Profi Zirkon Margin shoulder ceramics is used to restore the color and transparency in the neck area. First, isolate the model using Profi Zirkon Ceramic-Margin Isolir. Profi Zirkon Margin shoulder ceramics is applied with large strokes in the neck area in the form of a drop (that is, the external surface of the ceramics should be made convex), and then it is dried. After that, the framework with the applied and dried shoulder ceramics is carefully removed from the stump.



### Firing of Profi Zirkon Margin shoulder ceramics

T	B	S	t ↑	H	V1	V2
835°C	410°C	3 min	40°C	1 min	410°C	834°C

### Profi Zirkon Liner

To prevent shift of ceramics from the smooth surface of a zircon dioxide framework (which can subsequently cause shears) it is recommended that a thin layer of Profi Zirkon Liner or Profi Zirkon Dentin should be first applied to the framework to create a rough surface and improve the adhesion between the ceramics and the framework. When Profi Zirkon Liner is used, adhesion strength increases. Profi Zirkon Liner removes an excessive brightness of the framework without obstructing the passage of light and improves the fluorescent effect. Profi Zirkon Liner is applied in a thin layer evenly on the whole surface of the framework. Use Profi Zirkon Modelling Liquid for work with Profi Zirkon Liner.

### Firing of Liner

T	B	S	t ↑	H	V1	V2
805°C	410°C	3 min	40°C	1 min	410°C	804°C

## Profi Zirkon Dentin



First, the labial and occlusal surfaces are restored with a dentin body of a desired color. After the final anatomical shape is ready, remove any material in the area of the incisal edge and in the interdental space in order to leave enough space for subsequent layering. Finish the restoration, using the masses of the incisal edge, transparent masses, the mass pulse. Opal-Schneide is applied on the whole labial surface with a thickness of 1 mm on the incisal edge, the closer to the neck, the smaller the thickness.

**!** Attention – Avoid excessive drying of the ceramics!  
Do not wet the applied ceramics on the framework with modeling liquid.  
Use distilled water only.

Before the second firing of dentin and the incisal edge, the restoration must be carefully cleaned, for example, with a steam jet device.

### First firing of dentin

T	B	S	t↑	H	V1	V2
810°C	410°C	7 min	40°C	1 min	410°C	809°C

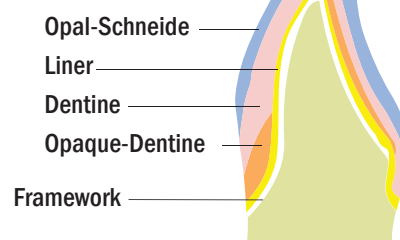
### Second firing of dentin

T	B	S	t↑	H	V1	V2
800°C	410°C	5 min	40°C	1 min	410°C	799°C

## Profi Zirkon Shade/Stains

**!** Attention – Do not use Profi Line Universal Shade/Stains to work with Profi Zirkon. Use Profi Zirkon Shades/Stains and Profi Zirkon Glazing-Staining liquid only. If these rules are not observed, chipping can occur.

Take the desired amount of Profi Zirkon Stains and dilute it with Profi Zirkon Glazing-Staining Liquid depending on what consistence you wish to have, mix them. Then create individual features on the surface of the ceramics such as staining any fissures, enamel spots and so on.



## Profi Zirkon Glazing



Use only Profi Zirkon Glazing. Never use Profi Line Glazing.

Take Profi Zirkon Glazing and primarily mix it well. After that, apply the glazing with a brush in usual manner. Avoid applying thick layers or, most importantly, too liquid application of the glazing. If necessary, use Profi Zirkon Glazing-Staining Liquid.

### Firing of glazing/ stains

T	B	S	t↑	H	V1	V2
790°C	450°C	3 min	40°C	1 min	—	—

## Profi Zirkon Correctur

Often after the work on the restoration is finished, small corrections are needed, such as contact points, support of the pontic part, fitting of the shoulder, etc. To this end, use Profi Zirkon Correctur.

T	B	S	t↑	H	V1	V2
700°C	410°C	4 min	40°C	1 min	410°C	699°C

## Ceramics mass correspondence table

	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Dentin	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Opal-schneide	OS1	OS1	OS2	OS2	OS3	OS4	OS2	OS2	OS2	OS3	OS2	OS2	OS3	OS3	OS2	OS2
Liner	2	2	2	3	2	1	3	3	3	1	2	2	2	1	2	3
Margin	M2	M2+M6 90/10	M2+M6 80/20	M2+M6 50/50	M6	M1+M3 50/50	M1+M3 20/80	M3	M3+M4 50/50	M1+M5 50/50	M1+M5 30/70	M1+M5 20/80	M5	M2+M5 70/30	M2+M5 50/50	M5

Opaque-Dentin	O-D1	O-D2														
Transpa	Neutral	Clear			Blue			Brown-grey				Orange-grey				
Impulse	Opal Effect white			Opal Effect blue				Occlusal Dentin Orange				Mamelon light				
Bleach	Opaquers	Dentin		Schneide												
Gingiva								Gingiva				Gingiva Opaquer				
Correctur								Correctur								

## Profi Zirkon mass pulse

Bleach dentin	Bleach schneide	Transpa Neutral	Transpa Clear	Transpa Orange Grey	Transpa Brown Grey	Transpa blue	Opal Effect White	Opal Effect Blue	Occ. Dentin Orange	Mamelon Light	Gingiva

## Zirkon Shade and Stains

Zirkon Stains deep	Zirkon Stains white	Zirkon Stains crackliner	Zirkon Stains yellow	Zirkon Stains light yellow	Zirkon Stains khaki	Zirkon Stains olive	Zirkon Stains orange	Zirkon Stains mahagony	
Zirkon Stains grey	Zirkon Stains red	Zirkon Stains blue	Zirkon Stains maroon	Zirkon Shade Group A	Zirkon Shade Group B	Zirkon Shade Group C	Zirkon Shade Group D		

## Profi Zirkon ceramics firing table

	T	B	S	t↑	H	V1	V2
Firing of shoulder ceramics	835 <sup>0</sup> C	410 <sup>0</sup> C	3 min	40 <sup>0</sup> C	1 min	410 <sup>0</sup> C	834 <sup>0</sup> C
Firing of Profi Zirkon Liner	805 <sup>0</sup> C	410 <sup>0</sup> C	3 min	40 <sup>0</sup> C	1 min	410 <sup>0</sup> C	804 <sup>0</sup> C
First firing of dentin	810 <sup>0</sup> C	410 <sup>0</sup> C	7 min	40 <sup>0</sup> C	1 min	410 <sup>0</sup> C	809 <sup>0</sup> C
Second firing of dentin	800 <sup>0</sup> C	410 <sup>0</sup> C	5 min	40 <sup>0</sup> C	1 min	410 <sup>0</sup> C	799 <sup>0</sup> C
Firing of glazing and stains	790 <sup>0</sup> C	450 <sup>0</sup> C	3 min	40 <sup>0</sup> C	1 min	-	-
Firing of the correction body	700 <sup>0</sup> C	410 <sup>0</sup> C	4 min	40 <sup>0</sup> C	1 min	410 <sup>0</sup> C	699 <sup>0</sup> C

Temperatures can be adjusted if needed

(for example, the temperature of firing of dentin can be raised by 10 °C if the material is too matte).

T - final temperature

B - starting temperature

S - drying time

t↑ - heating rate

H - holding time

V1 - vacuum on

V2 - vacuum off