HEIMERLE+MEULE

INSPIRATION zirkon

Facing Ceramic for Zircon Frames

The method when layering INSPIRATIONzirkon is in many ways similar to that of traditional metal ceramics. Rethinking is not necessary!

- **Simple, safe processing**
- **Stabile CTE, thus high firing stability**
- **Translucent, fluorescent Chroma Shade for homogenous bonding with the zircon frame**
- **Very low shrinkage**
- **High brilliance, natural aesthetics, no greyish effects even after several firing circles**
- **Fluorescent staining colour system as well as deeply sintering, high-gloss glaze material**

Instruction for use

CE 0483

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Instructions for use

Material und Indication

The low fusing INSPIRATIONzirkon-ceramic is a leucite-free, amorphous material of several synchronised components. Selection and composition of the basic components as well as their structure and grain distribution are responsible for the outstanding optical and mechanical characteristics of the facing ceramic and provide safe bonding with the zircon-dioxide.

The colours shaded in accordance with the VITA®-colour system serve for facing and personalisation of frame materials made of zircon-dioxide.

Creation of Frames

Zircon-dioxide frames have to be created in accordance with the manufacturer's instructions.

Attention: When handling the surface as blasting the frames, the manufacturer's instructions have also to be complied with.

Chroma Shade Firing Circle

Chroma Shade makes for the bonding at one side, at the other side it ensures the esthetical aspects of the individual groups of dental colours.

Mix Chroma Shade-Powder with Liquid CF or Liquid N to creamy consistence and thinly apply it to the cleaned zircon frame.

1. Chroma Shade firing circle:
   - Position object onto the firing table and pre-dry it 4 minutes with opened furnace
   - Close furnace (basic temperature 400 °C)
   - Heat furnace to 980 °C with 60 °C/min. and vacuum from 450 °C
   - Holding time 1 min. without vacuum

Repeat this process if the surface is not evenly covered with Chroma Shade material.

Shoulder Material Firing Circle

Mix Shoulder Material (SM) with Modelling Liquid SF to creamy consistence and apply it.

Densify the shoulder materials applied by slight riffling, suck off surplus liquid and thoroughly dry it.

1. FIRING CIRCLE:
   - Position the object onto the firing table and pre-dry it 4 minutes with opened furnace
   - Close furnace (basic temperature 400 °C)
   - Heat furnace to 820 °C with 45 °C/min. and vacuum from 450 °C
   - Holding time 1 min. without vacuum

The second application of shoulder materials for optimisation of the accuracy of fit is done thereafter.

2. FIRING CIRCLE:
   - See first firing circle, firing temperature 810 °C, however.

Dentin Firing Circle

Mix ceramic powder (dentin and enamel) with Modelling Liquid N to creamy consistence. Apply in small portions in the cervical as well as the interdental area ad densify with gently vibrations. Then apply dentin and enamel in accordance to the tooth layering.

1. FIRING CIRCLE:
   - Position object onto the firing table and pre-heat it 4 – 6 min. with opened furnace
   - Close furnace (basic temperature 400°C)
   - Pre-heat furnace to 770 °C with 60 °C/min. and vacuum from 450 °C
   - Holding time 1 min. without vacuum

Work up object after the first dentin firing circle and thoroughly clean it. Then apply dentin and enamel for the second dentin firing circle.

2. FIRING CIRCLE:
   - Same procedure as during the first dentin firing circle, with firing temperature of 760 °C, however. Additional dentin firing circles are done at 750 °C.

Glaze Firing Circle

After final finishing, the crowns or bridges have to be cleaned thoroughly. Mix glaze powder with glaze liquid and thinly apply it. Apply and fire respective staining colours with glaze for colour personalisation.

FIRING CIRCLE WITH GLAZE:
   - Position object onto the firing table and pre-heat it 4 min. with opened furnace
   - Close furnace (basic temperature 400 °C)
   - Heat furnace to 730 – 740 °C with 45 °C/min. without vacuum.
   - Holding time 1 min. without vacuum

FIRING CIRCLE WITHOUT GLAZE:
   - The glass firing circle is done accordingly to the glaze firing circle, with a firing temperature of 740 – 750 °C, however.

In order to process the zircon frames more gently, a minor long-term cooling is feasible, but not necessarily required..

Alignment of the Shoulder Materials

A0	A1	A2	A3	A3.5	A4	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
SM1	SM1	SM2	SM2 SM3	SM3	SM3	SM4	SM4	SM4	SM5 SM4	SM5	SM6	SM6	SM6 SM7	SM7	SM8	SM9	SM10
-	-	-	1:1	-	-	-	-	-	4:1	-	-	-	1:1	-	-	-	-

Enamel Combination Chart

Dentin	A0	A1	A2	A3	A3.5	A4	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Enamel	1	1	2	2	4	4	1	1	2	3	4	2	2	3	4	1	2	3

⚠ Warning: Long-term inhalation of ceramic dust may result in health risks.

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Firing Chart „PLATINA® mat“

		Chr. Shade firing circle 1+2	Shoulder 1	Shoulder 2	Dentin 1	Dentin 2	Gloss with Glaze	Gloss w/o Glaze	Correction Material
Basic temperature	[°C]	400	400	400	400	400	400	400	400
Closing time	[min.]	4	4	4	4 – 6	4 – 6	4	4	4
Drying time	[min.]	0	0	0	0	0	0	0	0
Heating rate	[°C/min.]	60	45	45	45	45	45	45	45
Vacuum start	[°C]	450	450	450	450	450	0	0	450
Vacuum strength	[%]	95	95	95	95	95	0	0	0
Stop Vacuum	[°C]	969	819	809	769	759	0	0	709
Holding	[min.]	0	0	0	0	0	0	0	0
End temperature	[°C]	970	820	810	770	760	730 – 740	740 – 750	710
Holding time	[min.]	1	1	1	1	1	1	1	1
Internal cooling	[min.]	0	0	0	0	0	0	0	0
Cooling rate	[min.]	0	0	0	0	0	0	0	0

In order to process the zircon frames more gently, 2 – 3 min. long-term cooling is recommended.

Firing Chart „Austromat 3001“

	Firing program – enter sequenze										
Chroma Shade 1 + 2	C400	T120	T120.L9	V9	T060.C970	V0	T60	C0	L0	T2	C400
Shoulder 1	C400	T120	T120.L9	V9	T045.C820	V0	T60	C0	L0	T2	C400
Shoulder 2	C400	T120	T120.L9	V9	T045.C810	V0	T60	C0	L0	T2	C400
Dentin 1	C400	T180	T180.L9	V9	T045.C770	V0	T60	C0	L0	T2	C400
Dentin 2	C400	T180	T180.L9	V9	T045.C760	V0	T60	C0	L0	T2	C400
Gloss with Glaze	C400	T120	T120.L9		T045.C730		T60	C0	L0	T2	C400
Gloss without Glaze	C400	T120	T120.L9		T045.C740		T60	C0	L0	T2	C400
Correction material	C400	T120	T120.L9	V9	T045.C710	V0	T60	C0	L0	T2	C400

In order to process the zircon frames more gently, 2 – 3 min. long-term cooling is recommended.

Firing Chart „Austromat M“

	Start [°C]	**Drying [min.]**	**↑ [min.]**	**→ [min.]**	**VAC Level**	**↗ [°C/min.]**	**END [°C]**	**→ [min.]**	**(V)**	**↘ 1**	**↘ 2**
Chroma Shade 1 + 2	400	0	4	0	9	60	970	1		0	0
Shoulder 1	400	0	4	0	9	45	820	1		0	0
Shoulder 2	400	0	4	0	9	45	810	1		0	0
Dentin 1	400	0	4 – 6	0	9	45	770	1		0	0
Dentin 2	400	0	4 – 6	0	9	45	760	1		0	0
Gloss with Glaze	400	0	4	0	9	45	730	1		0	0
Gloss without Glaze	400	0	4	0	0	45	740	1		0	0
Correction material	400	0	4	0	0	45	710	1		0	0

In order to process the zircon frames more gently, 2 – 3 min. long-term cooling is recommended.

The temperatures stated are standard values and depending on the individual constellation of your furnace.

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Firing Chart „Programat P 90“

	Readiness temperature B [°C]	Increase t ↑ [°C/min.]	End temperature T [°C]	Closing time S [min]	Holding time H [min.]	Vacuum start V_1 [°C]	Vacuum end V_2 [°C]
Chroma Shade 1 + 2	400	60	970	4	1	450	969
Shoulder 1	400	45	820	4	1	450	819
Shoulder 2	400	45	810	4	1	450	809
Dentin 1	400	45	770	4 – 6	1	450	769
Dentin 2	400	45	760	4 – 6	1	450	759
Gloss with Glaze	400	45	730	4	1		
Gloss without Glaze	400	45	740	4	1	–	–
Correction material	400	45	710	4	1	450	709

In order to process the zircon frames more gently, 2 – 3 min. long-term cooling is recommended.

Firing Chart „Vacumat 2500“

	Readiness [°C]	Pre-drying time [min.]	Temperature increase [°C/min.]	End temperature [°C]	Holding time [min.]	Vacuum start at [°C]
Chroma Shade 1 + 2	400	4	60	970	1	450
Shoulder 1	400	4	45	820	1	450
Shoulder 2	400	4	45	810	1	450
Dentin 1	400	4 – 6	45	770	1	450
Dentin 2	400	4 – 6	45	760	1	450
Gloss with Glaze	400	4	45	730	1	–
Gloss without Glaze	400	4	45	740	1	–
Correction material	400	4	45	710	1	450

In order to process the zircon frames more gently, 2 – 3 min. long-term cooling is recommended.

The temperatures stated are standard values and depending on the individual constellation of your furnace.

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