WILLI GELLER Creation

SIMPLY BRILLIANT

INSTRUCTIONS FOR USE

CREATION CC

Classic Metal-Ceramics

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WILLI GELLER Creation

SIMPLY BRILLIANT

CONTENT

INTRODUCTION

Perfect metal-ceramics

CREATION CC – technically refined and inspired by nature. Better than ever, more brilliant than ever: Creation CC is a high-fusing metal-ceramic with unique optical and physical properties that has developed constantly in line with growing aesthetic demands – recognised worldwide for over 25 years!

The perfectly compatible ceramic materials have excellent homogeneity and thus guarantee high flexural strength. The result: a densely sintered structure for pure and non-porous layering with the utmost reliability. The pure potash feldspar with micro-pure leucite crystal structure in Creation CC creates iridescent light refraction and natural brilliance and enhances the strength. Exceptional colour nuances can additionally be created with the unique effect materials. The ceramic bonder Crea Alloy Bond also acts as a CTE buffer between metal and ceramic – for improved adhesive properties to non-precious metal and greater colour reliability. Whether Introduction, Starter, Shoulder, Gingiva, Bleach Shades kit, Kit 1 or 2: With the modular classic brand Creation CC, metal-ceramic restorations can be produced with impressive aesthetics and dimensional stability – for superb dental artistry! Creation CC – natural brilliance and efficiency.

The brilliance of Creation CC:

- Unique, analogous aesthetic thanks to highly refined feldspars
- Resistance through consistently high flexural strength
- Natural colour effect and light dynamics due to leucite crystals
- Ease of handling thanks to consistent colour and layering system
- Processing security since 1988

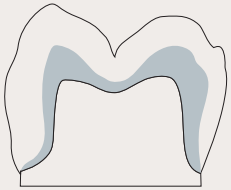
METAL FRAMEWORK
Material/design/development

Material
Noble metals or non-noble metals with a CTE of 13.9 - 14.9 at 25° - 500 °C may be blended with Creation CC.
CTE > 14.5 Prolonged cooling
CTE < 14.1 The object must be quickly removed from the firing chamber.

Design
The framework shall be designed in a reduced tooth shape in such a way that it supports the cusps. For increased stability, frame-works with garlands may be additionally strengthened.

Development
The metal framework is ground with carbide burs or ceramically bound finishing abrasives with sharp punching always in the same direction. It should be ensured that there is no overlapping of metal in the grinding.

Anterior tooth supported



Posterior tooth supported

METAL FRAMEWORK
Sandblasting, steamcleaning, oxidation

Sandblasting
The frameworks are blasted with aluminium oxide (noble metal: 110µm, non-noble metal: 250µm, at 2-3 bar pressure). The frame-work should not come into contact with grease and is held solely with forceps or artery clamps.

Steamcleaning
The framework is thoroughly cleansed with the steam jet cleaner.

Oxidation
Noble metals are oxidised according to the instructions of the alloy manufacturer. A consistent oxide coating is observed thereby.

CREA ALLOY BOND

The use of the bonder Crea Alloy Bond is particularly important for highly oxidising alloys. It shall be applied in a thinly covering con-sistency on the grease-free, cleansed framework and fired. Crea Alloy Bond allows for a bond strength of approx. 70 MPa and thus a secure bond between ceramic and metal alloy. The bonder neutralises metal oxides and serves as a CTE buffer between metal and ceramic. Metal oxides of the alloys are bound in the bonder, it accrues a golden appearance on the surface. The base coat thus pro-vides high colour stability. The appearance of the bonder may vary according to the alloy.

Firing	Start temperature	Drying time	Temperature increase	V	Final temperature	Holding time	Appearance
Crea Alloy Bond	550 °C	6 min.	80 °C/min.	+	980 °C	1 min.	Yellowish, slightly shiny*

* The appearance of the bonder may vary according to the alloy composition.

FIRST OPAQUE FIRING

Creation CC Creapast or CC powder opaque is applied in uniform brushstrokes with the designated Creapast brush with approx. 75 % opacity on the metal framework. Particular care should be taken in that the brush is only lightly moistened with UF.
In the event that it requires the alloy, the first opaque firing may be carried out thirty degrees lower at only 950 °C using WOP paste. Subsequently the second opaque firing is proceeded with powder or paste opaque.

Technical information:
- Avoid any dilution with water.
- The consistency of Creapast may be altered with universal fluid (UF).
- Avoid a pre-drying time which is too short or a pre-drying temperature which is too high (boiling bubbles!).
- Expressed materials should not be withdrawn with the syringe again.

Firing 1st Opaque firing	Start temperature	Drying time	Temperature increase	V	Final temperature	Holding time	Appearance
WOP opaquer	550 °C	6 min.	80 °C/min.	+	950 °C	1 min.	Slightly shiny
Creapast*	550 °C	6 min.	80 °C/min.	+	980 °C	1 min.	Slightly shiny
Powder opaquer*	600 °C	2 min.	80 °C/min.	+	980 °C	1 min.	Slightly shiny

* In the use of NEM: Final temperature 1,000 °C

SECOND OPAQUE FIRING

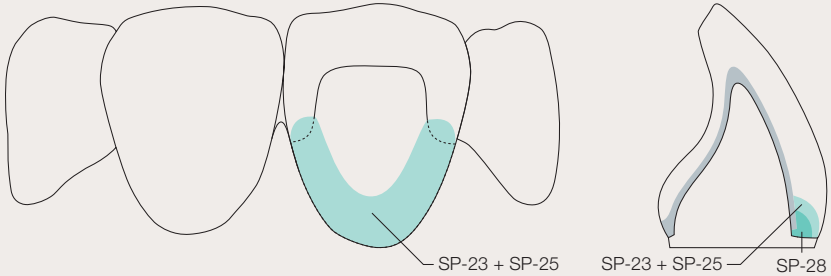
The second opaque firing is applied thoroughly. The opaque layering may be modified with special opaque intensive upon request (powder opaquer may also be used for the second opaque layering). The second opaque firing should have an eggshell gloss.

Firing 2nd Opaque firing	Start temperature	Drying time	Temperature increase	V	Final temperature	Holding time	Appearance
Creapast	550 °C	6 min.	80 °C/min.	+	950 °C	1 min.	Eggshell gloss
Powder opaquer	600 °C	2 min.	80 °C/min.	+	950 °C	1 min.	Eggshell gloss

FIRST SHOULDER FIRING

Layering example: Shade A3

The very thinly sealed die is isolated with Creapen in the area of the shoulder. The not too tightly fitting milled framework cap is put on the die. Application of the opaque shoulder material (depending on selected tooth shades: SP-27 – 29) in the framework/shoulder transition area to stabilise the brightness in the neck area. The shoulder is covered up to the preparation border with the shoulder material (SP-21 – 26) selected for the tooth shade. After gentle initial drying with a hair-dryer or in front of the open firing chamber, the cap can be removed effortlessly from the die.
The SP mixing recommendations for Vita® shades are to be extracted from the colour allocation table on page 70.

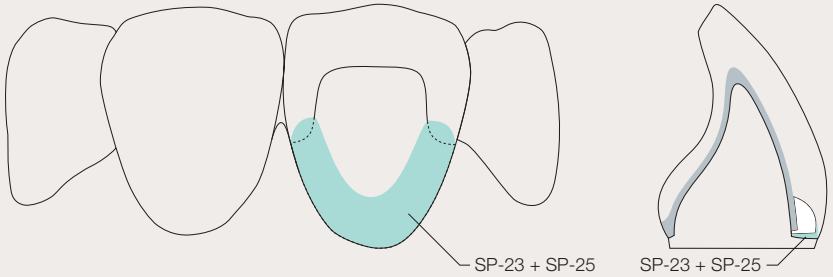


Materials used:
- Opaque shoulder material SP-28
- Translucent shoulder material SP-23 + SP-25 (Ratio 2:1)

Firing	Start temperature	Drying time	Temperature increase	V	Final temperature	Holding time	Appearance
1st and 2nd shoulder firing	600 °C	2 min.	80 °C/min.	+	950 °C	1 min.	Slightly shiny

SECOND SHOULDER FIRING

Repeated isolation with Creapen. The ceramic shrunk through the firing is supplemented with translucent, shoulder material selected by tooth shade.



Materials used:
- Translucent shoulder material SP-23 + SP-25 (Ratio 2:1)

Firing	Start temperature	Drying time	Temperature increase	V	Final temperature	Holding time	Appearance
1st and 2nd shoulder firing	600 °C	2 min.	80 °C/min.	+	950 °C	1 min.	Slightly shiny

DENTINE FIRING

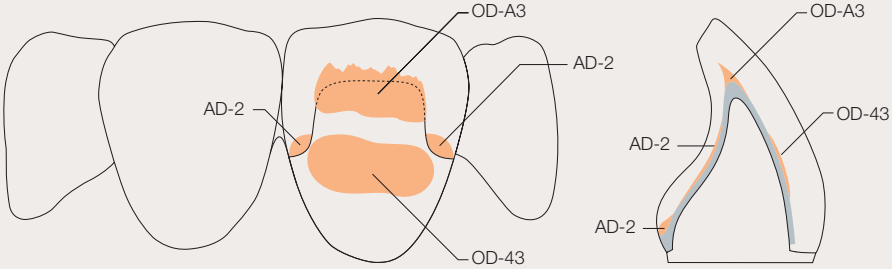
Application of opaque Dentines

Opaque Dentine Intensive includes: OD-32, -37, -41, -43 and -44. Use of OD-43 in the middle crown area for regulating the shine.

The opaque Dentines vitrify slightly more strongly and are hence more homogeneous from the perspective of periodontal hygiene.

At the base of the pontics this is extremely important and additionally helps to stabilise shine in the cervical third.

To prevent shadowing of the build-up in the interdental area, the chromatic approximal Dentines AD-1 and AD-2 are applied interprox-imally.

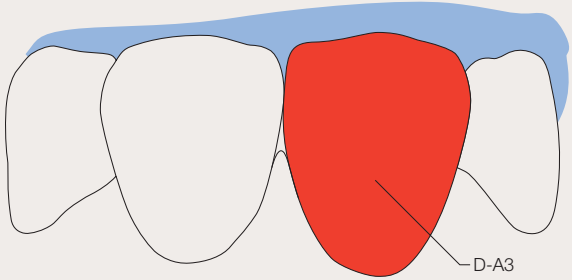


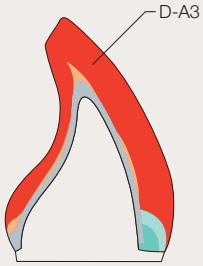
Materials used:
- Opaque dentine OD-43
- Opaque dentine OD-A3
- Opaque dentine AD-2

DENTINE FIRING

Application of Dentine materials

Correct positioning of the dentine using silicone matrix.
The anatomical form of the crown is built up with Dentine material.



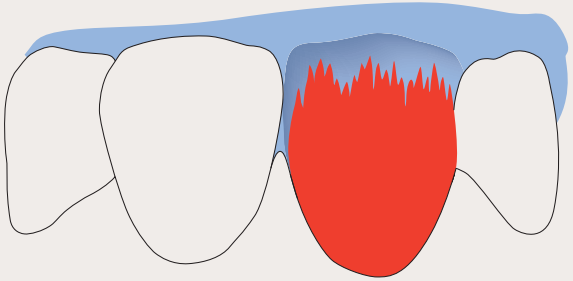


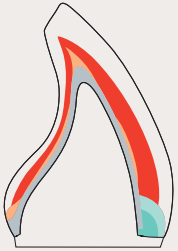
Materials used:
- Dentine A3

DENTINE FIRING

Reduction of dentine build-up (cutback)

After the anatomical form is correctly modelled, the dentine build-up is reduced in the labial (special incisal) in order to create space for another layer, whereby the shape of the mamelons remains visible in the dentine.
Irregularities are thereby rather advantageous.

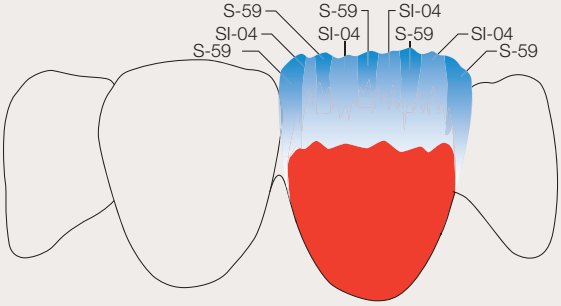


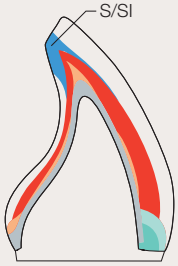


DENTINE FIRING

Layering the incisal plate

The Dentine layering is individually complemented by Enamel and Transpa materials in its incisal-palatal direction. The first stage is to build up the distal and/or mesial edges. The alternating layer arrangement of the incisal plate is created depending on the brightness value with the following materials: Enamel (S-58 – 60), opal Enamel (SI-01 – 06), pearl Enamel (PS-0 – 3), opal Transpa (NT, OT), clear (CL-0, UC) or TI (TI-1 – 5). Over-contouring of the incisal length of the restoration is necessary to achieve compensation of shrinkage.



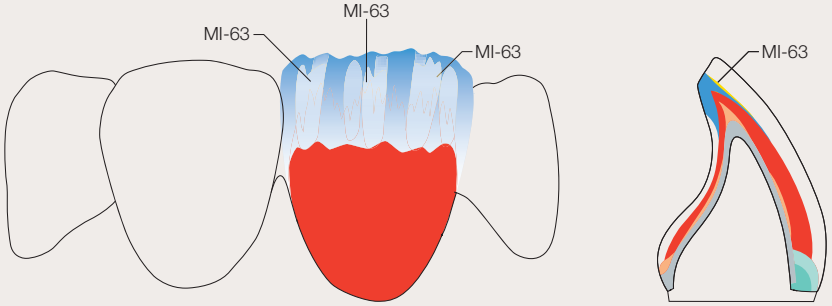


Materials used:
- Enamel S-59
- Intensive Enamel SI-04

DENTINE FIRING

Layering of internal effects

Onto the labial surface, the iridescent Make In materials (MI-61 – 66) at an appropriate intensity depending on the required characteristics are thinly washed into wet material in the incisal third. Lifelike mamelons or effects can thus be reproduced.

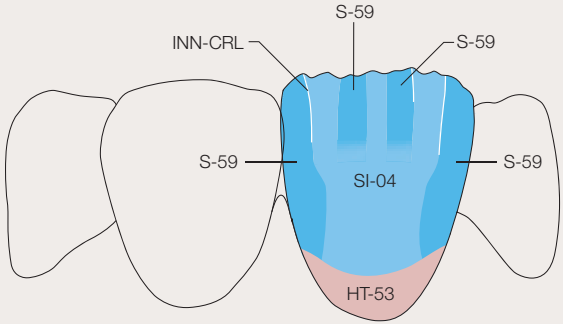


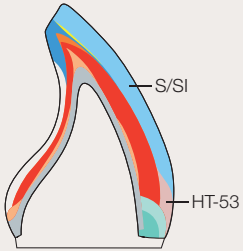
Materials used:
- Make In MI-63

DENTINE FIRING

Layering of the labial Enamel parts and the incisal edge

The labial surface is supplemented with Enamel materials (S-57 – 60) in a classic layering technique. Through the addition of Transpa Clear (CL-0/UC), the Enamel is somewhat more translucent, if required. For individual layering, the chromatic Opal Enamels (SI-01 – 06, SO-10 – 11), Pearl Enamels (PS-0 – 3), Opal or Transpa Neutral materials (NT, OT), Clear or Ultraclear materials (CL-O, UC) and the Transpa Enamel materials (TI-1 – 5) can be used, depending on the desired effect. In the cervical and incisal third, the high-fluorescent Neck Transpa materials (HT-51 – 56) can be used for individual layering. The incisal edge is achieved with an Enamel/Dentine mixture. To allow for firing shrinkage, the layering is also over-contoured labially and incisally.



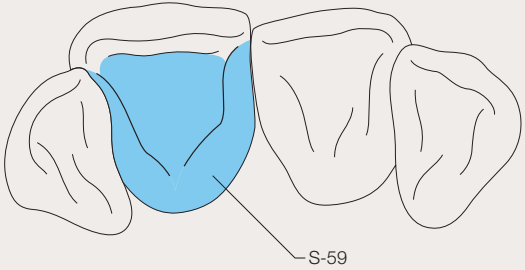


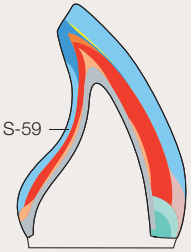
Materials used:
- Neck Transpa HT-53
- Enamel S-59
- Enamel Incisal SI-04
- In Nova Neo INN-CRL

DENTINE FIRING

Layering of the palatal surface

The palatal surface is covered, usually with a darker OD (e.g. OD-41, OD-32, OD-37) or with an OD mixture modified using CreaColor In Nova Neo, tapered thinly towards the incisal edge. The tubercle area and the substructure of the marginal ridges are built up with Dentine. Dark and discoloured areas in the palatal fossa can be treated with a mixture of Dentine and In Nova Neo (Universal Modifier). The palatal surface is then completed with Enamel, Transpa and Neck Transpa materials.





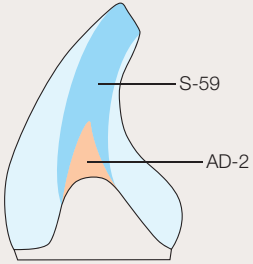
Materials used:
- Enamel S-59

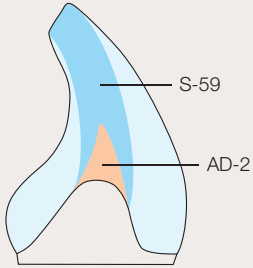
DENTINE FIRING

Layering of the interapproximal areas

After lifting off the model, a triangle is removed in the cervical-interapproximal area and filled with Approximal Dentine (AD-1, AD-2), then covered with the desired Dentine shade.
As a result, increased light and colour stability is achieved. The points of contact are supplemented with the corresponding Dentine Enamel materials.

For bridge restorations the interdental areas are separated with a sharp instrument (razor blade, thin scalpel etc.).





Materials used:
- Approximal Dentine AD-2
- Enamel S-59

DENTINE FIRING

The Dentine firing is performed at 920 °C under vacuum.

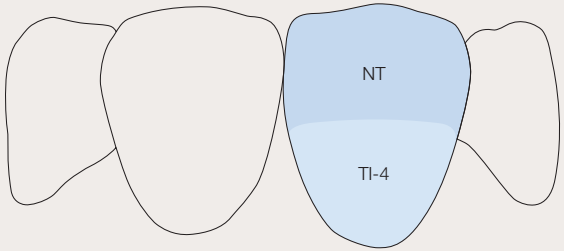
After reaching the final temperature the firing chamber is flooded. The holding time amounts to 1 minute. Reliable proof of a correct firing cycle can only be gained by visual inspection post-firing.

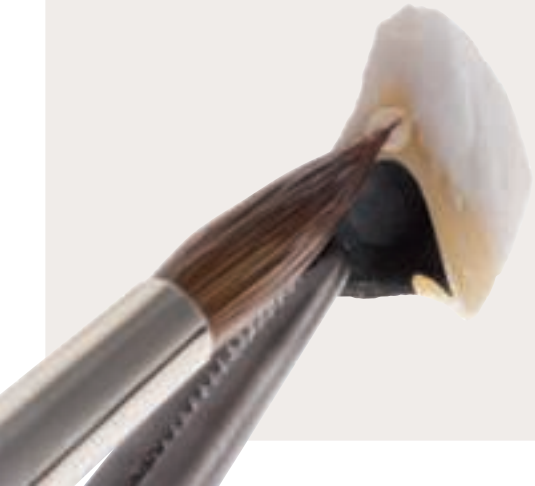
Should the appearance resemble the illustration, the firing cycle was optimal (slightly shiny).

Firing	Start temperature	Drying time	Temperature increase	V	Final temperature	Holding time	Appearance
Dentine firing	580 °C	6 min.	55 °C/min.	+	920 °C	1 min.	Slightly shiny

CORRECTION FIRING

Before the correction firing the crowns are finished and cleaned. The second firing is a pure correction firing. Only small contour corrections are made with Enamel, Transpa and Neck materials.





Materials used:
- Transpa Incisal TI-4
- Neutral Transpa NT
- Enamel S-59

CORRECTION FIRING

Is fired at 910 °C under vacuum. After reaching the final temperature the firing chamber is again flooded. Holding time: 1 minute. If the firing cycle is correct, the ceramic also appears slightly shiny this time. Usually only minor contour corrections are required.

The crown is formed with rotary instruments.

Firing	Start temperature	Drying time	Temperature increase	V	Final temperature	Holding time	Appearance
Correction firing	580 °C	4 min.	55 °C/min.	+	910 °C	1 min.	Slightly shiny

SURFACE TEXTURING

However, the natural surface texture of the restoration is also important. The aim is aesthetic harmony with the adjacent teeth, which can be achieved by using conventional diamonds, stones and carbide tungsten tips.

GLAZE FIRING

Discolourations on the tooth surface can be reproduced in a lifelike way with CreaColor Make up Neo. The surface of the furnace-glazed crown is mechanically finished. Depending on the gloss level of the texture, the surface is adapted to the situation in the mouth using rubber polishers, emery powder, felt wheel, pumice powder and polishing materials.

Should glazing powder be used, it is mixed with the GL Liquid. The Make up Neo stains and the Make up Neo fluorescent glaze are already pre-mixed ready for use.

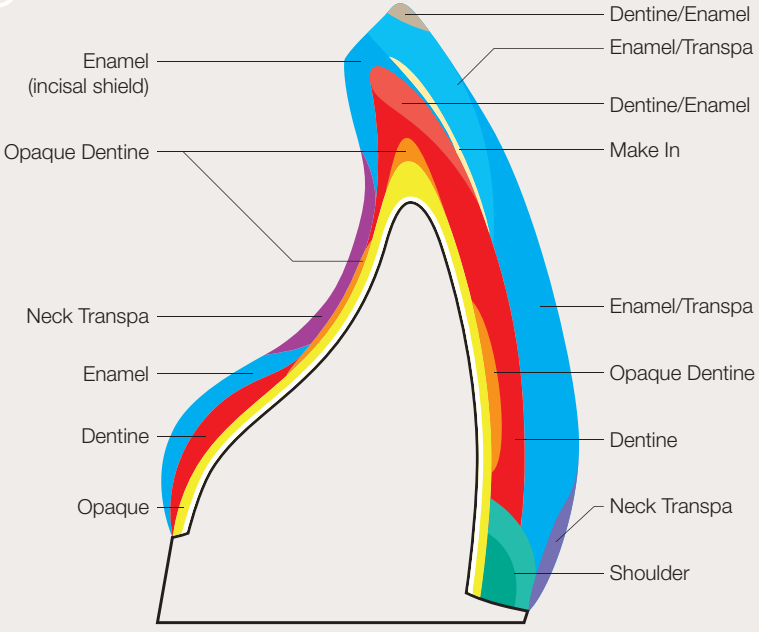
Minimal corrections after Glaze firing may be carried out with the low-melting Creation LF. (See firing chart p. 75)

The Creation ceramic materials are characterised by the correct fluorescence level, which allows a natural, harmonious transition to the rest of the dentition even under extreme light conditions.

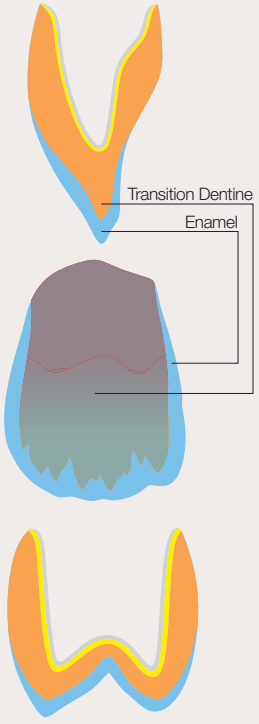
Firing	Start temperature	Drying time	Temperature increase	V	Final temperature	Holding time	Appearance
Glaze firing without glaze	580 °C	2 min.	55 °C/min.	+	920 °C	-	Shiny
Glaze firing with glaze	600 °C	2 min.	55 °C/min.	-	900 °C	1 min.	Shiny
Glaze and stain firing (Make up Neo)	600 °C	2 min.	55 °C/min.	-	930 °C	-	Shiny

LAYERING DIAGRAM CREATION CC

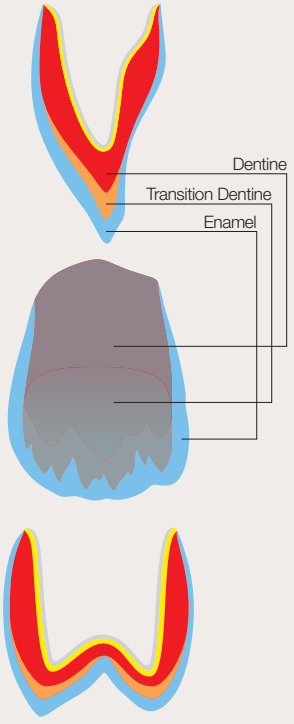
Layering technique **Creation Classic**
(with Dentine)



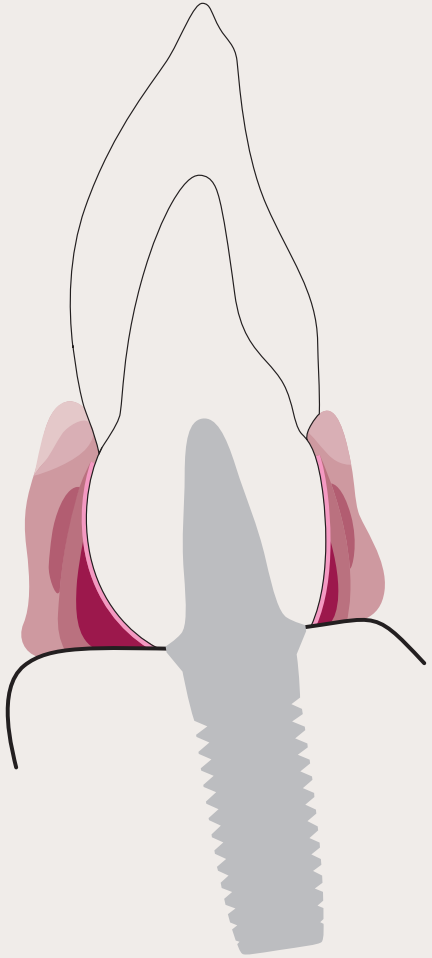
Layering technique
Creation Smart
(with Transition Dentine)



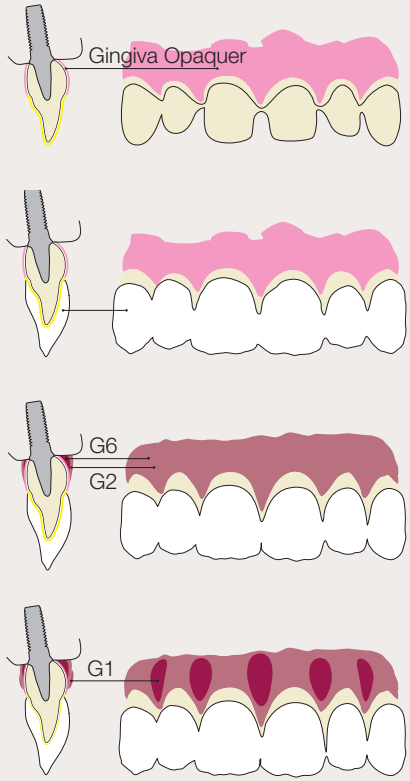
Layering technique
Creation Professional
(combination: Dentine and
Transition Dentine)



CREATION CC GINGIVA



CREATION CC GINGIVA



OPAQUER (CREAPAST OR POWDER OPAQUER)

It should be ensured that the gingiva-coloured Opaquer is applied 1 mm shorter in order to prevent it cervically extending into the white veneers.

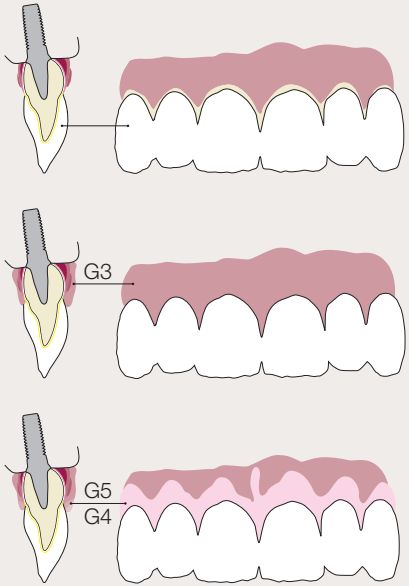
1. LAYERING

Layering the white aesthetics.

Layering the pink aesthetics.

Subsequently the complete, still exposed framework is covered with G2 (dark pink). For thick layers, the ceramic mass may be built up from within using G6 (dark pink opaque) and the colour stabilised as a result of the higher opacity. It is important to make sure the tooth-coloured and gingiva-coloured ceramics do not touch so that specific positioning of the fired materials can be achieved.

Washing of G1 (purple) mesially and distally to the aveola mounds.



DENTINE FIRING

The Dentine firing is performed at 920 °C under vacuum (see firing table p. 74).

2. LAYERING

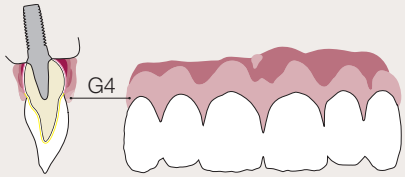
Completing the white aesthetics.

Completing the pink aesthetics.

Completely covering the pink aesthetics with a thin layer of G3 (light pink).

Individual characterisation of gingival margin, labial and buccal frenulae with G5 (rose) and for lighter areas with G4 (flamingo).

CREATION CC GINGIVA



1. CORRECTION FIRING

The correction firing is performed at 910 °C under vacuum (see firing table p. 74).

2. CORRECTION FIRING

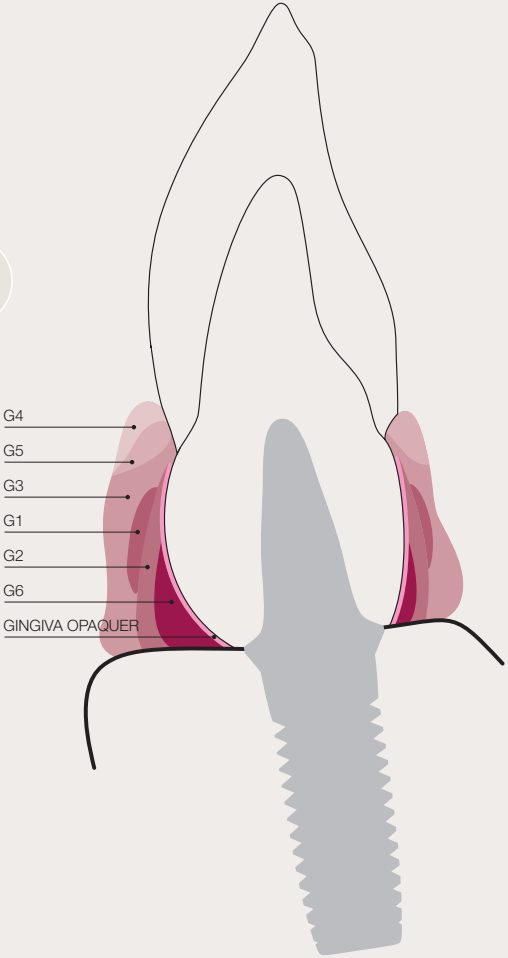
The second correction firing is performed at 910 °C under vacuum. Final corrections to the tooth form and corrections to the gingiva are possible with G4 (flamingo).

GLAZE FIRING

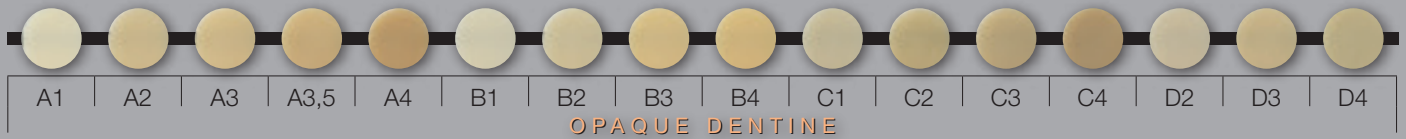
See also the firing table on page 74.
Discoloura tions on the tooth surface or in the gingiva can be reproduced in a lifelike way with CreaColor Make up Neo (marking and glazing).

CREATION CC GINGIVA

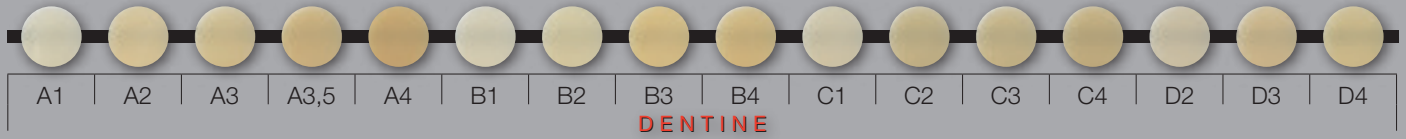
G2 G6 G1 G3 G5 G4 G7 GN



CREATION CC - COLOUR CHART

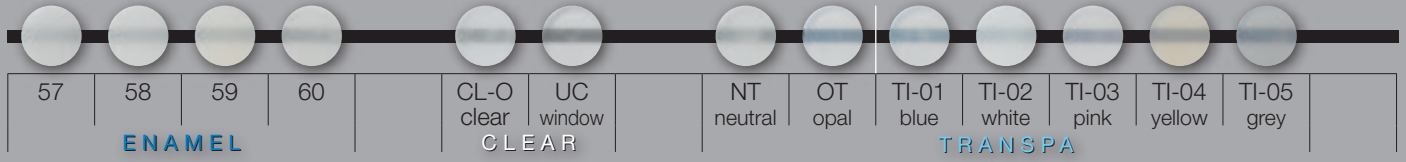


OPAQUE DENTINE



DENTINE

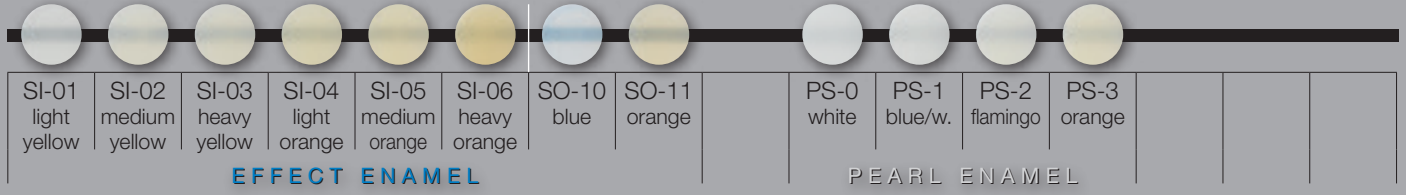
TRANSITION DENTINE



ENAMEL

CLEAR

TRANSPA



EFFECT ENAMEL

PEARL ENAMEL

* Vita® is a registered trade mark of VITA Zahnfabrik H. Rauter GmbH & Co. KG, Bad Säckingen, Germany.

CREATION CC - COLOUR CHART

HT-51 iridescent	HT-52 khaki	HT-53 sand	HT-54 honey	HT-55 borde.	HT-56 ocher	SP-21 neutral	SP-22 flamingo	SP-23 sand	SP-24 gold	SP-25 red brown	SP-26 yellow gold	SP-27 ivory	SP-28 opaque yellow	SP-29 honey	SP-G gingival

NECK TRANSPA HIGH FLUORESCENT

SHOULDER POWDERS HIGH FLUORESCENT

MI-61 ivory	MI-62 lemon	MI-63 honey yellow	MI-64 flamingo	MI-65 gold	MI-66 olive	AD-1 light yellow	AD-2 orange

MAKE IN HIGH FLUORESCENT INTERNAL POWDER

APPROXIMAL DENTINE

G1 purple	G2 dark pink	G3 light pink	G4 flamingo	G5 rose	G6 dark pink opaque	G7 violet	G-N neutral	OD-32 havanna	OD-37 curry	OD-41 orange	OD-43 ivory	OD-44 cuba

GINGIVAL

OPAQUE DENTINE

O-AB		BD-A	BD-B	BD-BO		TD-BA		S-AB		SP-AB		KM	

BLEACH OPAQUE

BLEACH DENTINE

TRANSITION D

BLEACH EN.

BLEACH SHOULDER

CORRECTION POWDER

COLOUR ALLOCATION TABLE Vita® Shade* A – B

Shade	A1	A2	A3	A3,5	A4	B1	B2	B3	B4
SP Opaque	SP 27	SP 28	SP 28	SP 29	SP 29	SP 27	SP 28	SP 28	SP 28
SP Translucent	SP 21+22	SP 22	SP 23+25	SP 24+25	SP 24+25	SP 21+22	SP 21+22	SP 23	SP 24+23
Mixture ratio	1:3	100 %	2:1	2:1	1:1	4:1	2:1	100 %	3:1
Opaque Dentine (OD)	OD 32	OD 32	OD 32	OD 32	OD 32	OD 37	OD 37	OD 37	OD 37
Enamel	S 58	S 58	S 59	S 59	S 60	S 57	S 59	S 59	S 59
SI	SI 01	SI 02	SI 03	SI 04	SI 05	SI 01	SI 02	SI 04	SI 06
HT	HT 52	HT 52	HT 53	HT 53	HT 53/55	HT 52	HT 52	HT 54/55	HT 54
MI	MI 61	MI 62	MI 62	MI 63	MI 65	MI 62	MI 62	MI 63	MI 65

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COLOUR ALLOCATION TABLE Vita® Shade* C – D

Shade	C1	C2	C3	C4	D2	D3	D4
SP Opaque	SP 27	SP 28	SP 28	SP 28	SP 28	SP 28	SP 28
SP Translucent	SP 22+26	SP 22+26	SP 26+25	SP 26+25	SP 22+25	SP 22+25+26	SP 22+25
Mixture ratio	1:1	1:2	3:1	4:1	4:1	3:2:1	3:1
Opaque Dentine (OD)	OD 44	OD 44	OD 44	OD 44	OD 44	OD 44	OD 44
Enamel	S 60	S 59	S 59	S 60	S 60	S 59	S 59
SI	SI 02	SI 03	SI 04	SI 05	SI 03	SI 04	SI 05
HT	HT 52	HT 52/56	HT 56	HT 56	HT 52/56	HT 56	HT 56
MI	MI 61	MI 64	MI 64	MI 66	MI 64	MI 66	MI 66

CREACOLOR - COLOUR CHART

In Nova Neo is a fluorescent universal modifier for ceramic materials which is also burnt in the respective Dentine firings. Some exceptions to this are the Opaquer materials and the Opaquer Modifier.
In Nova Neo has, thanks to its fluorescence, the property of effectively and harmoniously transporting the tooth shades.
In Nova Neo is very rigorous in shade rendition. It only requires small amounts to modify the respective materials. In Nova Neo may not be applied to the surface of a ceramic restoration at any time.

Fig. 1 - 4, Sascha Hein

IN NOVA NEO

Indication: modifiers and characteristics

12 fluorescent modifiers
1 In Nova Fluid

INN-1 melone	INN-2 rose	INN-3 yellow	INN-4 red brown	INN-5 brown	INN-6 olive	INN-7 grey	INN-8 blue	INN-9 white	INN-10 mais	INN-CRL Crackliner	INN-IL Illusion

Make up Neo stains characterised by glaze.
They may be added to the ceramic materials in small amounts for modification, in order to provide them with a higher colour saturation without adversely affecting the brilliance of the materials.

MAKE UP NEO

Shades, Characteristics of Make up Neo

17 fluorescent transparent colours (MUN-F)
1 fluorescent glaze (GL-F)
1 Colour fluid
1 Colour reconditioner (for refreshing thickened colours)

MUN-F1 white	MUN-F2 eggshell	MUN-F3 lemon yellow	MUN-F4 mandarine	MUN-F5 flamingo	MUN-F6 apricot	MUN-F7 light brown	MUN-F8 medium brown	MUN-F9 olive	MUN-F10 red
MUN-F11 blue	MUN-F12 grey	MUN-F13 deep blue	MUN-FA stain A	MUN-FB stain B	MUN-FC stain C	MUN-FD stain D	MUN-GL-F Glaze		

CREATION CC - FIRING CHART

Firing	Start temperature	Drying time	Temperature increase	V	Final temperature	Holding time	Appearance
Oxide firing	Depending on the instructions of the alloy manufacturer						
Crea Alloy Bond	550 °C	6 min.	80 °C/min.	+	980 °C	1 min.	Yellowish, slightly shiny**
1. Opaque firing - WOP opaquer - Creapast* - Powder opaquer*	 550 °C 550 °C 600 °C	 6 min. 6 min. 2 min.	 80 °C/min. 80 °C/min. 80 °C/min.	 + + +	 950 °C 980 °C 980 °C	 1 min. 1 min. 1 min.	Slightly shiny
2. Opaque firing - Creapast - Powder opaquer	 550 °C 600 °C	 6 min. 2 min.	 80 °C/min. 80 °C/min.	 + +	 950 °C 950 °C	 1 min. 1 min.	Eggshell gloss
1st and 2nd shoulder firing	600 °C	2 min.	80 °C/min.	+	950 °C	1 min.	Slightly shiny
Dentine firing	580 °C	6 min.	55 °C/min.	+	920 °C	1 min.	Slightly shiny
Correction firing	580 °C	4 min.	55 °C/min.	+	910 °C	1 min.	Slightly shiny
Glaze firing without glaze	580 °C	2 min.	55 °C/min.	-	930 °C	-	Shiny
Glaze firing with glaze	600 °C	2 min.	55 °C/min.	-	900 °C	1 min.	Shiny
Glaze and stain firing (Make up Neo)	600 °C	2 min.	45 °C/min.	-	930 °C	-	Shiny
Correction Powder Firing	450 °C	1 min.	45 °C/min.	+	770 °C	1 min.	Shiny

* If NEM is processed without CreaAlloyBond, the first opaque firing should be done at 1000 °C due to the poor heat conductivity of NEM. If using CreaAlloyBond on NEM this temperature increase is not necessary.
** The appearance of the bonder may vary according to the alloy composition.
The above firing parameters are guide values which must always be adapted to the furnace being used and the situation of the furnace. Getting the correct firing result is crucial here.

CREATION LF - FIRING CHART / SUPPLEMENTARY MATERIAL

Firing	Start temperature	Drying time	Temperature increase	V	Final temperature	Holding time	Appearance
1st and 2nd shoulder firing	450 °C	4 min.	45 °C/min.	+	810 °C	1 min.	Slightly shiny
Dentine firing	450 °C	6 min.	45 °C/min.	+	770 °C	1 min.	Slightly shiny
Correction firing	450 °C	6 min.	45 °C/min.	+	760 °C	1 min.	Slightly shiny
Glaze firing	480 °C	2 min.	45 °C/min.	-	780 °C	-	Shiny
Glaze and stain firing (Make up Neo)	480 °C	2 min.	45 °C/min.	-	750 °C	1 min.	Shiny

The above firing parameters are guide values which must always be adapted to the furnace being used and the situation of the furnace. Getting the correct firing result is crucial here.

CREATION CC - PHYSICAL PROPERTIES

Property	Unit	Value	Standard
Dentine firing	°C	920	-
Thermal expansion coefficient (25 °C - 500 °C)	10^{-6} xK^{-1}	13,3 ± 0,3	-
Glass transformation point	°C	580 ± 10	-
Solubility	µg/cm^2	16	max. 100
Density	g/cm^3	2,52	
Flexural strength	MPa (Nmm^2)	84	min. 50
Mean particle size	D 90 %	60	

The stated technical and physical values relate respectively to samples prepared in-house and the measuring instruments located in-house.

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