

CREATION WILLI GELLER INTERNATIONAL - SIMPLY BRILLIANT

WILLI GELLER
Creation

INSTRUCTIONS FOR USE
CREATION ZIRCONIUM OXIDE GINGIVA CERAMICS

ZI/ZI-F



ZTM Ralf Bahle

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INTRODUCTION



PINK AND WHITE IN PERFECTION

Creation ZI Gingiva is a veneering ceramic for all kinds of zirconium oxide frameworks – whether sintered or HIP-ed. Owing to its life-like colouring, it meets the highest requirements for reproduction of soft tissue material lost as a result of atrophy (pink aesthetics!) and thereby allows innovative working with crowns, bridges or implant-supported superstructures.

FRAME



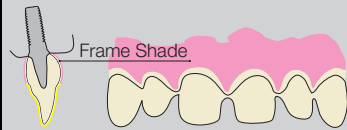
Zirconium oxide frames can be veneered with Creation ZI and ZI-F.

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.

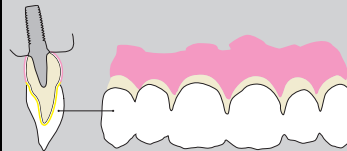
Unless stated otherwise by the manufacturer, blast the framework surface with Al_2O_3 (110 μm) at 2 bar pressure, then clean thoroughly.

FRAME SHADE AND 1. BUILD-UP



APPLICATION OF FRAME SHADE GINGIVAL FS-G (see firing chart p. 10)

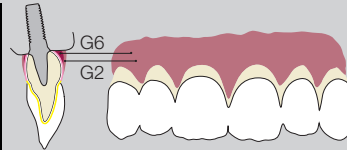
It is important to ensure that the gingival-coloured Frame Shade is applied 1 mm shorter to prevent it extending cervically into the tooth layering.



2nd BUILD-UP

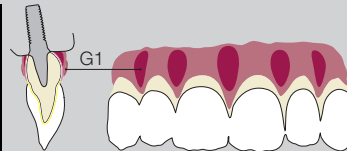
Building-up the white aesthetics.

Building-up the pink aesthetics.



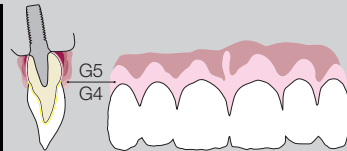
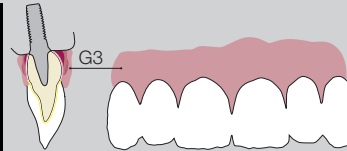
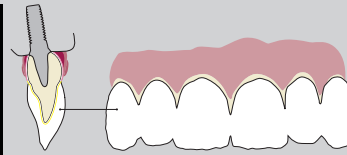
Then use **G2-dark pink** to cover the complete framework that is still exposed. For thicker layers, the porcelain can be supported from within using **G6-dark pink opaque** and colour-stabilised by the higher opacity.

It is important to ensure that the tooth-coloured and gingival-coloured porcelains do not touch in order to allow well-directed positioning of the fired materials.



Wash in **G1-purple** mesially and distally to the alveolar slopes.

DENTINE FIRING AND 2. BUILD-UP



DENTINE FIRING

The dentine firing takes place at **810°C under vacuum** (see firing chart p. 10). Reliable proof of a correct firing cycle can only be produced by visual checking after the firing.

If the appearance is as in the illustration, the firing cycle was perfect (**slightly shiny**).

2nd BUILD-UP

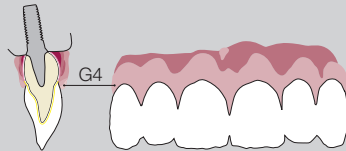
Completing the white aesthetics.

Completing the pink aesthetics.

Complete thin overlaying of the pink aesthetics with **G3-light pink**.

Individual characterisation of the gingival margin, labial and buccal frena with **G5-rose** and for lighter areas with **G4-flamingo**.

CORRECTION FIRING AND GLAZE FIRING



1st CORRECTION FIRING

The correction firing takes place at **800°C under vacuum** (see firing chart p. 10).

2nd CORRECTION FIRING

The 2nd correction firing takes place at **800°C under vacuum** (see firing chart p. 10). Final corrections to the tooth shape and corrections to the gingiva are possible with **G4-flamingo**.

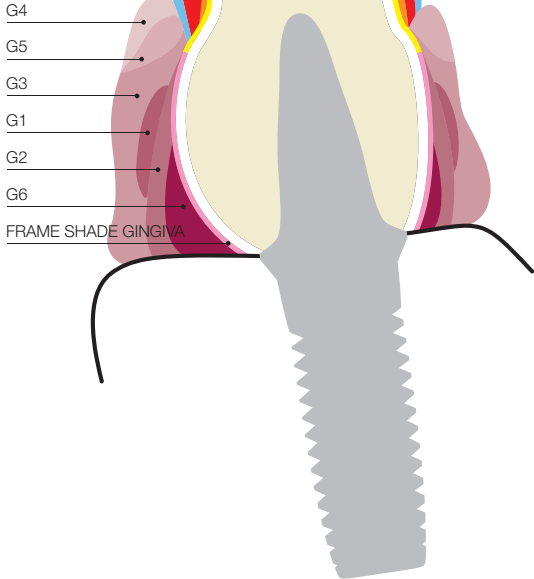
GLAZE FIRING

See the firing chart page 10.

Discolorations on the tooth surface or in the gingiva can be mimicked in a life-like way with **Creation AV.ZI.TI. Make Up Instant** (glazing and fluorescent).



BUILD-UP DIAGRAMME



COLOUR CHART

| | | | | | | | | |
|---------------------------|------------------|------------------|-------------------|-----------------|-------------|----------------------------|---------------|-----------------|
| Porcelains Gingiva Kit | G-1 purple | G-2 dark pink | G-3 light pink | G-4 flamingo | G-5 rose | G-6 dark pink opaque | G-7 violet | G-N neutral* |
| Frame Shade | FS G | | | | | | | |
| Liquid | Modelling liquid | | | | | | | |

*With the porcelain GN-neutral the opacity of materials G1-G6 can be reduced by admixing and thus the transparency and the resulting depth effect can be increased.

FIRING CHART

| | Preheating Temperature | Drying Time | Raise of Temperature | V | Final Temperature | 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. | Slightly shining |
| Dentine Firing | 450 °C | 6 min. | 45 °C/min. | + | 810 °C | 1 min. | |
| Correction Firing | 450 °C | 6 min. | 45 °C/min. | + | 800 °C | 1 min. | |
| Glaze Firing | 480 °C | 6 min. | 45 °C/min. | - | 820 °C | - | Shining |
| Glaze- and Shade Firing (Make Up Instant) | 480 °C | 2 min. | 45 °C/min. | - | 790 °C | 1 min. | |

The firing parameters given above are guidelines, which must always be adjusted to suit the furnace used and the situation of the furnace. What is essential is getting the right firing result.

PHYSICAL PROPERTIES

| Properties | Measure | Value | Norm |
|------------------------------------------------|-------------------------|-----------|----------|
| Dentine Firing | °C | 810 | |
| Coefficient of Thermal Expansion (25° – 500°C) | $10^{-6} \times K^{-1}$ | 9,5 ± 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 90% | 60 | |

The technical and physical values given relate to samples produced in-house and the measuring instruments located there.



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