Adhesive 750

The adhesive has the ability to fully wet zirconia and lithium disilicate surfaces perfectly and thus ensure an optimum bond. The adhesive 750 is fluorescent and provides nature-like fluorescence from the depth of the restoration.

Fig. 4 Zirconia frames (white) ready for application of adhesive 750.

Fig. 5 Applying a uniform coat of Adhesive 750.

Fig. 6 Note the glossy appearance of the adhesive 750 after firing.
HeraCeram® Zirkonia 750

Fig. 7 Application of the adhesive 750 on lithium disilicate frameworks.

Fig. 8 Slightly glossy adhesive layer on the lithium disilicate surface after firing.

Fig. 9 Image at tooth 21: Ideal fluorescence on a ceramic frame. Image at tooth 11: Zero fluorescence after none application of Adhesive 750

Fig. 10 Image at tooth 21: Ideal fluorescence on a finished restoration. Image at tooth 11: Without adhesive 750, shine-through on the none fluorescent frame.

**PLEASE NOTE:** The Adhesive 750 should be applied in a thin, uniform coat to the surfaces of the framework by using a HeraCeram opaque paste brush. The firing temperature on zirconia is 800°C and on lithium disilicate is 750°C, holdtime is 1 minute. (see the recommended firing cycles at page 31)
Dentine-enamel build up

HeraCeram Zirkonia 750 dentine and/or chroma dentine can be used for layering of the dentine core.

The dentine is highly transparent. This promotes brilliance but results in the shade of the framework having a stronger influence on the shade and brightness.

The underlying colour of zirconia frameworks are not standardised and may differ significantly in chroma and brightness from the desired tooth shade.

![Dentine-layering](image1)

**Fig. 11** The colour and brightness are very close to that of the desired tooth shade.

![Dentine-layering](image2)

**Fig. 11a** In this case, the dentine core can be built up using dentine material.

![Dentine-layering](image3)

**Fig. 12** This framework differs significantly in colour and brightness from the target shade.

![Dentine-layering](image4)

**Fig. 12a** The use of chroma dentine is recommended for build up of the dentine core.

![Dentine-layering](image5)

**Fig. 13** The colour does not correspond to the desired shade group.

![Dentine-layering](image6)

**Fig. 13a** Depending on the available space, the dentine core can be shaped using a combined layering of dentine and chroma dentine.

Chroma dentine (e.g. CD A3) is the same colour as the corresponding dentine (e.g. D A3). Its high colour density conceals the framework structures better and thus compensates differences in shade between the framework and the desired tooth shade. This allows the technician to adapt a preferred layering scheme to suit all indications.

The dentine core can be completely or partially built up with chroma dentine.
HeraCeram® Zirkonia 750
Everyday layering.

**PLEASE NOTE:** When grinding ceramic it is essential to wear a mask and safety glasses and use a dust extractor. Avoid inhaling dust.

Fig. 14 In order to achieve classic shades, HeraCeram Zirkonia can be built up in two simple layers using dentine and/or Chroma dentine and enamel depending on the shade of the framework.

Fig. 15 The dentine body can either be built up directly or first built up full size before cut back – this provides for better control over dimensions and positioning.

Fig. 16 Completion with enamel powder (See colour mapping table at page 30).
Fig. 17 The cut back comprises the incisal edge of the dentine and tapers off towards the lower third of the tooth.

Fig. 18 By inserting transparent wedges, the incisal area can be additionally individualised.

Fig. 19 HeraCeram Zirkonia after the first firing.
HeraCeram® Zirkonia 750
Everyday layering.

Fig. 20 The appropriate ceramics (dentine, incisal or transparent) are then built up to compensate for firing shrinkage and finalisation of the shape before being fired with the "Dentine 2" cycle.

Fig. 21 The restoration after the second firing.

Fig. 22 If no further ceramic needs to be added, the ceramic should be ground with diamond burs to finalise the shape and surface morphology.
Glaze firing

HeraCeram stain liquids have the same refractive index as HeraCeram. The layering and shade effects can be made visible by wetting the ceramic surface with stain liquid. This allows special effects created with glaze and stains to be evaluated more easily.

The level of glaze and texture of the ceramic surface can be influenced while firing the glaze by adjusting the temperature, hold time and final temperature. Further influencing factors are the type of surface finishing and preparation for glaze firing. Therefore, the settings quoted for glaze firing may only be considered as guidelines which have to be adjusted to the desired outcome. The firing cycle is shown under Glaze Firing, see glaze firing programm in capture Firing Programmes.

HeraCeram Zirkonia 750 can also be polished by hand. Our Signum HP diamond polishing paste provides an excellent surface finish.

Fig. 23 Wetted surface with HeraCeram stain liquid.
HeraCeram® Zirkonia 750
Everyday layering.

Correction ceramic is for adjustment after the glaze firing, e.g. building up contact areas – its firing temperature of 715°C is well below dentine firing temperature. Correction material is unshaded and transparent. If the corrections need shading, it can be mixed with any of the HeraCeram Zirkonia 750 ceramics. Depending on the mixing ratio, the firing or processing temperature of the correction material must be increased (e.g. 1:1 mixture – Firing temperature approx. 730°C).

Fig. 24 In reflected light after first stage polishing.

Fig. 25 In transmitted light after glaze firing.