

General Review

KERAPLUS® the porcelain covers the extremely large range of WAK values between 13,8 and 15,2 x 10⁶ at 100 to 600°C. Therefore baking both on non precious alloys, precious-metal-reduced alloys can be carried out. No green discoloration at all takes place in alloys containing silver.

Preparatory measures for ceramic covering

It is to be ensured that the alloys are processed according to the manufacturer's data. Before the application of opaque is carried out, a clean, grease-free base structure must be present. The oxide must show a uniform colouring.

Wash baking

Here there are three different possibilities:

1. Powders and liquids are mixed; the compound is mixed to a creamy consistency and is applied to the base structure with a glass tip or an opaque brush and then baked.
2. Processing of opaque paste.
3. Spraying-on of the opaque compound with an airbrush.

Opaque baking

The opaque compound present in a creamy consistency is applied to the base structure a second time, but now thinly covering, and is then baked again.

Preparation of the compounds

The KERAPLUS® powders are mixed with a modelling liquid until a creamy consistency is obtained and until the layer formation is finished they must not dry out neither on the mixing plate nor in applied form on the base structure. They must always be kept moist.

The over-dimensioning of the individual tooth shape during layer formation due to the shrinkage is dependent

- a) on the layer technique (application with/without compacting)
- b) on the baking control

Opaque dentin layer formation

In the case of Opaque dentin layer formation care must be taken to ensure that an evenly thinning flow, covering over the opaque compound from cervical in the direction incisal is applied.

Dentin application

Now the layer build-up of the Dentin compound starts from labial. The final tooth shape is worked out with Dentin compound. The tooth is built up in layers in the shape in which the final result is to be. However, a reasonable shrinkage depending on the layer build-up techniques is included in the calculation. If there is more than one tooth for which the layers are to be built up it is recommended that the teeth be built up alternately. In that way it is ensured that a check is kept of the build-up of the layers and the relations between them.

Dentin build-up on the alternate tooth

The Dentin application still missing on the 2 is supplemented.

Reduction of the Dentin

After the anatomical shape has been correctly modelled, the Dentin build-up, preferably alternating again, is reduced (1 and 3)

From incisal to cervical the layer formation is cut back in a wedge shape in the incisal third – without shortening the incisal area – running out thin. Now in the incisal third the Dentin is approximately also tapered wedge-shaped. And now the irregular reduction of the Dentin build-up in the incisal area takes place.

Cutting compound application

Now the reduced Dentin shape is completed again with cutting compound taking the shrinkage into account.

Reduction of Dentin and cutting compound application in the case of the alternate tooth

Only now is the Dentin cut back on the 2 and the anatomical shape also completed with cutting compound.

Palatal design

As a result of the space which is usually limited in this case it is recommended that increasingly work should be with Opaque dentin from palatal. After that, here, too, the anatomical shape is completed with cutting compound.

Separation and contact point completion

After the finished ceramic layer work has been lifted off the model the contact points are completed with cutting compound. The individual tooth units are now to be separated with a thin blade down to the opaque.

Completing of the shape for the first correction baking

The whole ceramic surface is now machined with grinding instruments suitable for the purpose. The percentages of the anatomical shape are then completed again with the appropriate compounds.

Preparation for glaze baking

After the first correction baking the contact points to the adjacent teeth are ground in, the bridge member layer is corrected and the anatomical shape is definitively worked out. For the glaze baking the pore free ceramic surface of the work must be machined with fine diamond grinders.

Glaze baking and finished ceramic work

Before the glaze baking the interdental cavities, and, if necessary, the cervical areas can be characterised with the appropriate KERAPLUS satisfaction colouring paints
