In the case, the minimum wall thickness will have to be adapted to the the CELTRA DUO recommendation; see Preparation.

Grinder and block sizes

In the case of the GLIDE, the CELTRA DUO material. The Sirona CELTRA CAM grinding unit will prompt you to insert a CELTRA DUO block. For detailed processing steps, please consult the Instructions for Use and technical manuals of the appropriate CAD/CAM system. Make sure to follow the manufacturers recommendations.

Finishing the restoration

Without the optional – glaze firing

1. Clean the restoration in an ultrasonic water bath or with a steam cleaner. Carefully blow-dry the restoration in an air stream.

2. Try in the final restoration to examine its fit. If necessary, adjust the proximal and occlusal contacts.

Minimum wall thickness

The following diagram shows the specified minimum wall thickness for each indication. The minimum wall thickness must still be ensured after all manual adjustments have been made.

Contraindications

CELTRA DUO is contraindicated for full ceramic veneers, thin crowns, very deep subgingival preparations, and for restorations made from Ceramco® II, Ceramco® II Silver™, Ceramco® 3, Ceramco® Ic porcelain, and Cercon® zirconia.

Paras and precautions

Consistency: 0.05 mm thick with frameworks that are exclusively polished

Inlays and onlays

A conventional inlay/onlay design is recommended. Do not prepare undercut. Ensure that the cavity walls form an angle of 5–6 degrees with the long axis of the tooth. Ensure that all sharp edges and angles are rounded.

Centric and dynamic occlusion, reduce incisally/occlusally by 1.5 to 2.5 mm.

CELTRA DUO inlays and onlays are delivered by fully adhesive cementing. We recommend the esthetic Calibra® composite cementing agent in connection with the XP BOND™ adhesive system by DENTSPLY. If the dual-curing variant of Calibra® is used, XP BOND must be combined with Self-Cure Activator (SCA).

Full crowns

Ensure that there is an axial reduction of 1.0 to 1.5 mm with the walls form an angle of 5–6 degrees with the long axis of the tooth. Ensure that all sharp edges and angles are rounded.

Concentric and dynamic occlusion, reduce incisally/occlusally by 1.5 mm. The lingual shoulders must be extended at least 1.0 mm into the proximal contacts surfaces. It is recommended to use a shoulder preparation without a beveld. All angles must be rounded, and the preparation surfaces must be smooth. CELTRA DUO full crowns can be delivered by fully adhesive or self-adhesive cementing. For fully adhesive cementing, we recommend the esthetic Calibra® composite cementing agent in connection with the XP BOND™ adhesive system by DENTSPLY. If the dual-curing variant of Calibra® is used, XP BOND must be combined with Self-Cure Activator. For self-adhesive cementing, we recommend the SmartCem® 2 self-adhesive cement by DENTSPLY.

Veneers

The standard reduction is 0.6 mm for the labial surface and 0.4 mm for the gingival area (since the enamel is thinner in this region). Reduce the labi-interproximal incisal angle by 10 to 15 degrees with the long axis of the tooth. The preparation margins should be located far enough proximally to conceal preparation margins from sight and to avoid proximal gingival undercut in the labial surface.

CELTRA DUO veneers are delivered by fully adhesive cementing. We recommend the esthetic Calibra® composite cementing agent in connection with the XP BOND™ adhesive system by DENTSPLY. If the dual-curing variant of Calibra® is used, XP BOND must be combined with Self-Cure Activator. For self-adhesive cementing, we recommend the SmartCem® 2 self-adhesive cement by DENTSPLY.

Preparation

Preparation of the hard tissue of the tooth. Preparation of the tooth is essential for maximizing the strength, shade and retention of the finished restoration. When preparing anterior or posterior teeth, the anatomical form has to be reduced as shown.

Indications

CELTRA DUO is a system of fully crystalized zirconia-reinforced lithium silicate glass ceramics processed through CAD-CAM technique for the fabrication of:

- Single unit dental restorations, for example all-ceramic crowns, inlays, onlays and veneers

- Can be used as a material for full contour applications.

- Universal Low Fusing Stains and Overglaze are indicated for finishing and glazing CELTRA DUO restorations. They also can be used for staining and glazing lithium silicate based - restorations, and for restorations made from Ceramco® II, Ceramco® II Silver™, Ceramco® 3, Ceramco® Ic porcelain, and Cercon® zirconia.

- CELTRA DUO restorations are not suitable for patients with clinical symptoms of parafunctional habits or bruxism.

- Precautionary notes for medical devices:
  - if properly processed and used, adverse effects of these medical products are highly unlikely.
  - However, reactions of the immune system (such as allergies) or localized paresthesis (such as an irritating taste or irritation of the oral mucosa) cannot be completely ruled out as a matter of principle. Should you hear or receive information about any adverse effects - even when doubtful - we would like to request notification.
  - Do not inhale dust particles during grinding.

- Situation to avoid:
  - Insufficient wall thickness.
  - Direct insertion without polishing or glazing.
  - Cutting blocks using non-compatible CAD/CAM systems.
  - Use of stains and veneering materials by third-party manufacturers.
  - Use of auxiliary firing pastes by third-party manufacturers.

If an firing paste is preferred, then only SuperPeg II™ is recommended.

- SuperPeg II™ is recommended.

- Rubber polishing wheels (not too hard; e.g. DeguDent TwisTec ceramic polishes white or yellow) or polished rubber polishing wheels (not too hard; e.g. DeguDent SuperPeg II) or polished super polish wheels (e.g. DeguDent SuperPeg I).

- Wet grinding is performed using CELTRA stains and glazes.

- Additional glaze firings may be performed at 770°C in order to accentuate the shade or to correct if it, or glazed, in the glass. It is necessary to coat the entire surface with CELTRA universal glaze to obtain a uniform glossy finish.

- Finally, check the shade against a shade tab and adjust if necessary.

Cementing

- Preparations
  - Clean the restoration with an ultrasonic or steam cleaner or with alcohol.
  - Apply 5% hydrofluoric acid etching gel to the interior of the restoration only and allow to soak for 30 seconds.

- CAUTION: Do not allow tissue or eyes to come into contact with the acid!

- Then remove the hydrofluoric acid as per the manufacturer’s instructions.

- Dry the restoration in an air stream.

- It is recommended to silanize the etched surfaces immediately.

- At chairside, apply silane only to those surfaces required for adhesive cementing.

- Allow to soak for 60 seconds. If the silane layer is no longer liquid, add more silane. Blow-dry in a powerful air stream. (Recommended material: Calibra Silane; www.dentsply.eu/FLU).

- Self-adhesive cementing
  - DENTSPLY SmartCem® 2 (self-adhesive composite cementing agent)
  - DENTSPLY CemTec System (self-adhesive composite cementing agent)

- Fully adhesive cementing
  - DENTSPLY Calibra (adhesive composite cementing agent) in connection with XP BOND and Self-Cure Activator
  - DENTSPLY CemTec Cementation System (Not available in the United States)