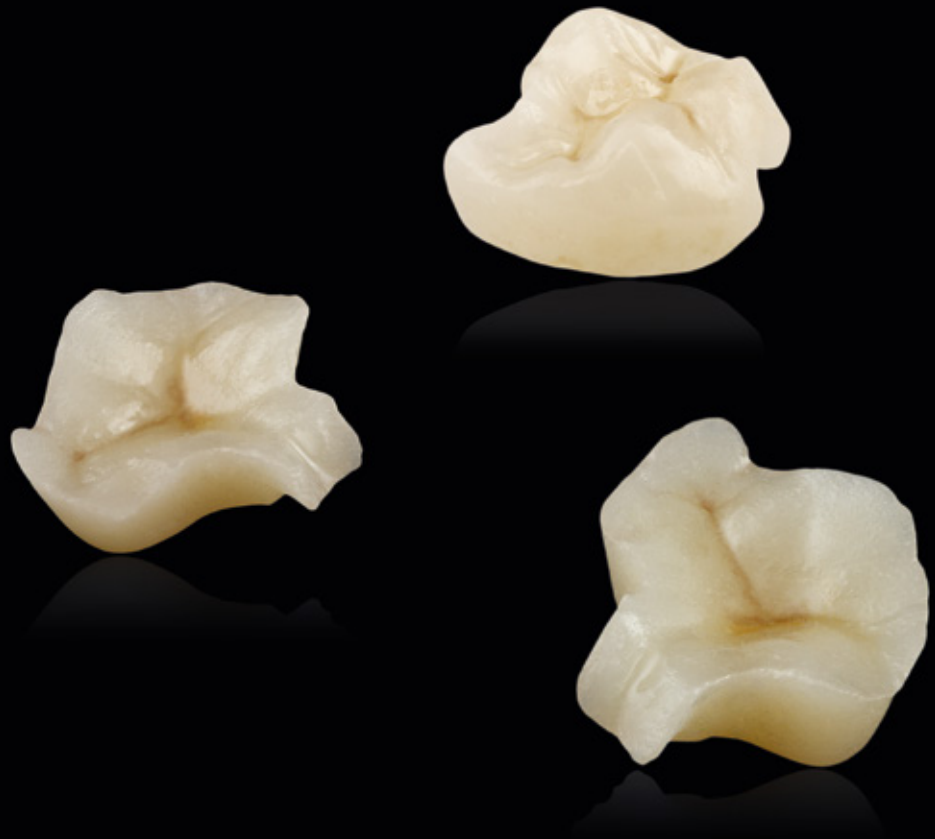


CELTRA[®]

DUO



GUIDELINES

FOR PROCESSING CELTRA DUO

DENTSPLY



CONTENTS

Minimum wall thickness	4
CAD/CAM processing	5
Finishing/polishing	5
Staining and glazing	5
Glaze-firing	7
Firing recommendations	8
Cementing	9
Ordering information	10

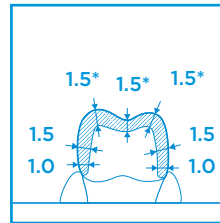
1 MINIMUM WALL THICKNESS

Notes

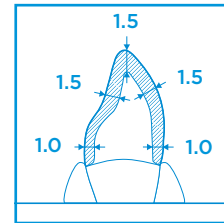
Proper reduction of the hard tissue of the tooth during preparation is essential for maximising the strength, shade, and retention of the finished restoration. When preparing anterior or posterior teeth, the anatomic shape has to be reduced as shown below.

The following diagram shows the specified minimum wall thickness for each indication.

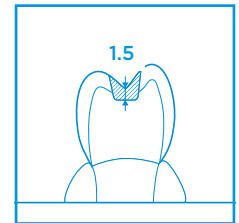
Procedure



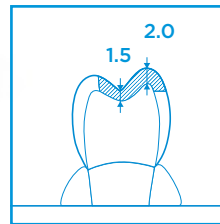
Posterior crowns



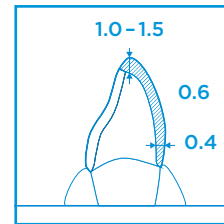
Anterior crowns



Inlays



Onlays



Veneers

**1.5 - 2 mm for frameworks that have been polished only*



The minimum wall thickness must still be ensured after all manual adjustments have been made.

2 CAD/CAM PROCESSING

4 STAINING AND GLAZING

Notes

CELTRA® DUO restorations are produced with Brain MCXL, CEREC® and inLab® CAD/CAM systems .

3 FINISHING/POLISHING

Instructions (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.
- 3** When making adjustments to the ceramic material, make sure to avoid overheating (e.g. by providing irrigation).
- 4** Diamond polishing bodies (< 60 µm) are recommended for polishing the occlusal surfaces. The use of tungsten carbide burs is not recommended.
- 5** Smooth the remaining surfaces of the restoration with a rubber polisher at low speed and minimum pressure.
- 6** Thoroughly clean the restoration.



Instructions for optional staining and glaze-firing of CELTRA® DUO restorations

Custom staining of CELTRA® DUO restorations can be performed using CELTRA® stains and glazes. When firing the ceramic materials applied, observe the following firing recommendations.

For best results, any sanding marks on the surface should be removed with ceramic-coated rubber polishing wheels (not too hard; e.g. DeguDent TwisTec® ceramic polishers white or yellow) or polished smooth at moderate speed (not exceeding 8,000 rpm).

- !** Avoid local overheating during mechanical polishing.

CEREC® and inLab® not registered trademarks of DENTSPLY International Inc.

Procedure

- 1** Before applying the stains and glaze, the restoration must be clean and free of grease. Clean the surface of the restoration with a steam cleaner or submerge for 10 minutes in an ultrasonic cleaner with distilled water. Any contamination after cleaning must be prevented.
- 2** Place the cleaned crown on the die. To achieve the correct shade, prepare the die material according to the shade recommendation in Table 1 (below).



3 Mix the mass thoroughly with a spatula. Do not use a metal spatula. Withdraw the required amount of CELTRA® glaze and place it on the mixing plate. For a thinner consistency, dilute the material with CELTRA® Stain & Glaze Liquid.



4 Apply a thin layer of glaze to the entire crown surface using a brush. Apply a thin layer of stain in the gingival area and spread with a brush toward the incisal region (or as needed). Use the brush to increase or decrease the stain amount to achieve the desired shade.



5 Again using the brush, apply a thin layer of incisal stain to the incisal edge. Use the brush to increase or decrease the stain amount to achieve the desired aesthetic incisal effects.

Notes

- › A more intensive shade effect can be achieved by repeated cycles of applying and firing the material. However, too many layers of stain may result in an unnatural appearance.
- › Cusps and fissures can be individually characterised with stains.
- › The basic shade is determined based on the Vita shade groups (A, B, C, D) (see Table 2).

TABLE 1 Restoration shades and recommended die material

Shade	A1	A2	A3	A3.5	B2
Die material	F1	F12	F10	F7	F11

TABLE 2 Assignment of shade groups

Vita shade group	Bleach	A	B	C	D
Universal stain shade	0	1	2	3	4

TABLE 3 Use of incisal stains

Stain	Tooth shade
Universal Stain (shade i1)	A1, A2, A3, B1, B2, B3, B4, Bleach
Universal Stain (shade i2)	A 3.5, A4, C1, C2, C3, C4, D2, D3, D4

! Use of glazes and stains by third-party manufacturers

Only the native range of glaze and stains (CELTRA® Universal Stain & Glaze) in conjunction with the appropriate liquid is recommended for customising and glazing CELTRA® DUO, as its compatibility has been tested and is guaranteed. Glazes and stains by third-party manufacturers may require firing cycles other than those recommended for CELTRA® DUO.

5 GLAZE FIRING

i Firing a CELTRA® DUO restoration

CELTRA® DUO comes pre-crystallised and exhibits no significant dimensional changes during glaze firing. The use of a refractory firing paste is not required. It is recommended to use a firing pad.

Instructions when using firing paste / firing pins



1 Take up the glazed / painted restoration with a pair of tweezers and place it on the firing pad.



2 You may also place the objects on a sheet of platinum foil to avoid the adhesion of fibers from the firing pad.

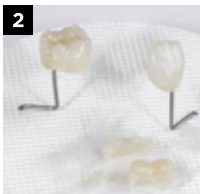
Instructions when using firing cotton / honeycomb carrier

CELTRA® DUO is very stable when fired and can be processed in a ceramic furnace without the use of firing paste. However, if a stain / glaze firing with a firing paste is desired, the following points should be noted:

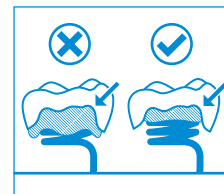
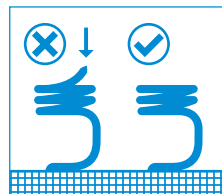
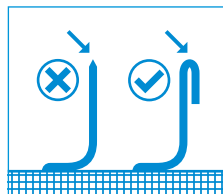
- › Only thin, scale-free, rounded metal pins or thin ceramic pins should be used for anchoring the objects in the Harvest Dental SuperPeg II™ firing paste. Make sure the pins do not touch the restoration.
- › Apply only small quantities of the SuperPeg II firing paste, just enough to secure the restoration on the pin. Avoid filling the restoration completely with firing paste.



1 Place the restoration on the firing pin. If necessary, secure the restoration on the pin with a small amount of refractory firing paste. Then anchor the pin securely within the honeycomb carrier.



2 Alternatively, you may use a firing support instead of firing cotton. If the restoration is additionally secured by a refractory firing paste, use only small quantities of firing paste on the pin, just enough to secure the restoration.



When using firing pins, make sure no sharp pin ends touch the restoration. Firing paste should always be applied in small quantities and should never completely fill the inside of the restoration.

When using firing paste SuperPeg II is recommended.
Harvest Dental and SuperPeg II are not a registered trademarks of DENTSPLY International Inc.

6 FIRING RECOMMENDATIONS

Furnace settings

Glaze firing of CELTRA® DUO should be performed using the following firing parameters:

- › Starting temperature 500°C
- › Place the object in the furnace on a firing support or firing pad
- › Pre-dry the object sufficiently

General firing recommendations

	First glaze firing	Second and subsequent glaze firings
Pre-drying	2:00 min plus 2:00 min when using SuperPeg II	2:00 min plus 2:00 min when using SuperPeg II
Drying (depending on the type of furnace)	2:00 min	2:00 min
Preheating	2:00 min	2:00 min
Start temperature	500°C	500°C
Heating rate	55°C/min	55°C/min
Final temperature	820°C	770°C
Vacuum	Off	Off
Holding time	1:30 min	1:30 min
Cooling*	N/A	N/A

* If the object is placed directly on firing cotton with a firing support, no cooling phase is required.

Notes

- › When using firing paste, extend the pre-drying time by around 2-3 minutes. This allows the paste to sufficiently dry and avoids internal stresses.
- › Additional glaze firings may be performed at 770°C in order to accentuate the shade, or to correct it with glaze, or to increase the gloss. You must coat the entire surface with CELTRA® Universal Glaze to obtain a uniform glossy finish.
- › If you prefer using an auxiliary firing paste, we recommend only SuperPeg II refractory paste, applied loosely on the inside of the crown.



Use of furnaces by third-party manufacturers

Since furnaces of different manufacturers differ greatly in terms of software and performance, these parameters may vary depending on the furnace used. This is especially true of the pre-drying times (with the firing chamber open) and of the heating rate.

CELTRA® DUO can be glaze-fired in these furnaces. However, you must adhere to the following firing parameters:

- › The final firing temperature of 820°C must not be exceeded, not even briefly as a result of heating-unit hysteresis.
- › The holding time of 1:30 min should not be exceeded.

SuperPeg II is not a registered trademark of DENTSPLY International Inc.

7 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 the acid to come into contact with tissue or eyes!
- › Remove the hydrofluoric acid as per the manufacturer's instructions.
- › Dry the restoration in an air stream.
- › It is recommended to silanise the etched surfaces immediately.
- › At chairside, prior to delivery, 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.com.au)

Adhesive cementing

Depending on the indication, CELTRA® DUO/CAD restorations can be cemented self-adhesively or fully adhesively. Compatible time-proven adhesive cementing materials are available as part of the DENTSPLY range of products.

Self-adhesive cementing

[DENTSPLY SmartCem®2](#)
(self-adhesive composite cementing agent)

Fully adhesive cementing

[DENTSPLY Calibra®](#)
(adhesive composite cementing agent) in connection with Prime & Bond XP™ and Self-Cure Activator.

	Self-adhesive	Fully adhesive
Inlays	✓	✓✓
Onlays	✓	✓✓
Crown	✓✓	✓✓
Veneers		✓✓

✓ = recommended ✓✓ = highly recommended

ORDERING INFORMATION

Product		REF
CELTRA® Universal Glaze		
Universal Glaze	5 g	D601322
CELTRA® Universal Liquids		
Universal Stain & Glaze Liquid	15 ml	D601315
Universal Stain & Glaze Liquid	50 ml	D601350
CELTRA® Universal Stains		
Universal Stain, shade 0	5 g	D601500
Universal Stain, shade 1	5 g	D601501
Universal Stain, shade 2	5 g	D601502
Universal Stain, shade 3	5 g	D601503
Universal Stain, shade 4	5 g	D601504
Universal Stain, shade i1	5 g	D601511
Universal Stain, shade i2	5 g	D601512
Universal Stain, White	5 g	D601520
Universal Stain, Cream	5 g	D601521
Universal Stain, Sunset	5 g	D601522
Universal Stain, Copper	5 g	D601523
Universal Stain, Khaki	5 g	D601524
Universal Stain, Olive	5 g	D601525
Universal Stain, Mahogany	5 g	D601526
Universal Stain, Violet	5 g	D601505
Shade Guide - Universal Stains		D601591
CELTRA® Stains Starter kit		D601590
<i>Content: 1x Universal Stain & Glaze liquid / 15x Universal Stain / 1x Brush / 1x Firing Cotton / 1x Pin for firing / 1x Universal glaze</i>		

ACCESSORY PRODUCTS

Product		REF
Dentsply All-Ceramic Die Material	F1	613910
Dentsply All-Ceramic Die Material	F2	613911
Dentsply All-Ceramic Die Material	F3	613912
Dentsply All-Ceramic Die Material	F4	613913
Dentsply All-Ceramic Die Material	F5	613914
Dentsply All-Ceramic Die Material	F6	613915
Dentsply All-Ceramic Die Material	F7	613916
Dentsply All-Ceramic Die Material	F8	613917
Dentsply All-Ceramic Die Material	F9	613918
Dentsply All-Ceramic Die Material	F10	613919
Dentsply All-Ceramic Die Material	F11	613920
Dentsply All-Ceramic Die Material	F12	613921
Auxiliary firing paste SuperPeg II		215812
Etching Gel and neutraliser		D430491
CELTRA® firing pin set	6 pcs.	5365901204
CELTRA® firing pads	3 pcs.	5365901205
Die Material Shade Guide		418400



DENTSPLY (Australia) Pty Ltd.
ABN 15 004 290 322
11-21 Gilby Rd
Mount Waverley VIC 3149
Phone: 1300 55 29 29
Fax: 1300 55 31 31
Email: clientservices@dentsply.com
www.dentsplyestore.com.au
Data on file

DENTSPLY (New Zealand)
Tel: 0800 DENTSPLY (33 68 77)
Fax: 0800 DENTFAX (33 68 32)
Email: clientservicesnz@dentsply.com
www.dentsplyestore.co.nz

DENTSPLY