

REINFORCED COMPOSITE FOR PERMANENT RESTORATION

# BRILLIANT Crios

## Handling Guideline



# CONTENT

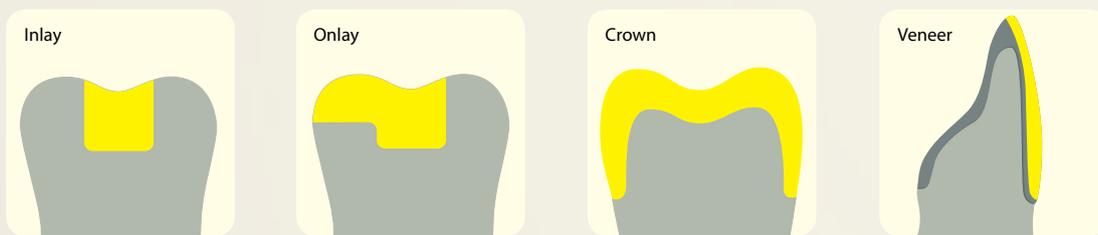
BRILLIANT Crios .....	3
Key luting steps .....	4
Luting materials for every indication .....	5
Important notes to ensure a successful luting .....	6
Step-By-Step Guideline – Inlay .....	7
Step-By-Step Guideline – Onlay .....	9
Step-By-Step Guideline – Crown .....	11
Step-By-Step Guideline – Veneer .....	13
Step-By-Step Guideline – Crown on implant abutment .....	15
Step-By-Step Guideline – Polishing chairside .....	17
Step-By-Step Guideline – Polishing laboratory .....	18
Step-By-Step Guideline – Modification or repair .....	19

# BRILLIANT CRIOS

## BRILLIANT CRIOS IS A REINFORCED COMPOSITE FOR PERMANENT RESTORATIONS

- High flexural strength for resistant restorations
- Tooth-like modulus of elasticity for a shock-absorbing effect and pleasant bite feeling
- Blends in extremely well to provide natural aesthetics
- High wear resistance and low abrasion on antagonist
- Secure bonding due to ONE COAT 7 UNIVERSAL
- Suitable luting material for every situation

## INDICATIONS

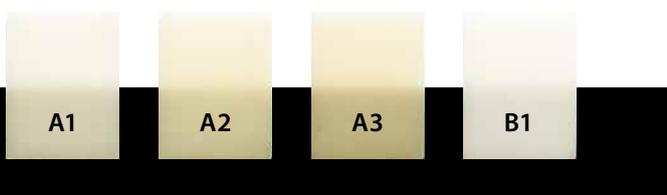


## SHADES

### Low Translucent



### High Translucent



Disc only available in A1-A3.5 LT and A1-A3 HT.

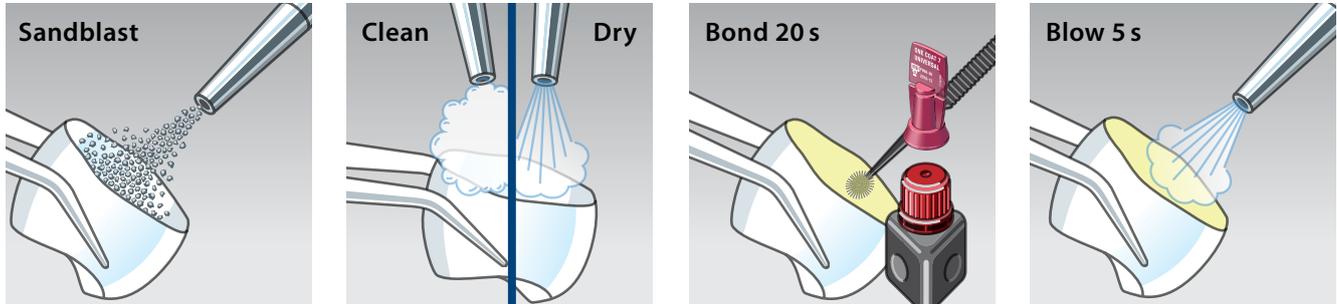


## SHAPES

BRILLIANT Crios is available as block (12/14) and disc (H14/H18).

# KEY LUTING STEPS

## STEP 1: TREATMENT OF BRILLIANT CRIOS RESTORATION



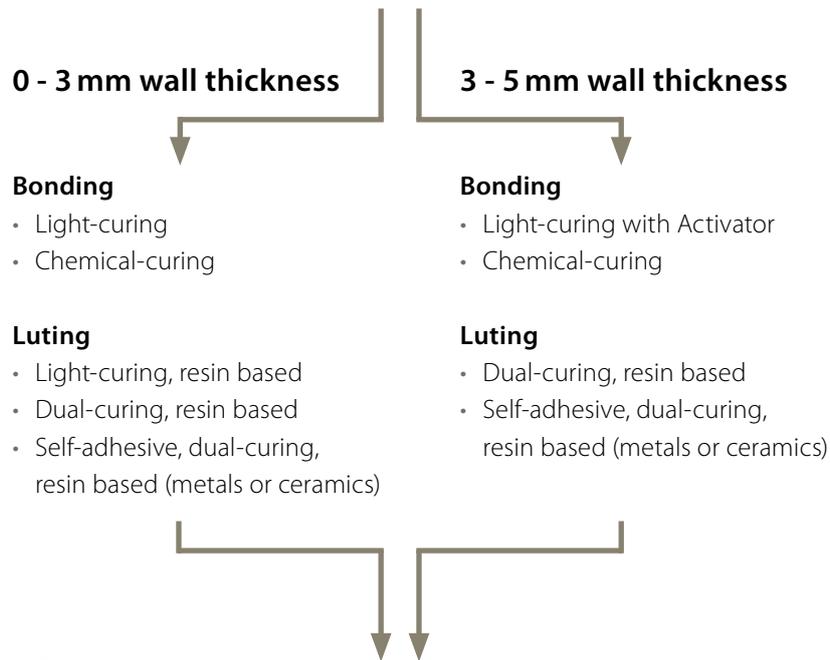
Sandblast the BRILLIANT Crios restoration. Use ONE COAT 7 UNIVERSAL as bonding agent on BRILLIANT Crios.

**Note: Do not use hydrofluoric acid or silane!**



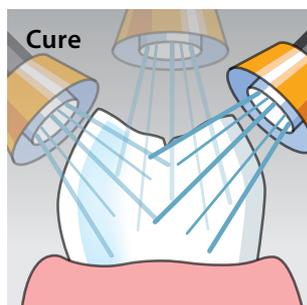
## STEP 2: BONDING AND LUTING TO SUBSTRATE

Bonding and luting material must be chosen due to wall thickness of the BRILLIANT Crios restoration and the luting substrate. Follow the detailed proceeding according manufacturer's instructions for use.



## STEP 3: FINAL CURING

Always light-cure each surface for 30 s at the end to cure the adhesive on the BRILLIANT Crios restoration.



# LUTING MATERIALS FOR EVERY INDICATION

With the universal adhesive ONE COAT 7 UNIVERSAL, the BRILLIANT EverGlow composite or the dual-curing resin cements DuoCem and SoloCem, COLTENE offers a matched and proven luting system for BRILLIANT Crios for indication-appropriate solutions.

## ONE COAT 7 UNIVERSAL

ONE COAT 7 UNIVERSAL is matched perfectly to the BRILLIANT Crios components, resulting in strong anchorage and a reliable adhesion. This is why the ONE COAT 7 UNIVERSAL adhesive is to be used in conjunction with BRILLIANT Crios.

The monomers (red) contained in ONE COAT 7 UNIVERSAL penetrate into the polymerised resin matrix of BRILLIANT Crios



**Interlooping**

Polymer chains are formed during polymerisation of the monomers and these are anchored in the resin matrix.



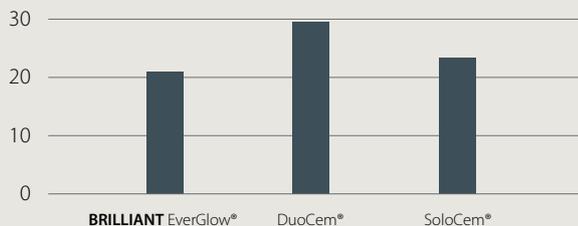
**Chain formation**

The double bonds contained in the resin matrix form chains during polymerisation of the monomers.

- BRILLIANT Crios
- ONE COAT 7 UNIVERSAL

## SHEAR BOND STRENGTH WITH ONE COAT 7 UNIVERSAL

Measured in MPa



The BRILLIANT EverGlow, DuoCem and SoloCem luting materials demonstrate excellent bonding strengths to give a secure adhesion to BRILLIANT Crios.

Source: internal data



### BRILLIANT EverGlow®

Light-curing composite

Ideal as luting material to dentine or composite for thin restoration walls.

### DuoCem®

Dual-curing resin cement

Offers exceptional bonding values to dentine or composite, in particular for greater wall thickness.

### SoloCem®

Self-adhesive, dual-curing resin cement

Convincing bonding to metal or ceramic abutments, without requiring an additional bonding step.

# IMPORTANT NOTES TO ENSURE A SUCCESSFUL LUTING

## DO'S

- Use of a dental dam is recommended.
- Follow the guideline for preparation and wall thickness.
- ONE COAT 7 UNIVERSAL adhesive must be applied to BRILLIANT Crios, whereas the use of other bonding agents on the tooth substance is possible.
- If a light-curing bonding is used on tooth surface, always light cure before placing the restoration.
- Only resin based luting materials are allowed to be used.

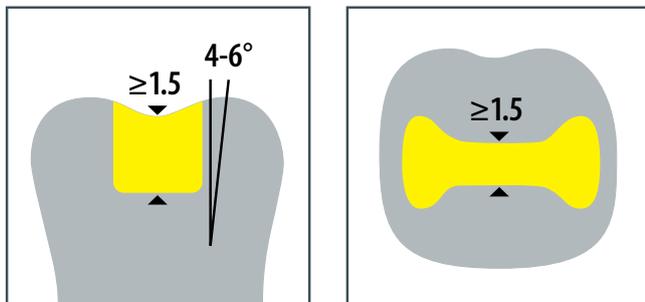
## DON'TS

- Do not use silane.
- Do not use inorganic cements.
- Do not lute with light-curing opaque shades.
- Do not fire BRILLIANT Crios.
- Do not use hydrofluoric acid.



# STEP-BY-STEP GUIDELINE INLAY

## STEP 1: PREPARATION



- Minimal occlusive thickness 1.5 mm
- Preparation angle: 4-6°

## COLTENE SUGGESTS

**Bond to restoration**  
ONE COAT 7 UNIVERSAL  
(mandatory)

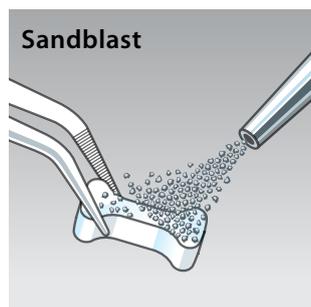
**Bond to tooth surface**  
ONE COAT 7 UNIVERSAL

**Etch**  
Etchant Gel S

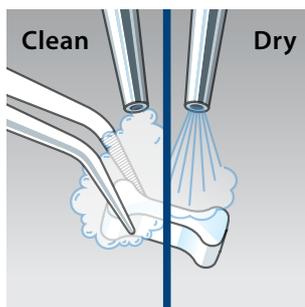
**Lute**  
BRILLIANT EverGlow  
(≤ 3 mm wall thickness)

If other materials are used, the exact procedure can slightly differ. Please proceed according manufacturer's instructions for use.

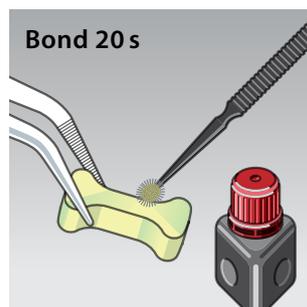
## STEP 2: TREATMENT OF BRILLIANT CRIOS RESTORATION



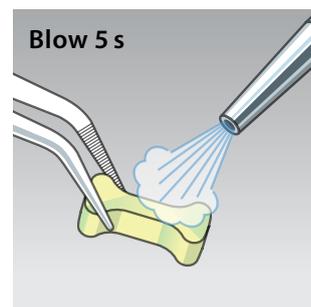
Sandblast the surface to be bonded with 25-50 µm aluminium oxide at 1.5 bar. **Note:** Do not etch the restoration with hydrofluoric acid.



Clean with ultrasonic or steam cleaner and dry with oil-free compressed air.



Apply ONE COAT 7 UNIVERSAL to the bonding surface with a disposable dentalbrush and rub in for 20 s. **Note:** Do not use other bonding agents or silane!

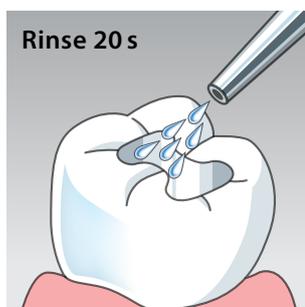


Blow gently with oil-free compressed air for 5 s.

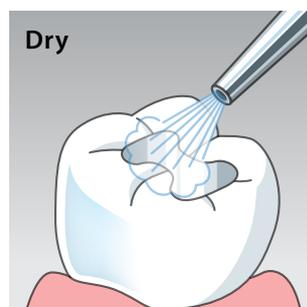
## STEP 3: ETCH



Apply Etchant Gel S directly from the applicator needle on the surface to be treated. Etching time: 15 s. **Note:** Selective etch is recommended for optimum adhesive results.



Rinse thoroughly with water until all traces of Etchant Gel S have been removed.



Dry with pressurized oil-free air, taking care not to overdry the dentine.

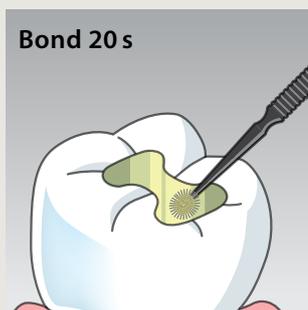
## BRILLIANT EverGlow®

Light-curing composite

- Smooth consistency
- Exceptional polishability
- Excellent gloss retention
- Very good wettability

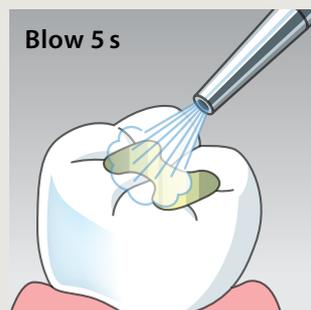


### STEP 4: BOND



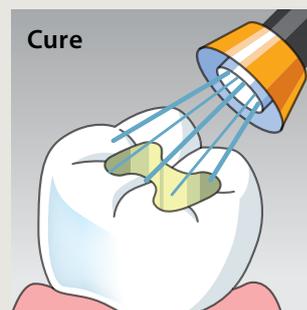
**Bond 20 s**

Apply ONE COAT 7 UNIVERSAL to dentine and enamel with a disposable dentalbrush and rub in for 20 s.



**Blow 5 s**

Blow gently with oil-free compressed air for 5 s.



**Cure**

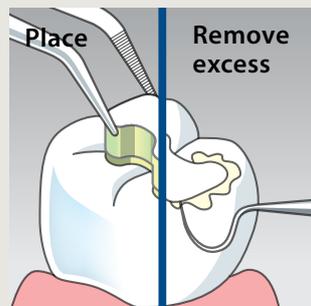
Light-cure for 10 s (Light intensity  $\geq 800$  mW/cm<sup>2</sup>).

### STEP 5: LUTE



**Lute**

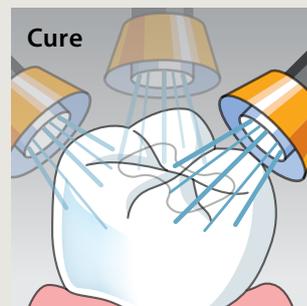
Apply BRILLIANT EverGlow into the cavity and shape to the margins. **Note:** Do not use BRILLIANT EverGlow opaque shades for luting, because full curing can not be ensured.



**Place**

**Remove excess**

Position the restoration with light pressure. Remove remaining excess material while the restoration is held in position.

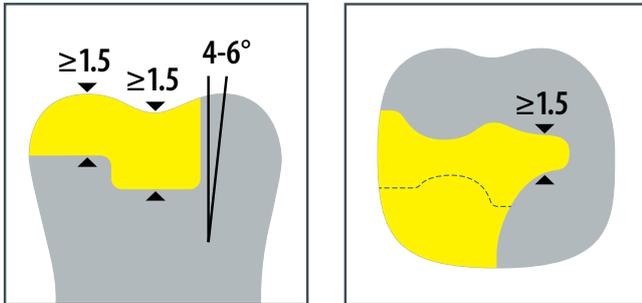


**Cure**

Light-cure each surface of the restoration for 30 s (Light intensity  $\geq 800$  mW/cm<sup>2</sup>).

# STEP-BY-STEP GUIDELINE ONLAY

## STEP 1: PREPARATION



- Minimal occlusive thickness 1.5 mm
- Minimal thickness under supporting cusp 1.5 mm
- Preparation angle: 4-6°

## COLTENE SUGGESTS

**Bond to restoration**  
ONE COAT 7 UNIVERSAL  
(mandatory)

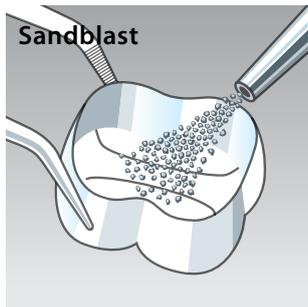
**Bond to tooth surface**  
ONE COAT 7 UNIVERSAL  
One Coat 7.0 Activator

**Etch**  
Etchant Gel S

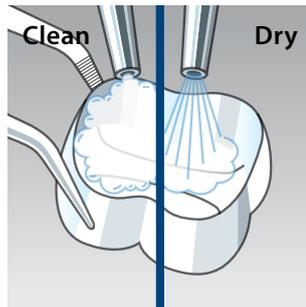
**Lute**  
DuoCem (≤ 5 mm wall thickness)

If other materials are used, the exact procedure can slightly differ. Please proceed according manufacturer's instructions for use.

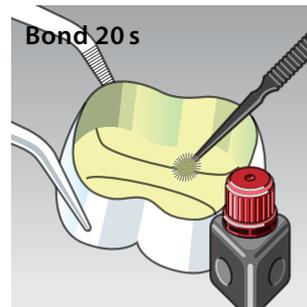
## STEP 2: TREATMENT OF BRILLIANT CRIOS RESTORATION



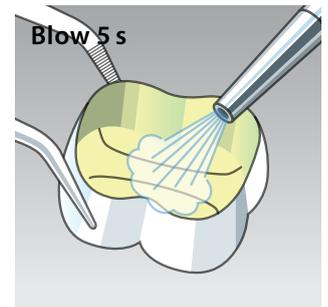
Sandblast the surface to be bonded with 25-50 µm aluminium oxide at 1.5 bar. **Note:** Do not etch the restoration with hydrofluoric acid.



Clean with ultrasonic or steam cleaner and dry with oil-free compressed air.



Apply ONE COAT 7 UNIVERSAL to the bonding surface with a disposable dentalbrush and rub in for 20 s. **Note:** Do not use other bonding agents or silane!

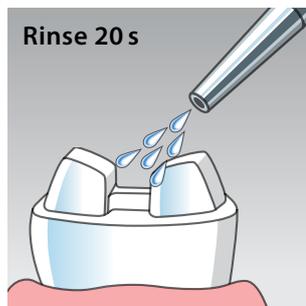


Blow gently with oil-free compressed air for 5 s.

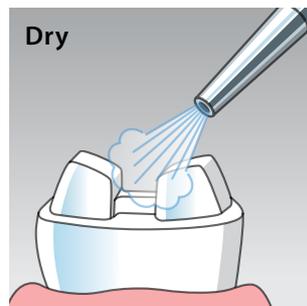
## STEP 3: ETCH



Apply Etchant Gel S directly from the applicator needle on the surface to be treated. Etching time: 15 s. **Note:** Selective etch is recommended for optimum adhesive results.



Rinse thoroughly with water until all traces of Etchant Gel S have been removed.



Dry with pressurized oil-free air, taking care not to overdry the dentine.

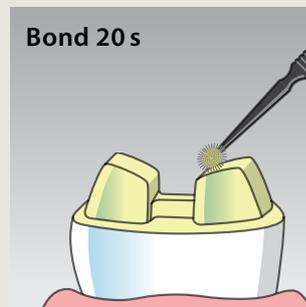
## DuoCem®

Dual-curing resin cement

- Strong adhesion and properties similar to composites
- All-purpose material for a variety of indications
- Convenient flow properties and ideal processing times
- Easy removal of excess material

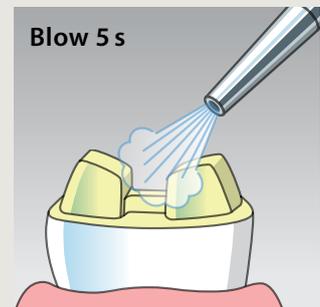


### STEP 4: BOND



**Bond 20 s**

Apply ONE COAT 7 UNIVERSAL to dentine and enamel with a disposable dentalbrush and rub in for 20 s.



**Blow 5 s**

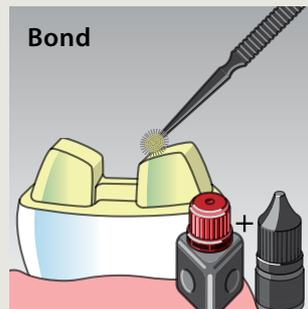
Blow gently with oil-free compressed air for 5 s.

**These steps are only required if restoration wall thickness is > 3 mm and light curing of the inhibition layer of ONE COAT 7 UNIVERSAL can not be guaranteed. Otherwise they can be skipped.**



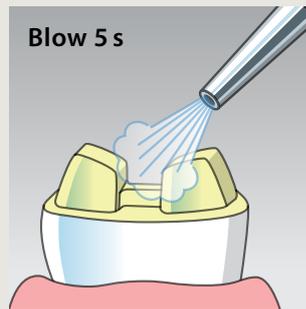
**Mix**

Dispense one drop ONE COAT 7 UNIVERSAL and one drop One Coat 7.0 Activator into the dispensing well and mix it with a clean disposable brush (approx. 5-10 s).



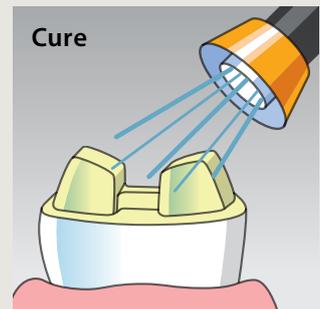
**Bond**

Apply the mixed bond to dentine and enamel with a disposable brush.



**Blow 5 s**

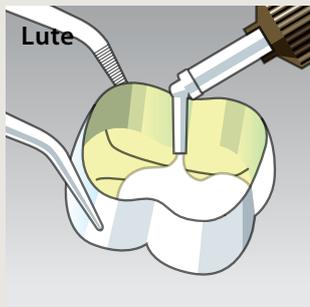
Blow gently with oil-free compressed air for 5 s.



**Cure**

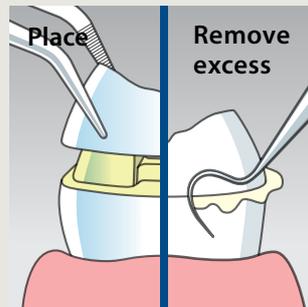
Light-cure for 10 s (Light intensity  $\geq 800 \text{ mW/cm}^2$ ).

### STEP 5: LUTE



**Lute**

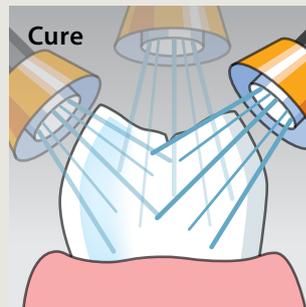
Apply DuoCem directly to the inner surfaces of the restoration. **Note:** Before applying dispense material and discard until an even, homogenous paste is flowing out.



**Place**

**Remove excess**

Position the restoration with light pressure. Remove remaining excess material while the restoration is held in position.

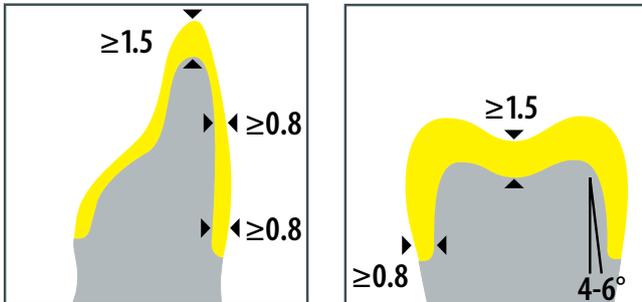


**Cure**

Light-cure each surface of the restoration for 30 s (Light intensity  $\geq 800 \text{ mW/cm}^2$ ).

# STEP-BY-STEP GUIDELINE CROWN

## STEP 1: PREPARATION



- Minimal occlusive thickness 1.5 mm
- Minimal buccal thickness 0.8 mm
- Minimal thickness under supporting cusp 1.5 mm
- Minimal cervical thickness 0.8 mm
- Preparation angle: 4-6°

## COLTENE SUGGESTS

**Bond to restoration**  
ONE COAT 7 UNIVERSAL  
(mandatory)

**Bond to tooth surface**  
ONE COAT 7 UNIVERSAL  
One Coat 7.0 Activator

**Etch**  
Etchant Gel S

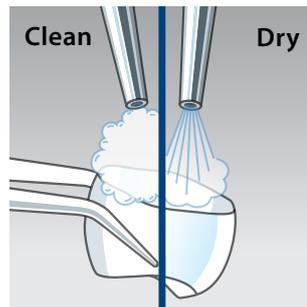
**Lute**  
DuoCem (≤ 5 mm wall thickness)

If other materials are used, the exact procedure can slightly differ. Please proceed according manufacturer's instructions for use.

## STEP 2: TREATMENT OF THE BRILLIANT CRIOS RESTORATION



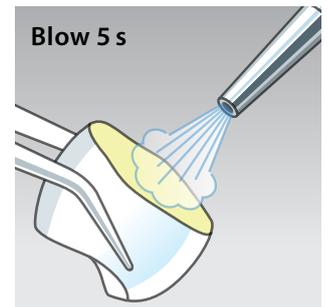
**Sandblast**  
Sandblast the surface to be bonded with 25-50 µm aluminium oxide at 1.5 bar. **Note:** Do not etch the restoration with hydrofluoric acid.



**Clean** **Dry**  
Clean with ultrasonic or steam cleaner and dry with oil-free compressed air.

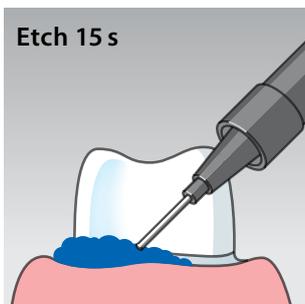


**Bond 20 s**  
Apply ONE COAT 7 UNIVERSAL to the bonding surface with a disposable dentalbrush and rub in for 20 s. **Note:** Do not use other bonding agents or silane!



**Blow 5 s**  
Blow gently with oil-free compressed air for 5 s.

## STEP 3: ETCH



**Etch 15 s**  
Apply Etchant Gel S directly from the applicator needle on the surface to be treated. Etching time: 15 s. **Note:** Selective etch is recommended for optimum adhesive results.



**Rinse 20 s**  
Rinse thoroughly with water until all traces of Etchant Gel S have been removed.



**Dry**  
Dry with pressurized oil-free air, taking care not to overdry the dentine.

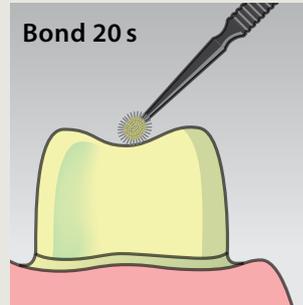
# DuoCem®

Dual-curing resin cement

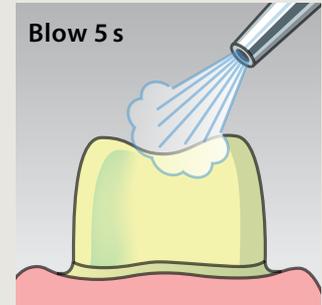
- Strong adhesion and properties similar to composites
- All-purpose material for a variety of indications
- Convenient flow properties and ideal processing times
- Easy removal of excess material



## STEP 4: BOND



**Bond 20 s**  
Apply ONE COAT 7 UNIVERSAL to dentine and enamel with a disposable dentalbrush and rub in for 20 s.

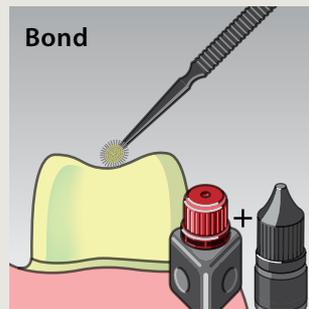


**Blow 5 s**  
Blow gently with oil-free compressed air for 5 s.

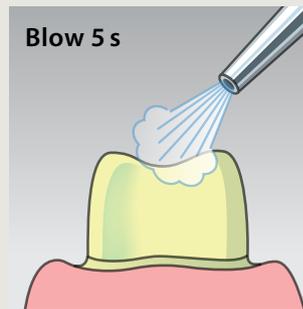
**These steps are only required if restoration wall thickness is > 3 mm and light curing of the inhibition layer of ONE COAT 7 UNIVERSAL can not be guaranteed. Otherwise they can be skipped.**



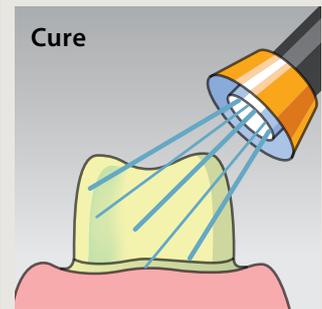
**Mix**  
Dispense one drop ONE COAT 7 UNIVERSAL and one drop One Coat 7.0 Activator into the dispensing well and mix it with a clean disposable brush (approx. 5-10 s).



**Bond**  
Apply the mixed bond to dentine and enamel with a disposable brush.

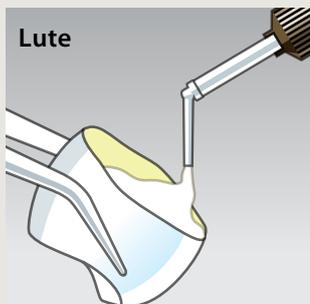


**Blow 5 s**  
Blow gently with oil-free compressed air for 5 s.

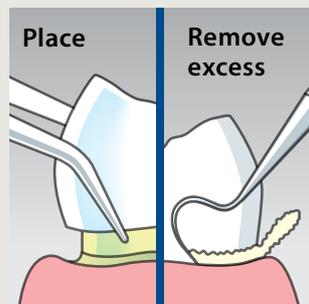


**Cure**  
Light-cure for 10 s (Light intensity  $\geq 800 \text{ mW/cm}^2$ ).

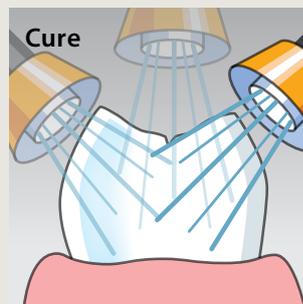
## STEP 5: LUTE



**Lute**  
Apply DuoCem directly to the inner surfaces of the restoration.  
**Note:** Before applying dispense material and discard until an even, homogenous paste is flowing out.



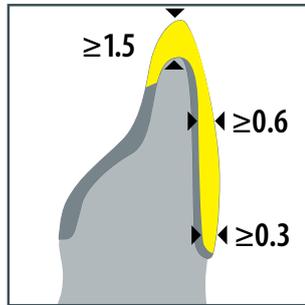
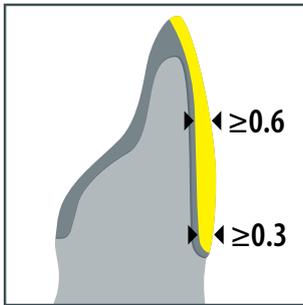
**Place**  
Position the restoration with light pressure. Remove remaining excess material while the restoration is held in position.



**Cure**  
Light-cure each surface of the restoration for 30 s (Light intensity  $\geq 800 \text{ mW/cm}^2$ ).

# STEP-BY-STEP GUIDELINE VENEER

## STEP 1: PREPARATION



- Minimal occlusive thickness 1.5 mm
- Minimal cervical thickness 0.3 mm
- Minimal labial thickness 0.6 mm

## COLTENE SUGGESTS

**Bond to restoration**  
ONE COAT 7 UNIVERSAL  
(mandatory)

**Bond to tooth surface**  
ONE COAT 7 UNIVERSAL

**Etch**  
Etchant Gel S

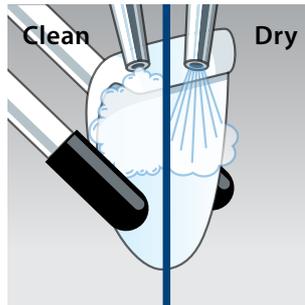
**Lute**  
BRILLIANT EverGlow

If other materials are used, the exact procedure can slightly differ. Please proceed according manufacturer's instructions for use.

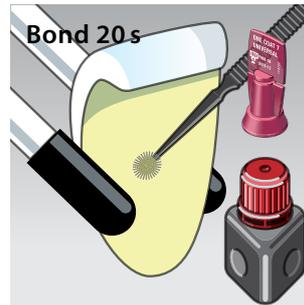
## STEP 2: TREATMENT OF THE BRILLIANT CRIOS RESTORATION



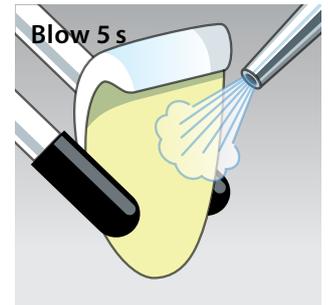
Sandblast the surface to be bonded with 25-50 µm aluminium oxide at 1.5 bar. **Note:** Do not etch the restoration with hydrofluoric acid.



Clean with ultrasonic or steam cleaner and dry with oil-free compressed air.

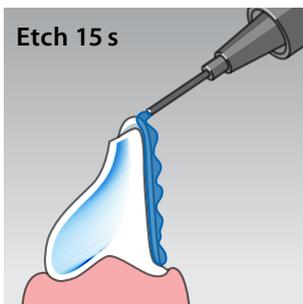


Apply ONE COAT 7 UNIVERSAL to the bonding surface with a disposable dentalbrush and rub in for 20 s. **Note:** Do not use other bonding agents or silane!



Blow gently with oil-free compressed air for 5 s.

## STEP 3: ETCH



Apply Etchant Gel S directly from the applicator needle on the surface to be treated. Etching time: 15 s. **Note:** Total etch is recommended for optimum adhesive results.



Rinse thoroughly with water until all traces of Etchant Gel S have been removed.



Dry with pressurized oil-free air, taking care not to overdry the dentine.

## BRILLIANT EverGlow®

Light-curing composite

- Smooth consistency
- Exceptional polishability
- Excellent gloss retention
- Very good wettability



### STEP 4: BOND



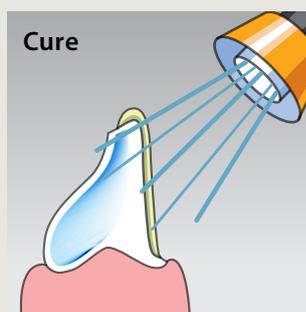
**Bond 20 s**

Apply ONE COAT 7 UNIVERSAL to dentine and enamel with a disposable dentalbrush and rub in for 20 s.



**Blow 5 s**

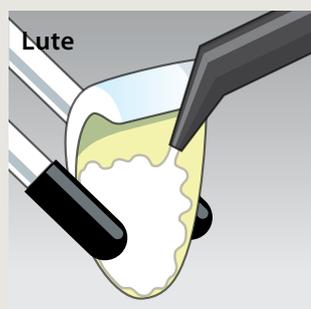
Blow gently with oil-free compressed air for 5 s.



**Cure**

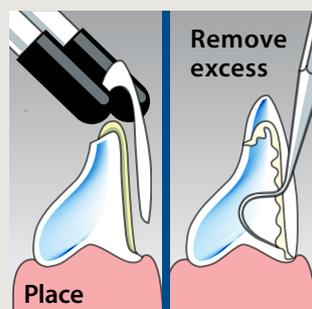
Light-cure for 10 s (Light intensity  $\geq 800 \text{ mW/cm}^2$ ).

### STEP 5: LUTE



**Lute**

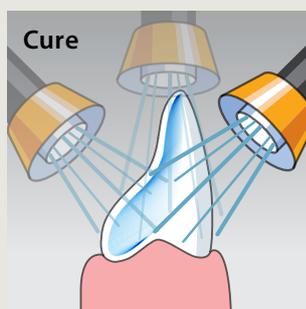
Apply BRILLIANT EverGlow to the contact surface of the restoration and shape to the margins.



**Place**

**Remove excess**

Position the restoration on the tooth and move carefully to the final position. While holding in position, remove excess.



**Cure**

Light-cure each surface of the restoration for 30 s (Light intensity  $\geq 800 \text{ mW/cm}^2$ ).

# STEP-BY-STEP GUIDELINE CROWN ON IMPLANT ABUTMENT

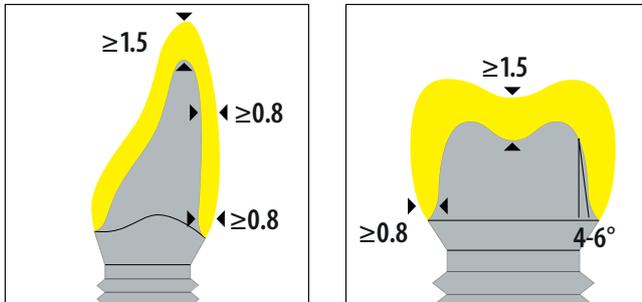
## COLTENE SUGGESTS

**Bond to restoration**  
ONE COAT 7 UNIVERSAL  
(mandatory)

**Lute**  
SoloCem ( $\leq 5$  mm wall thickness)

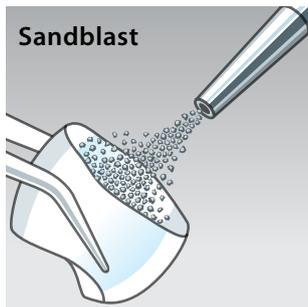
If other materials are used, the exact procedure can slightly differ. Please proceed according manufacturer's instructions for use.

## STEP 1: PREPARATION

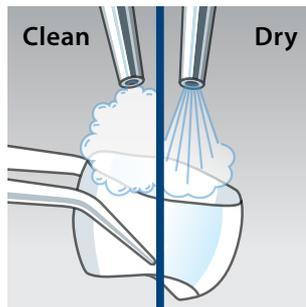


- Minimal occlusal thickness 1.5 mm
- Minimal buccal thickness 0.8 mm
- Minimal thickness under supporting cusp 1.5 mm
- Minimal cervical thickness 0.8 mm
- Preparation angle: 4-6°

## STEP 2: TREATMENT OF THE BRILLIANT CRIOS RESTORATION



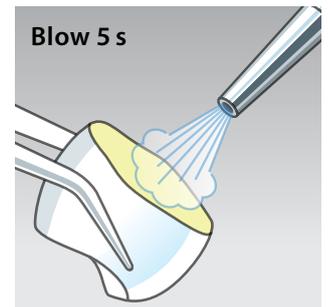
Sandblast the surface to be bonded with 25-50  $\mu$ m aluminium oxide at 1.5 bar. **Note:** Do not etch the restoration with hydrofluoric acid.



Clean with ultrasonic or steam cleaner and dry with oil-free compressed air.

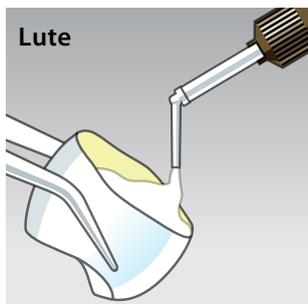


Apply ONE COAT 7 UNIVERSAL to the bonding surface with a disposable dentalbrush and rub in for 20 s. **Note:** Do not use other bonding agents or silane!

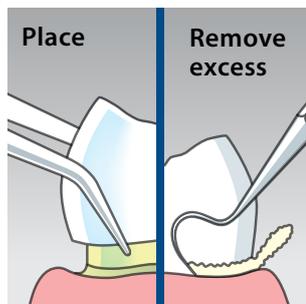


Blow gently with oil-free compressed air for 5 s.

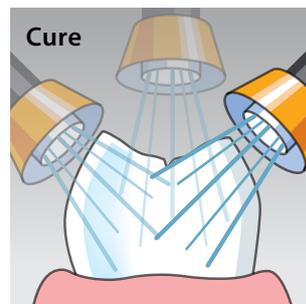
## STEP 3: LUTE



Apply SoloCem directly to the inner surfaces of the restoration. **Note:** Before applying dispense material and discard until an even, homogenous paste is flowing out.



Position the restoration with light pressure. Remove remaining excess material while the restoration is held in position.



Light-cure each surface of the restoration for 30 s (Light intensity  $\geq 800$  mW/cm<sup>2</sup>).

## SoloCem®

Self-adhesive, dual-curing resin cement

- High bonding strengths
- Low shrinkage
- Antibacterial zinc oxide
- Easy to use and time saving



# STEP-BY-STEP GUIDELINE POLISHING CHAIRSIDE

## COLTENE SUGGESTS

It is recommended to polish BRILLIANT Crios intraorally using DIATECH ShapeGuard silicone polishers for a fast and superior high luster result.

All DIATECH polishers can be used without paste and should be used wet when polishing intraorally.

### STEP 1: ADJUSTMENT AND FINISHING

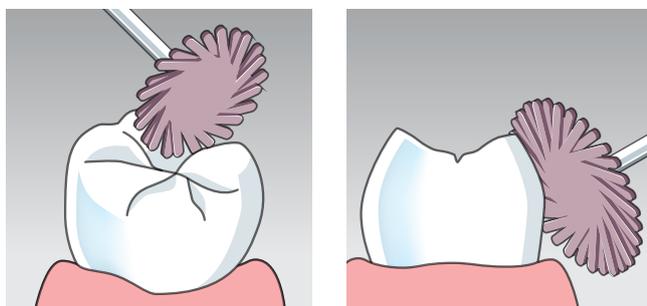


Grinding off sprue, grinding-in of the precontacts and modification of cusp slopes with a fine diamond bur (368-314-023-5F). Finish of the sprue area and, if necessary, of other surfaces with a flame shaped polisher (2303RA).

RPM 368-314-023-5F: 40'000 – 75'000

RPM 2303RA: 3'000 – 8'000

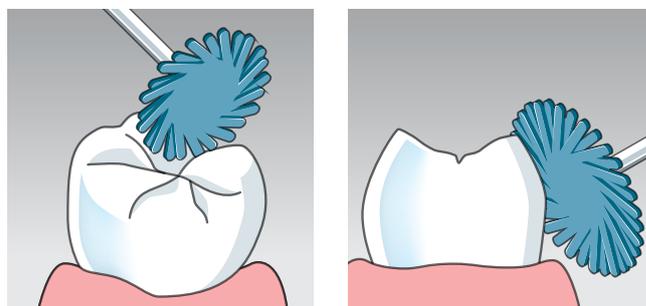
### STEP 2: PREPOLISHING



Prepolishing of the occlusal surface (23SG11RA), buccal and palatal (23SG14RA) with DIATECH ShapeGuard for composite (System Comprepol Plus).

RPM: 10'000 – 12'000

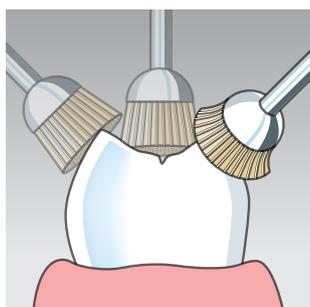
### STEP 3: HIGH LUSTER POLISHING



High luster polishing of the occlusal surface (24SG11RA), buccal and palatal (24SG14RA) with DIATECH ShapeGuard for composite (System Composhine Plus).

RPM: 10'000 – 12'000

### STEP 4: FINAL REFINEMENT



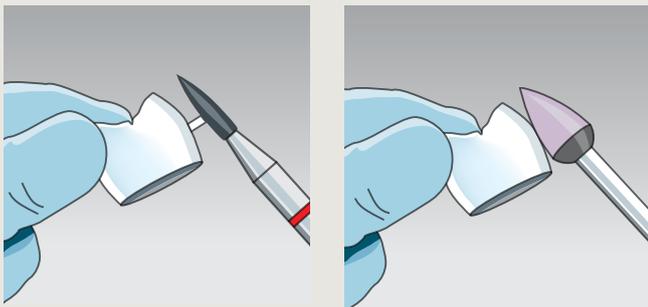
Final refinement with DIATECH brush (7001RA) for a tooth-like enamel gloss. RPM: 5'000 – 10'000



DIATECH Finishing & Polishing Kit for BRILLIANT Crios

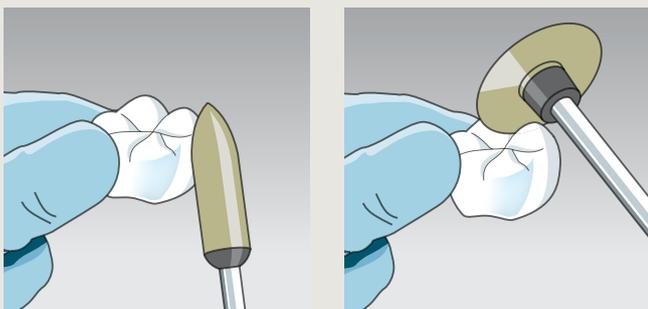
# STEP-BY-STEP GUIDELINE POLISHING LABORATORY

## STEP 1: ADJUSTMENT AND FINISHING



Grinding off sprue with a fine diamond bur (860-104-012-5-F).  
Finish of the sprue and, if necessary, of other surfaces with a flame shaped polisher (2303RA).  
RPM 860-104-012-5-F: 70'000 – 140'000  
RPM 2303RA: 3'000 – 8'000

## STEP 2: PREPOLISHING AND HIGH LUSTER POLISHING



Prepolishing and high luster polishing of the occlusal surface, buccal and palatal with DIATECH Diashine Compomant Plus (9104HP and 9121HP). Please use an elevated pressure for prepolishing and reduced pressure for high luster polishing.  
RPM prepolishing: 7'000 - 10'000  
RPM high luster polishing: 3'000 - 8'000



**DIATECH Lab Finishing & Polishing Kit for BRILLIANT Crios**

# STEP-BY-STEP GUIDELINE MODIFICATION OR REPAIR

**BRILLIANT EverGlow®**  
Light-curing composite

- Smooth consistency
- Exceptional polishability
- Excellent gloss retention
- Very good wettability



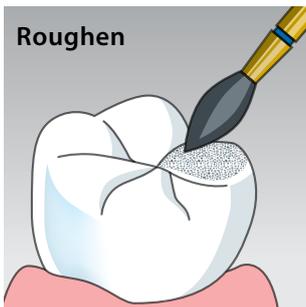
## COLTENE SUGGESTS

**Bond to restoration**  
ONE COAT 7 UNIVERSAL

**Modification / Repair**  
BRILLIANT EverGlow

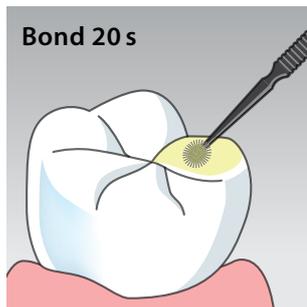
If other materials are used, the exact procedure can slightly differ. Please proceed according manufacturer's instructions for use.

### STEP 1: PREPARATION

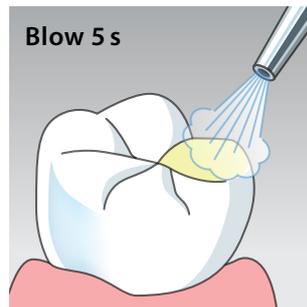


**Roughen**  
Roughen the surface of the restoration using a diamond-coated rotary instrument.

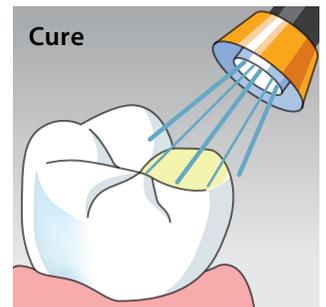
### STEP 2: BOND



**Bond 20 s**  
Apply ONE COAT 7 UNIVERSAL to dentine and enamel with a disposable dentalbrush and rub in for 20 s.

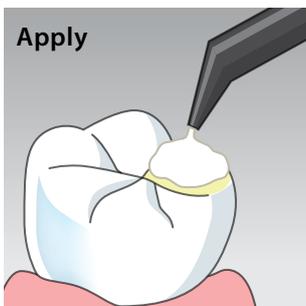


**Blow 5 s**  
Blow gently with oil-free compressed air for 5 s.

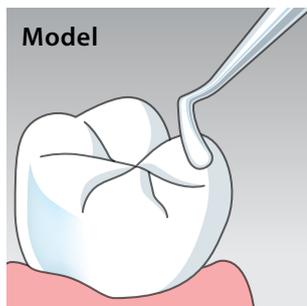


**Cure**  
Light-cure for 10 s (Light intensity  $\geq 800 \text{ mW/cm}^2$ ).

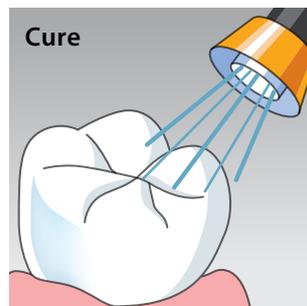
### STEP 3: MODIFY



**Apply**  
Apply BRILLIANT EverGlow to the surfaces.

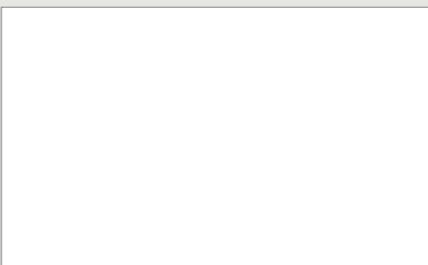


**Model**  
Model to the desired shape.



**Cure**  
Light-cure for 20 s (Light intensity  $\geq 800 \text{ mW/cm}^2$ ).

© Coltène/Whaledent AG - [www.coltene.com](http://www.coltene.com)



**Coltène/Whaledent Ltd.**

The President Suite  
Kendal House, Victoria Way  
Burgess Hill, West Sussex  
RH15 9NF / UK  
T +44 1444 235486  
F +44 1444 870640  
[info.uk@coltene.com](mailto:info.uk@coltene.com)

**Coltène/Whaledent AG**

Feldwiesenstrasse 20  
9450 Altstätten / Switzerland  
T +41 71 757 53 00  
F +41 71 757 53 01  
[info.ch@coltene.com](mailto:info.ch@coltene.com)

**Coltène/Whaledent Inc.**

235 Ascot Parkway  
Cuyahoga Falls, Ohio 44223 / USA  
T +1 330 916 8800  
F +1 330 916 7077  
[info.us@coltene.com](mailto:info.us@coltene.com)

