

Obsidian® – STEP-BY-STEP GUIDE

LITHIUM SILICATE CERAMIC



Preparation

Design

Milling



Prepare the tooth per the guidelines and minimum thickness requirements (see reverse). Complete the needed digital scans.



Digitally create your restoration using fastdesign.io™ Software.



Mill the Obsidian® lithium silicate ceramic restoration.



Smooth out the attachment points, and finish the restoration. Be sure to maintain the minimum thickness requirements per the user manual.

Preliminary Try-In

Preparation for Crystallization*



Try in the restoration in its partially crystallized state. Check the occlusion and articulation, and adjust if required.



After finishing and prior to crystallization, thoroughly clean the restoration with an ultrasonic water bath or with a steam jet. It is strongly recommended NOT to sandblast or grit blast the restorations using glass beads or alumina.



If desired, apply mixed Obsidian Paste Stains directly onto the partially crystallized state restoration. Place the restoration near the open furnace to dry the stains prior to applying any glaze. Ensure that the restoration naturally cools to room temperature before proceeding.



As an option, apply the Obsidian Fluorescent Low Glaze Paste, or spray an even, covering layer of PrismaTik Universal Low Fusing Ceramic Fluorescent Spray Glaze onto the restoration.



Fill the restoration with enough peg putty so that the restoration doesn't come into contact with the ceramic peg.

Crystallization

Post-Crystallization Cleaning

Post-Crystallization Try-In



Place the restoration on a ceramic peg, and set the ceramic peg on top of a honeycomb tray.



Conduct the crystallization firing with the finalstage.io™ Ceramic Oven as recommended, adjusting based on the number of restorations and the staining/glazing method used.



Once the restoration is cool to the touch, remove all the residual peg putty material from the inside of the restoration. The bulk of the putty material can be removed with a metal tweezer.



If there is remaining putty, remove it gently with a three-way syringe (air).



With the restoration crystallized and free of putty material, try in the restoration.

Etching

Cementing

Final Placement



Prior to final placement, etch the restoration for 10 seconds using 5% hydrofluoric acid gel.



Thoroughly rinse the etched surface with water.



Clean the preparation by rinsing it with water, and then blow dry with air.



Cement the restoration according to the manufacturer's instructions.

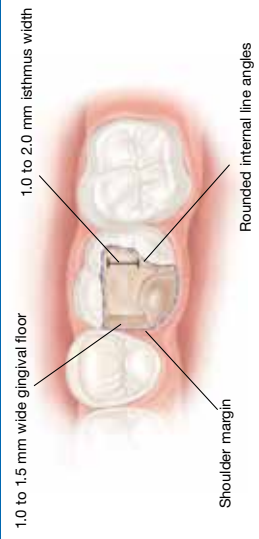
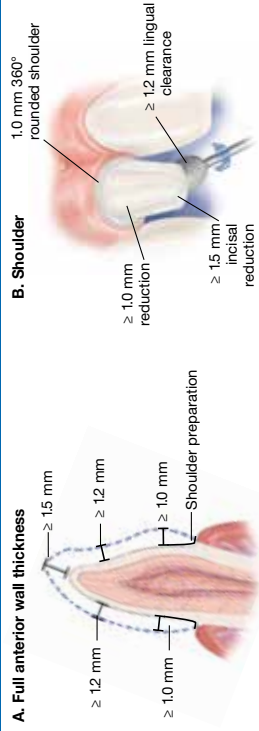


Seat the Obsidian restoration in place.

PREPARATION GUIDELINES FOR ALL-CERAMIC RESTORATIONS

ANTERIOR FULL-COVERAGE CROWN

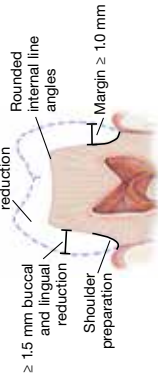
A. Full anterior wall thickness



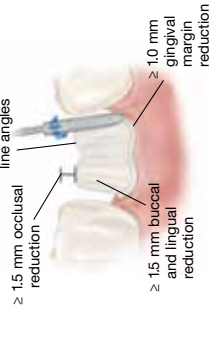
ONLAY (PREMOLARS OR MOLARS)

POSTERIOR FULL-COVERAGE CROWN

A. Shoulder



B. Shoulder



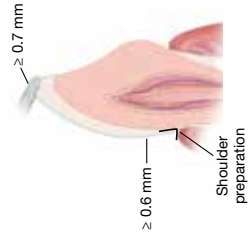
VENEER

Uniform Facial Preparation

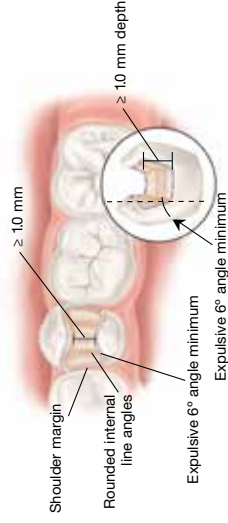
A medium-grit round-ended diamond is used to join the depth-cut grooves to establish a uniform preparation and veneer thickness of ≥ 0.6 mm.



Veneers wall thickness



INLAY (PREMOLARS OR MOLARS)



FIRING PARAMETERS

Crystallization

Entry Time	Entry Temp	1st Heating Rate	1st Hold Time	1st Hold Temp	2nd Heating Rate	Final Temp	Final Hold Time	Open Muffle	Cool Time	Use Vacuum	Vacuum Level	Start Vac - During Heat Up	Release Vac - During Final Hold Time
3 min	400 °C	90 °C/min	10 sec	760 °C	40 °C/min	820 °C	10 min	680 °C	1 min	Yes	72 cm	400 °C	10 min

Stain/Glaze Heating Cycle

Entry Time	Entry Temp	Heating Rate	Final Temp	Open Muffle	Cool Time	Use Vacuum	Vacuum Level	Start Vac - During Heat Up	Cool Time	Use Vacuum	Vacuum Level	Release Vac - During Hold Time
3 min	400 °C	40 °C/min	800 °C	680 °C	1 min	Yes	72 cm	400 °C	1 min	Yes	72 cm	1 min

GC Initial LF Veneering

Entry Time	Entry Temp	Heating Rate	Final Temp	Open Muffle	Cool Time	Use Vacuum	Vacuum Level	Release Vac - During Heat Up	Cool Time	Use Vacuum	Vacuum Level	Release Vac - During Hold Time
6 min	400 °C	45 °C/min	800 °C	680 °C	1 min	Yes	72 cm	400 °C	1 min	Yes	72 cm	1 min

GC Initial LF Add-On

Entry Time	Entry Temp	Heating Rate	Final Temp	Open Muffle	Cool Time	Use Vacuum	Vacuum Level	Start Vac - During Heat Up	Cool Time	Use Vacuum	Vacuum Level	Release Vac - During Hold Time
6 min	400 °C	45 °C/min	760 °C	680 °C	1 min	Yes	72 cm	400 °C	1 min	Yes	72 cm	1 min

CEMENTATION

The restorations must be etched (5% HF for 10 seconds) prior to cementing. The etched surface should be thoroughly rinsed with water.

Etching for longer time (more than 10 seconds) or using a higher concentration (>5%) of HF etchant is **NOT** recommended.

Dental professionals should use conventional cements, adhesive resin cements or self-adhesive resin cements for luting Obsidian restorations. Obsidian restorations require salinization or conditioning of the bonding surface. Adhesive resin cement is preferred for inlays, onlays and partial crowns. Anterior and posterior crowns can be cemented with conventional cements, adhesive resin cements or self-adhesive resin cements.



Incorrectly etched (lacking etching on select internal areas and margin edges).



5% HF etching gel applied inside the restoration.



5% HF etching gel applied all around the margin using a microbrush.



Correctly etched resin-cementation (internally and all around the margin edges).