

Achieve True 1-hour Single Visits with Lithium Disilicate Restorations

Amber® Mill Direct

SPEED / DURABILITY / REAL GRADATION

Pre-cyrstallized lithium disilicate block that achieves excellent restorations without the need for an oven.



True Single-Visit Results

We solve the challenges faced with indirect millable restoration materials





YAO-LIN TANG, DDS AestheticLab

"Amber Mill Direct has all the advantages of lithium disilicate ceramics. Its power, however, are the beautiful smooth margins without the need for firing – an invaluable CAD block every dentist should have in their office"



CHRITIAN PETRI, CDT Oral Design Clinic

"No glaze, no stain, just MILL & POLISH, and the final restoration is ready. Anybody can do it, so don't wait, get started today."

SpeedDurabilityReal Gradation

Speed

Cutting speed (rpm)

All you need is 1 hour! From the time the patient sits to the time that you deliver your restoration, Amber Mill Direct speeds up your workflow.

Scan & Design Mill Polish or Cementation Stain / Glaze (about 9 min 10 sec) * Single crown case PRE-CRYSTALLIZED Amber Mill Direct is a Lithium Disilicate-based millable glass ceramic block that requires no-crystallization, therefore, no oven. Given the shortened fabrication time, one-hour restorations are possible. Cutting force (N) depth of cut : 0.05mm Amber[®] Mill Direct 70 Product T 60 Cutting force (N) 50 40 30 20 10 0 10K 20K 30K 40K

Source : HASS R&D, Korea

Amber Mill Direct provides you with the following options:









Polish

After milling, just polish and deliver the restoration directly to the patient. Achieve excellent aesthetic results with our gradated translucency without any firing.



Stain / Glaze

If your restoration requires more characterization, simply stain / glaze it to achieve better aesthetic results.



Modify Opacity

Simply bake at over 840 °C to modify the value and opacity of the restorations from HT to LT.

Real gradation

Gradated translucency

Amber Mill Direct achieves natural translucency by applying a gradated microstructure, from the cervical to incisal/occlusal regions, without additional characterization.

• Real gradation

Result of contrast ratio test shows similar translucency in cervical and incisal part to natural teeth.

*Contrast ration to natural teeth · Enamel : 0.3~0.8 / 0.55~0.90 · Dentin : 0.6~0.95

• Contrast Ratio (CR)





Source : HASS R&D, Korea

 $CR = \frac{Y_{\flat}}{Y_{w}}$ Yb and Yw is spectrum reflection ratio measured in black and white background. In CR, 0 means transparence and 1 means opaque.

Durability

Microstructure

Amber Mill Direct produces restorations with different microstructures that generate different strengths in the cervical and incisal regions, thus, reducing wear of the antagonist teeth.

Cervical



Incisal







Fracture strength

Amber Mill Direct produces restorations with different microstructures that generate different strengths in the cervical and incisal regions, thus, reducing wear of the antagonist teeth.



Chewing simulator

*1,000,000 cycles / 1.5 Hz / 10kg force (in pH 7.2 Water) and thermal cycling at 5-55 °C for 30s each

Fracture strength before/after Chewing simulator



Fracture Load

Fracture Load(N)



Achieve excellent marginal fit and cervical contour.





AmberMill Direct



Competitive product







Test result from Chewing simulator proves superior wearout resistance in occlusal region.



Workflow

1. Scan



2. Design







4. Mill





5. Sprue Removal





6. Polish or Stain / Glaze (optional)





7. Cement



#11 12 21 22 veneers Source : Dr Ana Petri / Oral Design Clinic

Product Q&A

- Q As a functional gradient block, Amber Mill Direct has different trans and
- A The section where our product logo is marked on the block is the incisal area, which is more into consideration when you design your case.
- Q How is the gradated effect of your block different from other existing lithium disilicate-based glass ceramics?
- disilicate technology.
- Q Why does the Amber Mill Direct have a curved shape in the notch part of the holder?
- and faster milling.

Q Amber Mill Direct provides the option to change translucencies from HT to LT by co-firing. What is the heat treatment schedule to achieve LT?

4	Stand-by temperature B	Closing time S	Heating rate t ₁	Firing temperature T 1	Holding Time H ₁	Vacuum 1 V ₁₁ /V ₁₂	Vacuum 2 V ₂₁ /V ₂₂	Long-term cooling L	Cooling time tı
	400°C	3:00 min.	45°C	840°C	1:00 min.	450°C	840°C	690°C	-

Q What are the pretreatment conditions used for cementation?

5% HF. After that, you can bond it using conventional self-adhesive resin cement.



strength for each area; how can we distinguish the incisal/cervical area?

transparent, and the opposite side is the cervical area, which is more opaque. Take these points

A Amber Mill Direct is uniquely designed to achieve the most natural gradation to resemble how a natural tooth gradates. We coined this unique feature as our GLD technology - Gradient lithium-

A The curved shape allows the targeted area to be reached faster allowing for low bur consumption

A A silane for glass ceramics is applied after etching the case's inner surface for 20 seconds using

Amber[®] Mill Direct



PRODUCT LINE-UP

Size	Dimensions (mm)	pcs / Pack
C14 / HT	14 × 12 × 18	5 blocks

AVAILABLE SHADES



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