All Ceramic Materials for All-Ceramic Restorations

New Frontier of Lithium Disilicate-Based CAD/CAM Blocks & Disks

Amber® Mill

www.hassbio.com

CE 2195 FDA RX Only

APOTEMA Dental Technologies

beLIVE HASS

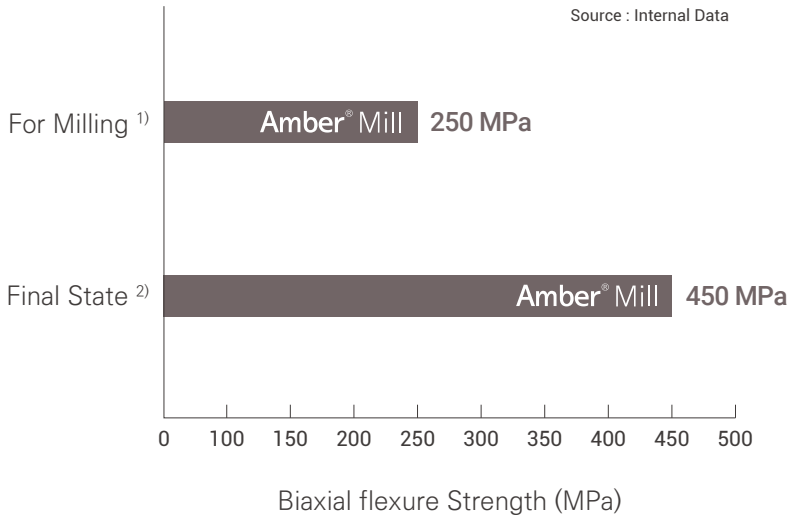
Innovation That Works for You

Machinable lithium disilicate block for CAD/CAM system

Amber® Mill is the machinable dental glass-ceramic blocks made of lithium disilicate.
Its reinforced mechanical properties and aesthetic values with qualified machinability are greatly advantageous for patients and clinics.

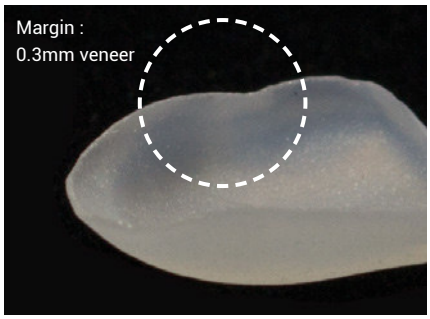
Strength for Aesthetic Longevity

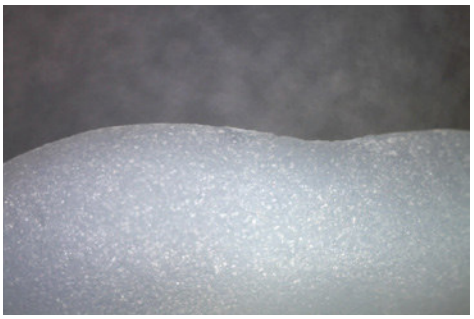
Denser and more crosslinked crystal structure of Amber® Mill results in superior physical properties. Biaxial flexure strength of Amber® Mill is 450MPa after it is fully crystallized.



High Edge Stability

Outstanding machinability of Amber® Mill is evidently affirmative when checking the edges of the milled restorations. Highly stable edges with less chipping occurrence prove that Amber® Mill is optimized machinable lithium disilicate block for CAD/CAM system.





Amber® Mill

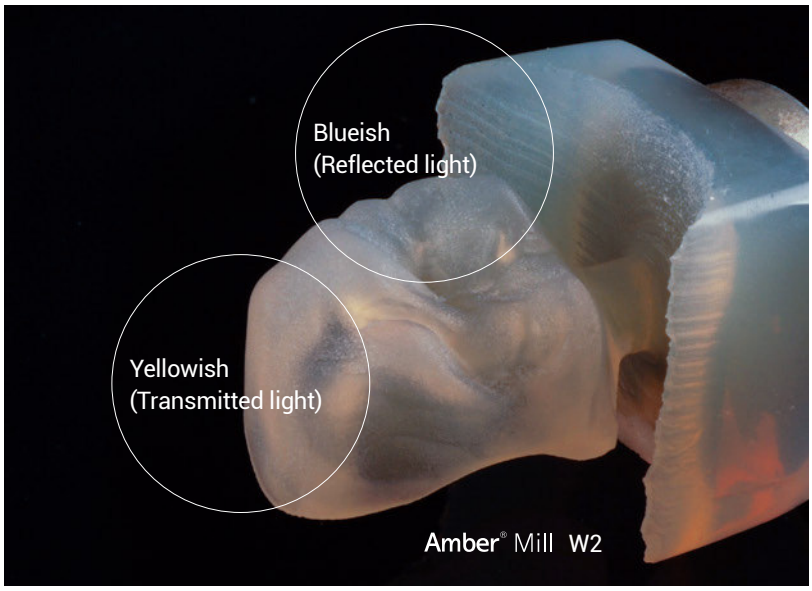
Multi-chromatic Gradation Effect

Restorations with Amber® Mill make vivid, definite and substantial visual difference in their outcome. Resulting from the excellent opalescence and fluorescence of Amber® Mill, the restorations even without staining displays natural color continuum from cervical to incisal/occlusal.

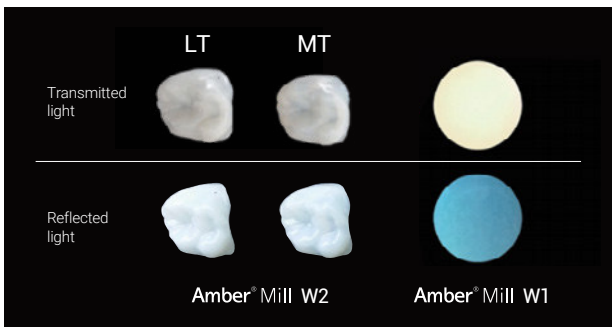
Representation of Natural Beauty

Natural Opalescence & Fluorescence

All natural teeth covered by the enamel present opalescence-they seem more blueish when viewed under reflected light and more yellowish when viewed in transmitted light. Amber® Mill demonstrates the opalescent feature of natural teeth. In addition, Amber® Mill shows fluorescence to that of natural teeth.



Comparison of Opalescence



Excellent Fluorescence

Aesthetics Proven by Clinical Case

As all physical properties and aesthetic values are combined in a well-balanced way, final restoration work using Amber® Mill shows off its high level of stability and naturalness when it is actually applied in mouth.

#25 crown - stain & glaze over Amber® Mill LT A3
Courtesy of CDT. Won Pil Jang and Dr. Hee-Kyong Lee, Seoul, Korea

Freedom of Translucency

Recommended Translucency Heat-treatment Schedule

It is possible to differentiate translucency with a single block of Amber® Mill. Just decide what shade you will use, then choose the translucency heat-treatment temperature according to your targeted translucency. This will enhance the efficiency in work process and inventory management for CAD/CAM milling blocks.

DEKEMA Austromat 624i[1)]

Standard Mode	HT			MT			LT(31:10)			MO		
Dry			–:–			–:–			–:–			–:–
Close			02:00			02:00			02:00			02:00
Preheat	450°C		01:00	450°C		01:00	450°C		01:00	450°C		01:00
Temperature 1	830°C	60°C /min	15:00	840°C	60°C /min	15:00	855°C	60°C /min	15:00	875°C	60°C /min	15:00
Temperature 2	690°C	60°C /min	–:–	690°C	60°C /min	–:–	690°C	60°C /min	–:–	690°C	60°C /min	–:–
Temperature 3	__°C	__°C/ min	–:–	__°C	__°C/ min	–:–	__°C	__°C/ min	–:–	__°C	__°C/ min	–:–
VAC(off/level/hold)	830°C	100%	15:00	840°C	100%	15:00	855°C	100%	15:00	875°C	100%	15:00

Rapid Mode	HT(16:25)			MT(16:23)			LT(16:22)			MO(16:37)		
Dry			–:–			–:–			–:–			–:–
Close			01:00			01:00			01:00			01:00
Preheat	450°C		01:00	450°C		01:00	450°C		01:00	450°C		01:00
Temperature 1	790°C	100°C /min	–:–	800°C	100°C /min	–:–	800°C	100°C /min	–:–	800°C	100°C /min	–:–
Temperature 2	830°C	15°C /min	05:00	840°C	20°C /min	05:00	855°C	20°C /min	04:00	870°C	25°C /min	04:00
Temperature 3	680°C	70°C/ min	–:–	680°C	70°C/ min	–:–	680°C	70°C/ min	–:–	680°C	70°C/ min	–:–
VAC(off/level/hold)	830°C	80%	05:00	840°C	80%	05:00	855°C	80%	04:00	870°C	80%	04:00

* The firing chamber must not be opened during long term cooling.

1) Austromat 624i is a registered trademark of DEKEMA.

IVOCLAR VIVADENT PROGRAMAT[2)]

Standard Mode

B ℃	S min.	t↗ ℃/min.	T ℃		H min.	VAC. 1/ VAC. 2 ℃		L ℃	tL*
400	3.00	60	HT	815	15.00	HT	550/815	690	0
			MT	825		MT	550/825		
			LT	840		LT	550/840		
			MO	860		MO	550/860		

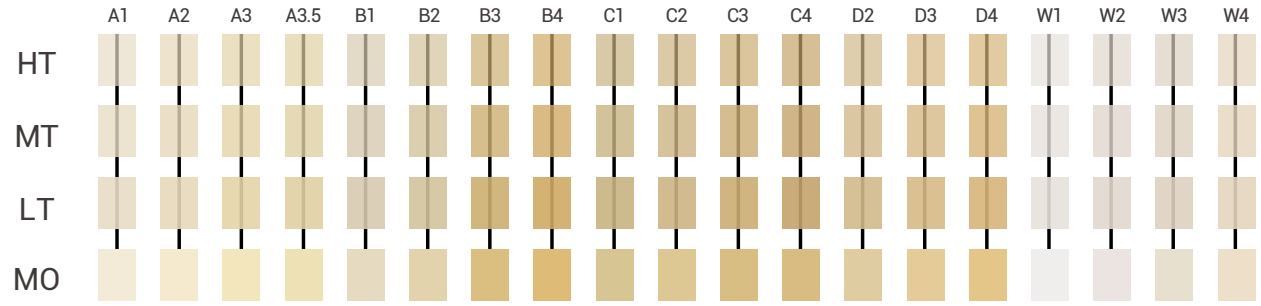
Rapid Mode

B ℃	S min.	t_1↗ ℃/min.	t_1 ℃	H min.	t_2↗ ℃/min.	t_2 ℃		H min.	VAC. 1/ VAC. 2 ℃			L ℃	tL*
400	1.00	90	780	0:00	30	HT	815	3.00	HT	690/780	780/815	690	40
						MT	830		MT		780/830		
						LT	845		LT		780/845		
						MO	865		MO		780/865		

* The firing chamber must not be opened during long term cooling.

2) PROGRAMAT is a registered trademark of IVOCLAR VIVADENT.

Available Shades



Product Q&A

Q What is the translucency heat-treatment for?

A In Amber® Mill, fine crystalline is embedded in glass matrix. When translucency heat-treatment is applied to Amber® Mill restorations, crystal size and density get increased and consequently mechanical properties get reinforced and translucency level gets altered.

Q What should be mainly considered for the translucency heat-treatment?

A Combination of two factors-temperature and holding time-for translucency heat-treatment of Amber® Mill differentiates the resulted translucency. Based on the recommended translucency heat-treatment schedule, each user is advised to verify his or her own optimized conditions for the furnace to use. Once the optimized version is identified, you will be able to create a wide range of translucency with just one Amber® Mill block and choose the exact translucency level as targeted.

Factors for the translucency heat-treatment

Q Any possibility of translucency alteration after multi-baking of veneering powder?

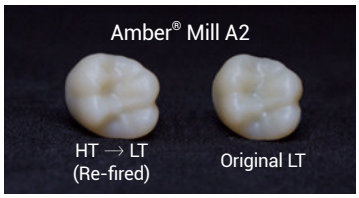
A In addition to temperature, holding time of heat-treatment is the determinant of translucency for Amber® Mill. Even if baking temperature is higher than translucency temperature, the result may retain the same translucency as far as the holding time is short. As usual, baking time for veneering powder is about a minute long so the baking has no significant influence on the translucency of Amber® Mill framework.

Stable translucency after baking of veneering

Q Is it possible to change the translucency by re-firing?

A For highly translucent restorations, it is achievable to lower their translucency by re-firing them. For example, you may apply 5 °C higher heating than normal low translucency (LT) temperature to high translucency (HT) crowns and keep the same holding time of 15 minutes so that the final crowns can be low translucent (LT).

Re-firing of Amber® Mill blocks (HT → LT)



Q What powders are compatible with Amber® Mill?

A Amber® Mill is compatible with a wide variety of veneering powders. As to the powders for lithium disilicate, those powders with CTE (coefficient of thermal expansion) less than or equal to 10.0 x 10^{-6}/ °C are compatible. Zirconia powders with baking temperature under 850 °C are also compatible with Amber® Mill.

Compatible with
powders of
CTE ≦ 10.0 x 10^{-6}/ °C

Amber® Mill

- Inlays
- Onlays
- Veneers
- Anterior Single Crowns
- Posterior Single Crowns
- 3-Unit Bridge
  *up to the second Premolar

Amber® Mill		Dimensions (mm)	pcs / Pack
	C12	10 x 12 x 15	5 blocks
	C14	12 x 14 x 18	
	C32	14 x 14 x 32	3 blocks
	C40	15 x 15 x 38	
	P9806	Ø98 x 6T	1 disk
	P9808	Ø98 x 8T	
	P9810	Ø98 x 10T	
	P9812	Ø98 x 12T	
	P9814	Ø98 x 14T	

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