



Celtra® Duo
Zirconia-Reinforced Lithium Silicate (ZLS)

Developed to
make a difference

Any block can make a restoration

Celtra® Duo (ZLS) provides the freedom to work your way

Finally, a CEREC® block that gives you total control. You choose the processing pathway. You determine the level of esthetics you wish to achieve. Even the degree of strength is up to you.

Benefits above and beyond the basics

Flexible processing options no
other block can provide

- Mill and Polish or Mill and Fire

Proven high strength regardless
of processing pathway

- 210MPa flexural strength (Mill and Polish)
and 370MPa flexural strength (Mill and Fire)

Lifelike esthetics

- Beautiful outcomes regardless of
processing pathway

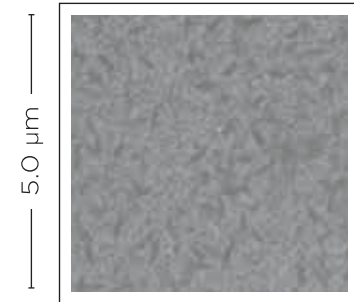


The ultra-fine microstructure makes all the difference

Celtra® Duo

Zirconia-Reinforced Lithium Silicate (ZLS)

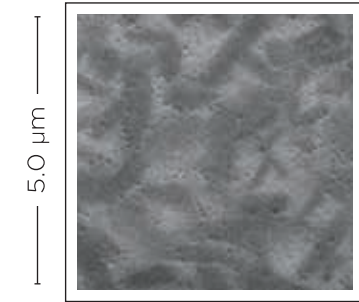
With crystallites four to eight times smaller than lithium disilicate blocks, Celtra Duo (ZLS) possesses an ultra-fine microstructure that combines high flexural strength with a high glass content, resulting in an impressive strength and beauty profile.



SEM image
Celtra Duo (ZLS) milled

Lithium disilicate ceramic

The crystallites embedded in the glass phase are 2000-4000nm in size, which is four to eight times larger than Celtra Duo (ZLS). The larger crystallite size negatively influences both the light-optical mechanical properties of the material, requiring a greater polishing effort.

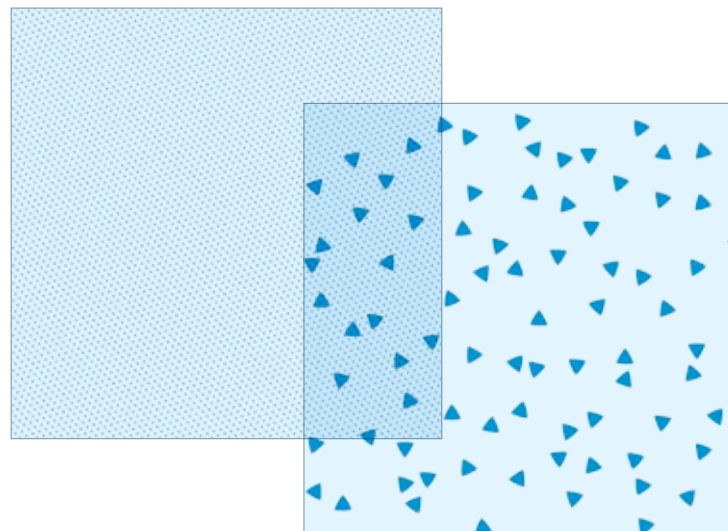


SEM image
Lithium disilicate, milled

Microstructure comparison

ZLS

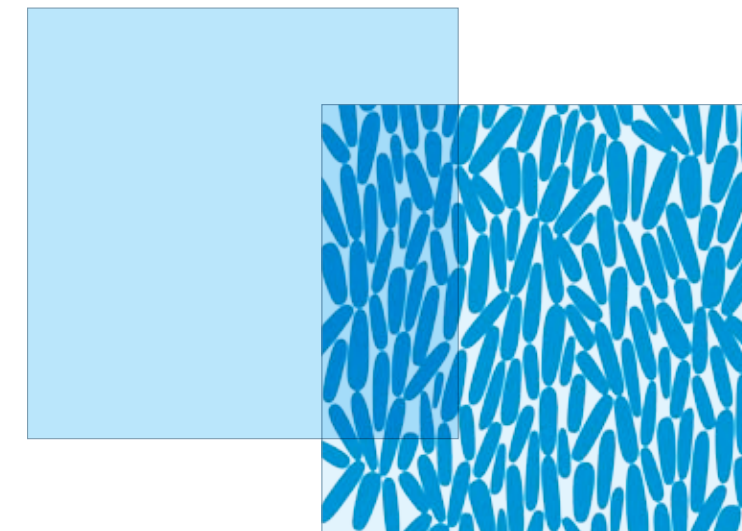
Glass with completely dissolved zirconia



Lithium silicate crystallites
500-700nm

LS₂

Glass



Lithium disilicate crystallites
2000-4000nm



“Once you’ve experienced the procedural freedom of Celtra® Duo (ZLS), you’ll never want to be clinically constrained by a block that locks you into only one processing pathway.”

—Andrew Hall, DMD

Simplicity that matters

One highly esthetic block—
two processing options

With Celtra® Duo (ZLS), you're always in control, and
that includes your choice of processing technique.

Option 1: Mill and Polish (210MPa flexural strength)

Mill

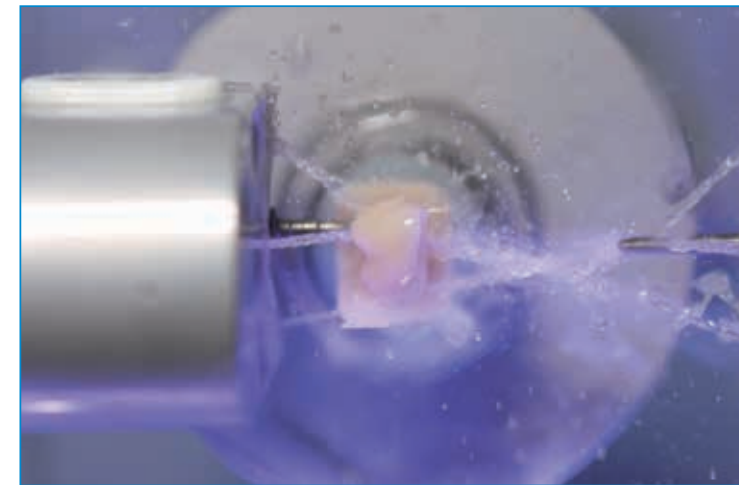


Polish



Option 2: Mill and Fire (370MPa flexural strength)

Mill



Fire



Note that Option 2 allows even more processing flexibility:

Wet-firing technique

- Mill → Stain and glaze → Fire → Seat

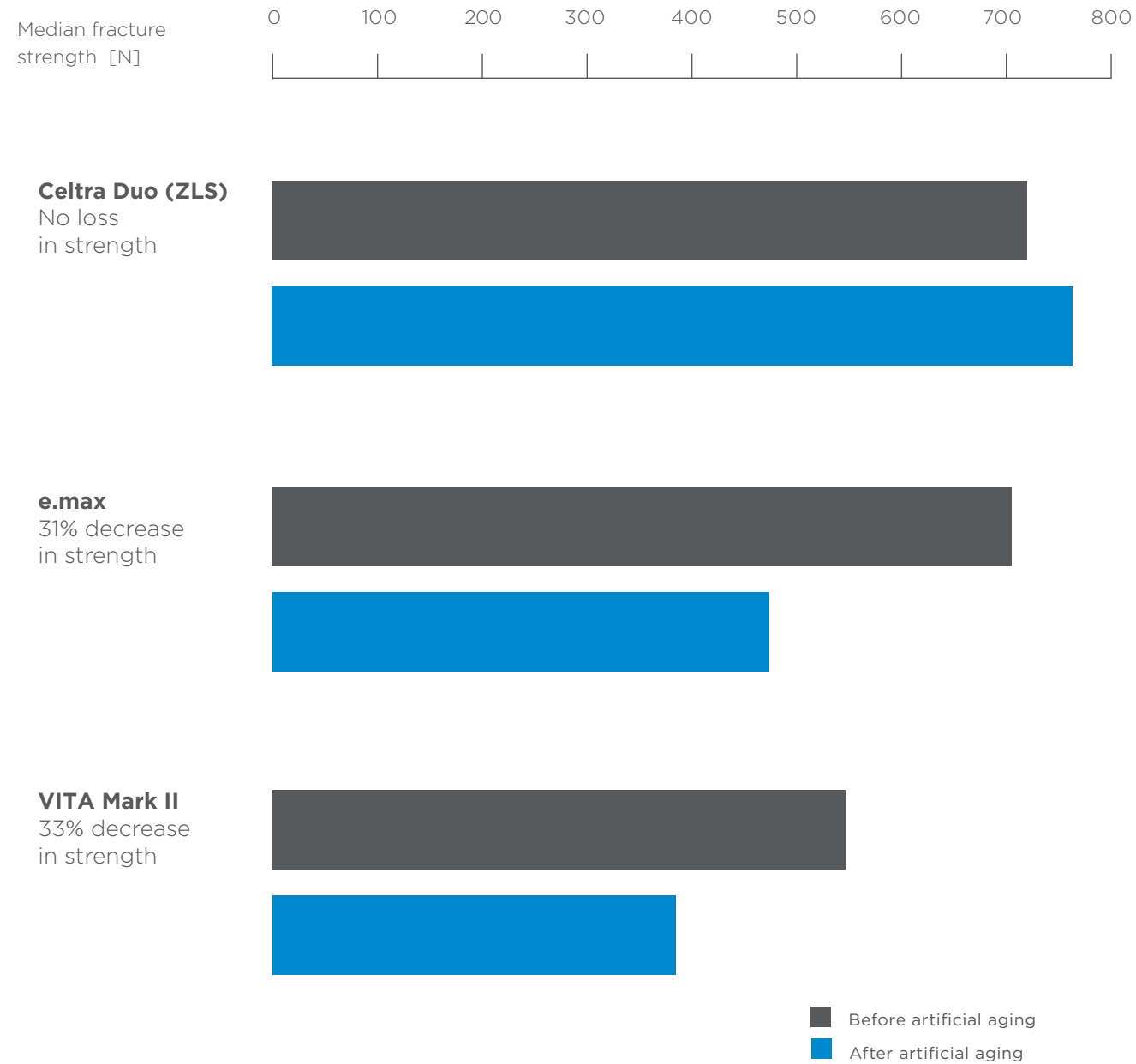
Dry-firing technique

- Mill → Polish → Fire → Seat

Strength you can rely on

Strength reserves after artificial aging/chewing simulations

In the chewing simulation, Celtra® Duo (ZLS) behaves in a way that is atypical of ceramic materials. While ceramics usually lose some of their strength in the aging process, Celtra Duo (ZLS) retains its high level of strength—a strength that contributes to the long-term safety of the restoration.



Load at fracture, anterior crowns - thermal cycling (5°C-55°C), 6000 cycles, followed by 1.2 million chewing cycles at 70 N. Source: Rues S, Müller D, Schmitter M. University of Heidelberg 2012. Data available on request.

Marginal integrity for long-term clinical confidence

Material 1
IPS Empress® CAD



Material 2
VITABLOCS® Mark II



Material 3
IPS e.max®



Celtra Duo (ZLS)



Optical properties and their benefits

Lifelike appearance

Celtra® Duo (ZLS) meets the highest esthetic standards: Natural opalescence, fluorescence, and pronounced chameleon effect give Celtra Duo (ZLS) restorations the appearance of natural teeth.

Natural opalescence

Opalescence is a light-scattering effect. The blue short-wave portion of the daylight spectrum is scattered in all directions, while the orange long-wave light passes through the enamel almost without scattering. The dynamic color interplay of blue, yellow, amber, and orange affects the appearance of the entire tooth. The lithium silicate crystallites in Celtra Duo (ZLS), 500-700nm in size, correspond exactly to the wavelength range of natural daylight that is responsible for the opalescence. Celtra Duo (ZLS) thus behaves like a natural tooth enamel.

Fluorescence and chameleon effect

The fluorescence of Celtra® Duo (ZLS) materials is graded by brightness. The fine crystals of the microstructure and the high glass content create a deep fluorescent effect and make the intensity easy to adjust. The high light conductivity and shade adaptation of Celtra Duo (ZLS) in conjunction with the remaining natural teeth and the pronounced opalescence create the desired chameleon effect. With its light-optical properties based on the ZLS microstructure, Celtra Duo (ZLS) has a reduced greying risk.

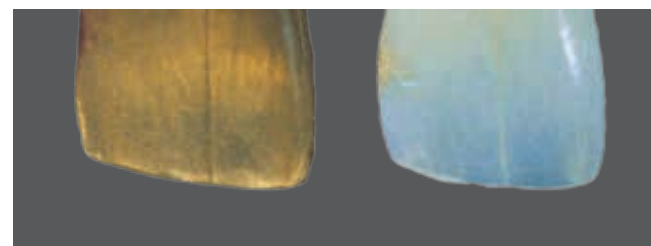


Perfect shade adaptation in situ

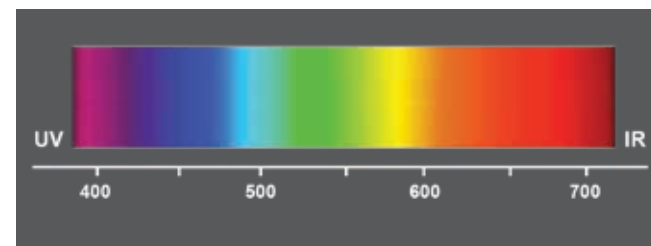
Opalescence



Fluorescence



Opalescence of natural tooth enamel



Wavelength (nm)



Celtra Duo (ZLS) Veneer



Final restoration

Clinical success you can count on

Restoration with Celtra® Duo (ZLS)



Baseline situation



Final restoration with Celtra Duo (ZLS):
Indistinguishable esthetics with adjacent teeth

Restoration with Celtra Duo (ZLS)



Initial situation



Final restoration with Celtra Duo (ZLS):
Indistinguishable esthetics with natural teeth

“Proven high strength and natural, lifelike esthetics, combined with the freedom to either mill and fire or mill and polish makes Celtra Duo a joy to work with. No other CEREC block gives me the ideal mix of strength, beauty, and workflow flexibility that Celtra Duo does.”

—Robert A. Conte, DMD

Success that makes a difference

Excellent margin quality increases confidence in complex case designs



Simple cementation system

A combination of Prime&Bond active™ adhesive and Calibra® Ceram cement makes it easy to achieve excellent results.

The Celtra® Duo (ZLS) 3-Step Restoration and Cementation System for CEREC® Users

Designed to simply work better together



STEP 1

Design and mill the restoration

Design the restoration as usual with CEREC, then mill it out using Celtra Duo (ZLS) material.

Celtra Duo (ZLS) advantages:

- You choose the processing pathway: fire and seat, or polish and seat—you're always in control



STEP 2

A Apply Prime&Bond active Adhesive

Apply Prime&Bond active Adhesive to the tooth.

Prime&Bond active Adhesive advantages:

- Universal application means you're in control: self-etch, total etch and selective etch—it's always your choice
- Low film thickness
- Virtually no post-op sensitivity



B Apply Calibra® Ceram Cement

After etching and silanating the intaglio surface of the restoration, apply a thin, uniform layer of Calibra Ceram Cement to the internal surface of the restoration.

Calibra Ceram Cement advantages:

- High bond strength for long term restoration success
- Easy excess cement cleanup:
 - wide tack cure window of up to 10 seconds means no worry of over-curing
 - 45-second extended gel phase gives you the time you need for a thorough and effective cleanup



STEP 3

Seat restoration

Seat the restoration; the cement will set permanently after final light curing of all areas of the restoration.

Developed to make a difference.

Celtra® Duo (ZLS)

Developed to make a difference...every step of the way

No other material block offers CEREC® users the level of workflow freedom and flexible processing options as Celtra Duo (ZLS). From initial preparation to final cementation, it's the only block that provides a complete, integrated restorative solution designed to produce optimal outcomes, case after case.



To place an order, call 855.723.5872

Learn more about Celtra Duo (ZLS) at www.celtra-dentsplysirona.com

Celtra® Duo (ZLS) Product Portfolio

Celtra Duo (ZLS) is available in a complete range of shades to satisfy the clinical esthetics of any case. Additionally, stains are available for dentists who wish to add characterization.

Product Description	Dentsply Sirona Product #	Product Description	Dentsply Sirona Product #
Celtra® Duo (ZLS) Block Refills (4 blocks per box)		Prime&Bond active™ Universal Adhesive	
HT A1	536 541 1205	Mini Refill	606.67.340
HT A2	536 541 1215	Standard Refill	606.67.341
HT A3	536 541 1225	SUD Refill	606.67.343
HT B1	536 541 1255	Eco Refill	606.67.342
LT A1	536 541 1005	SUD Eco Refill	606.67.345
LT A2	536 541 1015	Intro Kit	606.67.347
LT A3	536 541 1025	CliXdish™ Refill	606.67.346
LT A3.5	536 541 1035		
LT B1	536 541 1055	Celtra Stain and Glaze Jars (5g)	
LT B2	536 541 1065	Universal Overglaze	601322
LT BL2	536 541 1175	Stain 0	601500
LT BL3	536 541 1185	Stain 1	601501
		Stain 2	601502
		Stain 3	601503
		Stain 4	601504
		Stain 1i	601511
		Stain i2	601512
		Stain White	601520
		Stain Creme	601521
		Stain Sunset	601522
		Stain Copper	601523
		Stain Khaki	601524
		Stain Olive	601525
		Stain Violet	601505
		Stain Mahogany	601526
		Celtra Liquid for Stain and Glaze	
		15mL Bottle	601315
		50mL Bottle	601350
Calibra Ceram Cement			
Combo Kit			
1 Bottle Prime&Bond active™ (2.5mL), 1 Dual Cure AutoMix Syringe (4.5g) - Translucent Shade, 10 Mixing Tips, 25 Flocked Applicator Tips, 1 CliXdish™ Mixing Well	606.67.380		
Syringe Refill			
1 Dual Cure AutoMix Syringe (4.5g), 10 Mixing Tips			
Light Shade	607191		
Medium Shade	607192		
Translucent Shade	607194		
Opaque Shade	607195		
Bleach Shade	607196		
Calibra® Silane Coupling Agent Refill (3mL)			
Refill	607080		





Dentsply Sirona
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