

CEREC Tessera High-Strength Glass Ceramic Blocks impress with fast processing, high esthetics and robust strength

Dentsply Sirona introduced CEREC Tessera Advanced Lithium Disilicate CAD/CAM Blocks, a new material for CAD/CAM-fabricated restorations for anterior and posterior regions. The advanced lithium disilicate (ALD) ceramic is characterized primarily by the fact that it can be fired exceptionally quickly. The glaze firing takes only four and a half minutes, so the entire manufacturing process is accelerated. In addition, it offers high esthetics and flexural strength, making CEREC Tessera blocks an attractive option within single-visit dentistry.

Charlotte, September 15, 2022. High-strength glass ceramics are frequently used by dentists when fabricating a restoration. The reason is mainly esthetics – patients usually want restorations looking nearly identical to their natural teeth. Lithium disilicates play an important role in this group of materials: their results are convincing in all regions of the mouth and they can be used for CAD/CAM-fabricated restorations, i.e. in CEREC Primemill.

Advanced material properties due to optimized microstructure

CEREC Tessera blocks are an advanced lithium disilicate ceramic for the CEREC workflow that accelerate the entire manufacturing process by shortening the glaze firing time – a crown can be fired in the CEREC SpeedFire in just 4 minutes and 30 seconds. Compared to other glass ceramics, this represents a time savings in the entire manufacturing process (grinding and firing).

The fast firing time is mainly made possible by the special and new composition of the ceramic made of lithium disilicate and virgillite, a lithium aluminum silicate. Tessera blocks are composed of a new material containing virgillite. During the firing process, new virgillite crystals are formed and embedded in a zirconia enriched glass matrix. Together, these material constituents combine to create a robustly reinforced, high-density restorative material. The dense interwoven crystal composition of CEREC Tessera blocks is key to their high strength and helps suppress the presence of microcracks and subsequent crack propagation. The same microcrystal composition (lithium disilicate and virgillite) of CEREC Tessera blocks that is responsible for the material's high biaxial and flexural strength also contributes to its highly esthetic and dynamic light refraction, transmission, and absorptive properties that mimic the visual vitality of natural dentition.

The high-strength nature of CEREC Tessera blocks further provide clinical benefits via low minimal wall thickness preparation guidelines and the ability to use conventional cementation. All CEREC Tessera

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About Dentsply Sirona:

Dentsply Sirona is the world's largest manufacturer of professional dental products and technologies, with over a century of innovation and service to the dental industry and patients worldwide. Dentsply Sirona develops, manufactures, and markets a comprehensive solutions offering including dental and oral health products as well as other consumable medical devices under a strong portfolio of world class brands. Dentsply Sirona's products provide innovative, high-quality and effective solutions to advance patient care and deliver better and safer dental care. Dentsply Sirona's headquarter is located in Charlotte, North Carolina. The company's shares are listed in the United States on NASDAQ under the symbol XRAY.

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restorations can be fixed adhesively (for example with Prime&Bond and Calibra Ceram). Restorations with a wall thickness of 1.5 millimeters can also be conventionally cemented with a glass ionomer or hybrid glass ionomers (for example Calibra Bio).

CEREC Tessera blocks as a solution for three requirements

The first users are enthusiastic about CEREC Tessera blocks. Dr. Andrew Hall, a Key Opinion Leader who works with Dentsply Sirona and general dentist from Colorado Springs (Colorado), states, "The extremely fast matrix firing cycle is unlike anything we have seen. The time savings are tangible and really the whole process is just simple, yet the result is a robust restorative material. The combination of speed, strength and esthetics truly sets the material apart."

"With the new CEREC Tessera blocks, we have achieved three essential clinician requirements for a restorative ceramic – speed of processing, esthetics, and strength," explains Tom Leonardi, Group Vice President at Dentsply Sirona. "In this way, the overall treatment time with CEREC will be markedly shortened. This helps to further improve the cost-effectiveness of this concept and also offers real added value to patients on their way to a healthy smile."

CEREC Tessera blocks are available in the United States as of March 15, 2021 and are indicated for fully anatomical single-tooth restorations in the anterior and posterior regions, including crowns, inlays, onlays, and veneers.

Further information will be available at www.dentsplysirona.com

IMAGES

are available for [Download](#) on the website.



Fig. 1: With high strength, sophisticated esthetics and fast processing, CEREC Tessera blocks open up new possibilities for patient care in a single visit.



Fig 2: Glaze firing of CEREC Tessera blocks takes just four and a half minutes in the CEREC SpeedFire, which reduces the overall fabrication process time



Fig. 3: CEREC Tessa is an advanced lithium disilicate ceramic for the CEREC workflow that can be excellently processed in the CEREC Primemill.



Fig. 4: Tom Leonard, Group Vice President at Dentsply Sirona, is confident that the new Tessa material will offer CEREC users real added value – both for the practice and for patients.



Fig. 5: For Dr. Andrew Hall, dentist from Colorado Springs (Colorado), the glaze firing time of CEREC Tessa is a real gamechanger.

