Force-absorbing hybrid ceramic CAD/CAM block

CERASMART[™] 270

How does CERASMART[™] 270 fit into your practice?





CERASMART[™] 270 force-absorbing hybrid ceramic block – for strong[#], durable[#] and beautiful restorations

CERASMART[™] 270 is an aesthetic hybrid block which builds on the remarkable performance of the original CERASMART[™] offering fast, high quality production and a strong balance of physical properties that enable long lasting clinical success.^{*}

Thanks to the newly developed "Full Coverage Silane Coating" (FSC) with improved nanofiller technology, CERASMART[™] 270 offers high physical and aesthetic properties.^{^#} The milling is fast and effective, making it possible to create a qualitative restoration with fine margins and optimal fit in a single visit.^{*} Additionally, it can be polished or characterised for more vibrant aesthetics.

CERASMART[™] 270 is indicated for a range of cases, be it a quick onlay or a challenging wear case.

300 3-point Flexural Strength (MPa) 00 10 00 20 20 00 20 2.5 Abrasion – 3-Body Wear (µm) Breaking Energy (N-cm) 140 0.5 Competitor CERASMART[™] CERASMART[™] Competitor Competitor 270 В 3-point Flexural Strength (MPa) Breaking Energy (N-cm) Source: GC R&D Data on file

Impressive wear resistance[†]



Source: GC R&D Data on file

+ Shafter M, Wicks R, Jain V and Nathanson D. Comparative In-Vitro Wear Resistance and Surface Roughness of Chairside CAD/CAM Materials. J Dent & Oral Disord. 2017; 3(3): 1062.

Awada A, Nathanson D. Mechanical properties of resin-ceramic CAD/CAM restorative materials. J Prosthet Dent. 2015 Oct;114(4):587-93.

^ Carrabba M. High Strength Hybrid-Ceramic for CAD/CAM Milling: a 3-Point Bending Test. J Dent Res 2018 Vol 97(Spec Iss C):2488 (IADR/PER 96th General Session https://iadr2018.zerista.com/event/member/492082)

GC R&D Data on file

Strength & Flexibility

The perfect fit for your practice and patients

CERASMART[™] 270 offers the modern busy practice a truly fast, effective milling solution with flexibility in clinical applications. CERASMART[™] 270 provides improved strength, more natural aesthetics and fluorescence, higher radiopacity affording both clinicians and patients a no-compromise quality outcome, making it the perfect choice for inlay, onlay and implant restorations.[†]



† Neiva G, Valcanaia A. In-vitro Surface Roughness of Novel Chairside Resilient CAD/CAM Material. J Dent Res 2019 Vol 98 (Spec Iss A): 2479 (https://iadr.abstractarchives.com/abstract/19iags-3184930/in-vitro-surface-roughness-of-novel-chairside-resilient-cadcam-material).

† Ergucu Z, Balci M, Güneri P, Boyacioglu HL, Turkun S. Comparative Radiopacity of Different Posterior Restorative Materials. J Dent Res 2019 Vol 98 (Spec Iss B): 0406 (https://iadr.abstractarchives.com/abstract/ced-iadr2019-3223354/comparative-radiopacity-of-different-posterior-restorative-materials)

* GC R&D Data on file

CERASMART[™] 270 clinical indications

Quadrant restoration - Partial and full-coverage crowns



Initial presentation.



After preparation and IDS with G-ænial™ Universal Injectable.



Cemented restorations characterised with OPTIGLAZE color.

Composite resin replacement – Inlay and Onlays



Initial presentation.



After removal of existing composite restorations.



Immediately post-operative.

courtesy of Dr. Dimitr B. Vladimirova, Bulgar

> D D

Worn dentition – Palatal Veneers



Initial presentation.



Milled CERASMART[™] 270 palatal veneers.



Post-operative view.

Finishing CERASMART[™] 270

Polishing

An impressive gloss level can be obtained by just some simple polishing steps, utilising standard polishing wheels and points.



1. Milled CERASMART[™] 270 after removal of the connector.



3. Polishing using a fine silicone wheel.



2. Polishing using a medium silicone wheel.



4. Goat hair wheel and diamond paste used for a high gloss.

Characterisation with OPTIGLAZE Color

Add character to your restoration with the stroke of a brush. You can choose from a wide variety of colours or use the clear glaze to add a long-lasting, high gloss coating.*



1. Prepare – Sandblast with 25-50, alumina (0.2MPa).



3. Silanate – Apply silane coupling agent, eg. G-Multi PRIMER and dry.



2. Clean – Clean with oil-free air syringe or ultrasonic cleaner. Clean further with alcohol.



4. Characterise – Dispense and brush apply OPTIGLAZE color in a thin layer. Do not air blow. Must be cured with a light-curing device with a wavelength in the range of 400-430nm (NOT with traditional Blue LED).



5. CERASMART[™] 270 after polishing.



5. CERASMART[™] 270 finished with OPTIGLAZE color.

* N.Tekçe et al. The effect of glazing and aging on the surface properties of CAD/CAM resin blocks. J Adv Prosthodont 2018;10:50-57.

Easy pre-treatment and cementation options

Essential bonding steps for optimum results



1. Sandblast or 5% HF etch

Options for pretreating CERASMART[™] 270:

- A. Sandblast with 25-50µm alumina (0.2MPa); OR
- B. Treat with 5% HF (hydrofluoric acid) for 60 seconds. Wash with water and dry.



2. Clean

Clean with oil-free air syringe or ultrasonic cleaner and dry. Clean further with ethanol (alcohol) to remove oil residue.



3. Silane

Apply silane coupling agent, eg. G-Multi PRIMER and dry. No bonding agent is required after the application of G-Multi PRIMER. For other ceramic primers, follow the manufacturer's instructions.

Completing cementation



4. Tooth preparation

Clean and treat the prepared tooth surface following the instructions of the manufacturer of the adhesive resin cement.

Retaining a wide band of enamel, which is etched for mechanical retention, is ideal for optimum adhesion.



5. Adhesive resin cementation Follow the procedure described by the

manufacturer of the adhesive resin cement, eg. G-CEM LinkForce™.



6. Finish Finish and polish the margins.

Your complete GC CAD/CAM workflow















Product range



CERASMART[™] 270

CERASMART[™] 270 or CEREC, refill of 5 blocks Sizes 12, 14, 14L HT shades (A1, A2, A3, A3.5, B1) LT shades (A1, A2, A3, A3.5, B1) Bleach shade (BL)



G-CEM LinkForce[™] Starter kit



OPTIGLAZE color Complete set



DIAPOLISHER PASTE 2g syringe



GC Australasia Dental Pty Ltd 1753 Botany Road Banksmeadow NSW 2019 Australia T: +61 2 9301 8200 E: info.australasia@gc.dental www.gcaustralasia.com