

Beautiful smile for lifetime!



CAROZIIR[®]

Zirconia Dental Blank



www.caroziiir.com

About Us

Carol Zircolite (P) Ltd. is a High Alumina & Zirconia Ceramics precision products' manufacturer since 1991. Such a long practical experience with R&D and technical assistance from our UK based parent company, Carol Zircolite (P). Ltd. is now producing High Standards Zirconia Dental Blanks.

The company have state-of-the-art infrastructure in 15,000 sq. meters land with surrounding lush greenery with lot of precious sandal wood trees and hygienic nature. The company is managed by progressive management and engineering professionals with aims to achieve global competitiveness in the manufacturing of **CAROZIIR**[®] Dental Ceramics (Bio-Ceramics) and **CAROZIIR**[®] Industrial Ceramics (Advanced Technical Ceramics) products.



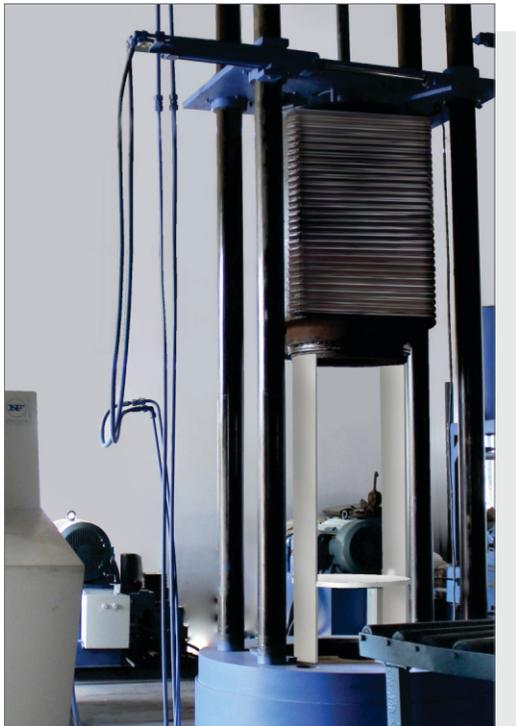
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About Our Production

Carol Zirconite (P) Ltd is a unique corporation with a history of industrial technical ceramic manufacturing success. This success has allowed us to transit into the dental industry with amazing results. We never compromise our high standards for quality. The company's speciality product is an advanced Nano Zirconium Dioxide that exhibits superior optical qualities through up to 49% translucency indexes and up to 1500 MPa strength. **CAROZIIR** zirconia dental blanks are manufactured from an eminent quality Zirconium Dioxide powder from world best Japanese company with an extreme high pressure (4,830 bar –which is highest pressure in the world for zirconia blank) & large volume but individual Cold Isostatic Pressing System from world leading European manufacturer. Carol Zirconite (P) Ltd has a unique & innovative powder pressing and sintering technology, with total quality system. From precise robotic pre-forming, individual cold isostatic pressing, multi-chambers-temperature-control pre-sintering, individual shrinkage measuring to multi-stage quality control, we ensure that the every blank should be with best quality.



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Products - Zirconia Blocks

CAROZIIR® Zirconia crown and bridges are the strongest and most aesthetically translucent restorations available in today's dentistry, nothing looks more like natural teeth. The homogenous material structure of our blanks provides the basis for the excellent strength characteristics and long-term clinical durability of a dental prosthesis made of Nano zirconium dioxide. **CAROZIIR®** offers a full selection of zirconium oxide components for premium dental restorations. This starts with specially designed production facilities, which ensure absolute hygiene and clean room conditions and continues with production systems built exclusively for the manufacture of medical zirconium blanks. We are acutely aware of the high level of responsibility, we assume towards users and patients when it comes to our high-performance dental ceramics. We meet this responsibility through a production process fine-tuned down to the smallest detail, to manufacture homogenous zirconium blanks totally free of defects for dental medicine.

Due to best quality, affordable price, superior service and quick delivery time - **CAROZIIR®** has worldwide customers, including in Asia, Europe, Middle East, Australia, Latin America and Africa.

CaroZiir® Zirconia Blanks Details					
Particulars	CaroZiir® S	CaroZiir® T	CaroZiir® ST	CaroZiir® T ⁺	
Value Bending strength-MPa (3-point)	1500 ± 100	1300 ± 100	800 ± 100	1,200 ± 100	
Translucency	41	44	49	47	
Indications	PFZ substructures, crowns, copings, long span bridges & Frameworks	Good for coping, & framework restoration, full contour.	Full solid zirconia crowns or coping in aesthetic zone.	- Full contour anterior and posterior, inlays, onlays, crowns - Monolithic anterior and posterior restorations	
Types	'98 (Open System) '71 (Amann Girrbach) '95 (ZirkonZahn) '100 (Dent Mill)	'98 (Open System) '71 (Amann Girrbach) '95 (ZirkonZahn) '100 (Dent Mill)	'98 (Open System) '71 (Amann Girrbach) '95 (ZirkonZahn) '100 (Dent Mill)	'98 (Open System) '71 (Amann Girrbach) '95 (ZirkonZahn) '100 (Dent Mill)	
Sizes	10mm, 12mm, 14mm, 16mm, 18mm, 20mm, 25mm	10mm, 12mm, 14mm, 16mm, 18mm, 20mm, 25mm	10mm, 12mm, 14mm, 16mm, 18mm, 20mm, 25mm	10mm, 12mm, 14mm, 16mm, 18mm, 20mm, 25mm	

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Typical Properties of Sintered Blank:

Particulars	Unit	CaroZiir® S	CaroZiir® T	CaroZiir® ST	CaroZiir® T ⁺
Bulk Density	g/cm3	6.075-6.080	6.075-6.080	6.075-6.080	6.080-6.090
Chemical Composition:					
ZrO2 + HfO2 + Y2O3		>98.7	>99	>99.7	>99.6
ZrO2		90.6	91.6	89	91.6
Y2O3		5.2	5.62	9.52	6.96
HfO2		3.1	2	1	1
Al2O3		< 0.5	< 0.4	< 0.3	< 0.4
Other Oxides		< 0.6	< 0.6	< 0.6	<0.2
Microstructure:	µm	0.25±0.05	0.25±0.05	0.25±0.05	0.25±0.05
Flexure Strength	Mpa	1,500	1,300	800	1,200
Radioactivity	Bq/g	0.0125	0.0125	0.0125	0.012
Pre-Sintered Blank Hardness	Hv10	65-80	60-70	60-70	65-70

Block Colors available:

- White
- Pre shaded
- Multilayered (coming soon)



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CAROZIIR coloring liquids are your perfect solution for staining pre-sintered milled crowns and multi-unit bridges. Our Liquids are water based and give especially natural shade teeth look.

Particulars :

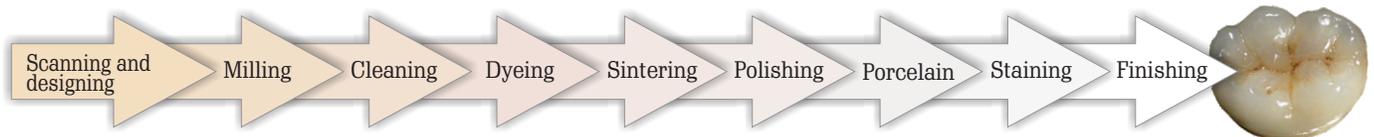
- ~ Water based with trace amounts of acid and alcohol free, so it doesn't evaporate
- ~ Perfect attention to aesthetics in perfect translucency and color
- ~ Optimized for translucent materials (**CAROZIIR T⁺**)
- ~ Simple reproduction of every teeth colors by immersion with **CAROZIIR** paint on technique
- ~ Absorbs deep and doesn't leave spots on the surface
- ~ Optimal dipping time is 2 minute (S), 2 minutes (T), 1 minute (ST), 1 minute (T+)
- ~ Can be used in any sintering furnace, drying is recommended before sintering
- ~ After completion of drying, framework can be sintered set at 1450°C or soak time of 2 hours
- ~ Perfectly matches all 16 VITA Classic dentine shades:



Shade	CaroZiir S / T	CaroZiir ST / T ⁺
A1, A2, A3, A3.5, A4	50ml / 100ml	50ml / 100ml
B1, B2, B3, B4	50ml / 100ml	50ml / 100ml
C1, C2, C3, C4	50ml / 100ml	50ml / 100ml
D2, D3, D4	50ml / 100ml	50ml / 100ml

Directions

Coping and bridges, Full contour crown and bridges

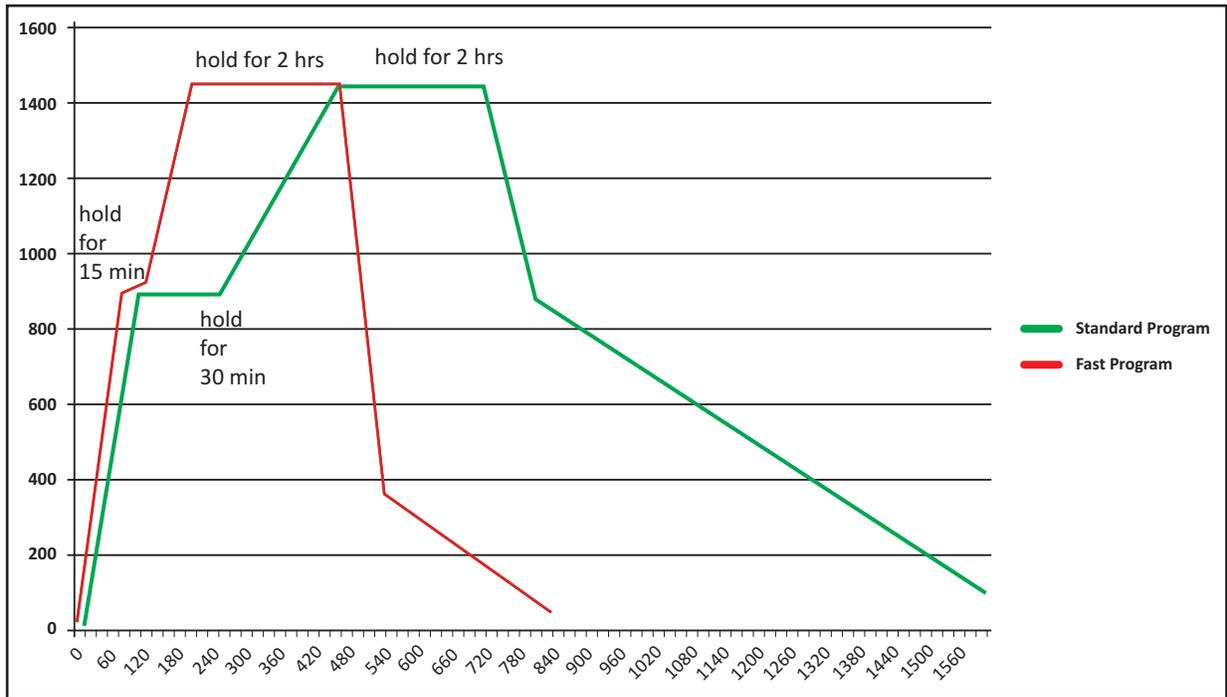


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Sinter Program

CaroZiir® S, CaroZiir® T, CaroZiir® ST & CaroZiir® T+
same curve, but tolerance between 1450C / 1500C max. temp.



STANDARD PROGRAM

	Temp	Time spent on	Total time	Speed (temp gradient)
Climbing to	900° C	150 min (2:30)	150 min (2:30)	6° C/min
Holding time on	900° C	30 min (0:30)	180 min (3:00)	-
Climbing to	1450° C	110 min (1:50)	290 min (4:50)	5° C/min
Holding time on	1450° C	120 min (2:00)	410 min (6:50)	-
Descending to	900° C	70 min (1:10)	480 min (8:00)	8° C/min
Descending to	100° C	400 min (6:40)	880 min (14:00)	2° C/min

FAST PROGRAM

	Temp	Time spent on	Total time	Speed (temp gradient)
Climbing to	900° C	45 min (0:45)	45 min (0:45)	20° C/min
Holding time on	900° C	15 min (0:15)	60 min (1:00)	-
Climbing to	1450° C	55 min (0:55)	115 min (1:55)	10° C/min
Holding time on	1450° C	120 min (2:00)	235 min (3:55)	-
Descending to	350° C	37 min (0:37)	272 min (4:32)	30° C/min

IMPORTANT:

- ◆ T & ST Max. temp. 1450°C. ◆ S Max.temp 1500°C. ◆ T+ Max.temp. 1450°C-1500°C. ◆ HOLD period at 900°C. for 30 min.
- ◆ FAST program not recommended for bridges, ONLY for single units.

LIFETIME WARRANTY

CAROZIIR® DENTAL OFFER A LIFETIME WARRANTY AGAINST MATERIAL MANUFACTURING DEFECTS.

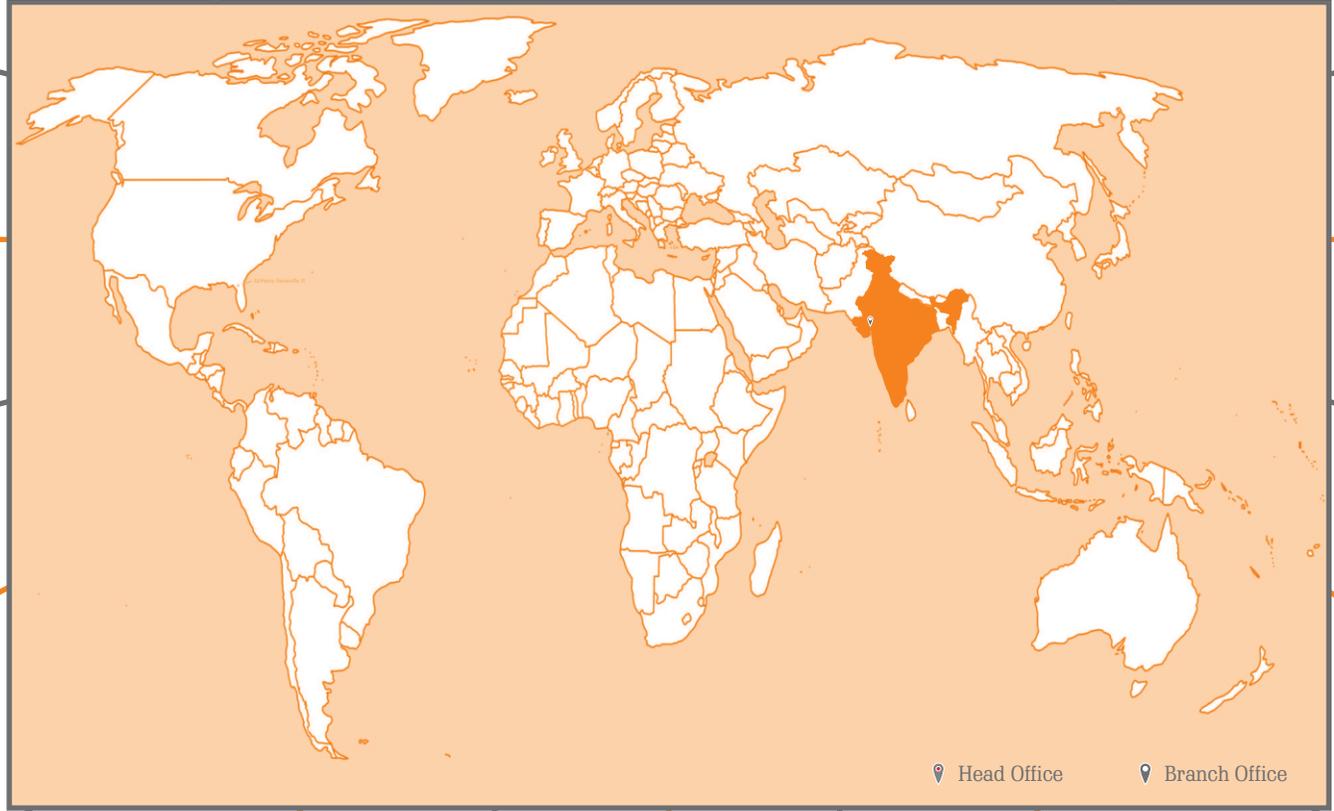
Copings or substructures created made out from **CAROZIIR®** Zirconia Oxide will not break if fabricated in compliance with the manufacturer's instructions and in accordance with the professional rules for processing.

The warranty regarding this Product may only be enforced if it is validated in accordance with the instructions indicated in the package of the Product using the link on [WWW.CAROZIIR.COM](http://www.caroziiir.com)

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 **CAROL ZIRCOLITE (P) LTD**



S-11/12, Shakti Arcade, Science City Road, Ahmedabad, Gujarat, India-380060
Contact : +91 9687 482482, +91 9712 074477
Website : www.caroziiir.com Email : info@caroziiir.com, marketing@caroziiir.com