



Product Description

CMC's Pearl™ discs are made of pre-sintered, yttria-stabilized tetragonal zirconia polycrystalline ceramics (YTZP) for use as a CAD/CAM milling blanks. Pearl is formed using a cold isostatic pressing technique, and the blocks are manufactured to have a well-controlled enlargement factor of approximately 1.25 (25%), ensuring good fit after full sintering. Each block is labeled with its individual, precisely determined enlargement factor. After full sintering, the material densifies into a high-strength dental ceramic with an average flexural strength in excess of 1200 MPa, as measured according to ISO standards.

Composition (in wt. %)

ZrO2 (+HfO2):> 94%
Y2O3:.....5.15 % ± 0.20
Al2O3:.....0.25 % ± 0.10
HfO2:.....typically < 3.0%

Technical Data

Coefficient of Thermal Expansion (25-500° C)* 10.6 x 10⁻⁶/°C
Flexural Strength (3-point bend)* > 1,200 MPa (discs)
Vickers Hardness (HV10): 1,250
Chemical Solubility:* 0 µg/cm²

**as measured according to ISO 6872:2008*

Features and Benefits

Feature

- Able to be milled thinner than typical zirconia discs
- Disc homogeneity
- Universally accepted thermal expansion
- FDA and ISO registered

Benefit

- Less chipping and no linear cracks
- Consistent cut anywhere on the block
- Compatible with aesthetic zirconia porcelains
- Ensures Good Manufacturing Practices and consistent quality

