

## TECHNICAL DATA

### Nacera® Pearl Shaded

Type/ Color: A1, A2, A3, A3.5, A4, B1, B2, B3, B4, C1, C2, C3, C4, D2, D3, D4, OM2, OM3

### Nacera® Pearl Multi-Shade

Type/ Color: A, B, C, D

## PHYSICAL PROPERTIES & TEST METHODS

Norm	Property	Requirement	Typical Values
	Optical Properties		translucent
13356	Density [acc.. ISO 18754 or EN 623-2]	$\geq 6,00$ [g/cm <sup>3</sup> ]	6,05
13356	Microstructure: Mean linear intercept [acc.. EN 623-3 or ASTM E112]	$\leq 0,4$ [μm]	0,33
6872	4 Point Bending Strength	$\geq 800$ [MPa]	1200
13356	Cycl. Fatigue	$\geq 320$ [MPa]	Successful, no failure
13356	Radioactivity	$\leq 200$ [Bq/kg]	15
6872	CTE	Determination	$10 \cdot 10^{-6} K^{-1}$
6872	Chem. Solubility	$\leq 2.000$ [μg/cm <sup>2</sup> ]	12
13356	Young's modulus	$\geq 200$ [GPa]	205
13356	Hardness	$\geq 11,8$ [GPa]	13

## CHEMICAL COMPOSITION

Norm	Property	Elements - Oxides	Requirement	Typical Values
13356	Composition in mass %	ZrO <sub>2</sub> + HfO <sub>2</sub> + Y <sub>2</sub> O <sub>3</sub>	$\geq 99,0$	99,90
13356		Y <sub>2</sub> O <sub>3</sub>	$> 4,5$ bis $\leq 6,0$	5,50
13356		HfO <sub>2</sub>	$\leq 5$	1,90
13356		Al <sub>2</sub> O <sub>3</sub>	$\leq 0,5$	0,002
13356		other oxides	$\leq 0,5$	$\leq 0,5$

Notified Body: ecm GmbH **CE 0481**

These properties were measured on test samples. The values are typical material properties and may vary according to product configuration, geometry and manufacturing process.