

Technical information, high performance ceramic

High performance ceramic:

	Unit	Cerazur	Z-101	Z-141
Material		ZrO2 Y-PSZ	ZrO2 Y-PSZ	ZrO2 TZP-A
Colour		blue	white	white
Density	g/cm ³	6	6	> 6,04
Flexural strength	Mpa	1300 (4 P.-)	1000 (4 P.-)	1200 (3 P.-)
Compressive strength	Mpa	3000	3000	3000
E-module	Gpa	205	205	205
Shock resistance	MPa m ^{1/2}	12	8	8
Weibull modulus	m	25	22	12
Hardness	HV 0,5	1150	1300	1300
Thermal expansion	10 ⁻⁶ K ⁻¹	10	10	10
Thermal conductivity	W/mK	< 2	2	< 2
Thermal shock resistance	Δ T °C	280	270	250
Max. operating temperature	°C	1000	1000	1000
Specific resistance at 20°C	Ω cm	> 10 ¹⁰	> 10 ¹⁰	> 10 ¹⁰
Dielectric strength	kV/mm	-	-	-
Dielectric constant	ε _r	-	-	-
Dielectric loss factor (10Mhz)	tan δ	-	-	-

The values indicated were measured on test specimens and are typical for this material.

However, the actual product properties may deviate from these values depending on part structure and the forming process.