



MATERIAL DATA SHEET

Material Type: Y-PSZ (Zirconium Oxide)

Properties		Unit	Specific Value
Main components		-	ZrO ₂ , Y ₂ O ₃ , Al ₂ O ₃
Purity		wt-%	> 99
Density		g/cm ³	≥ 6.00
Open Porosity		vol.-%	0
Average Size of Crystallites		μm	-
Bending Strength σ _m		MPa	≥ 1000
Compressive Strength	static	MPa	-
Young's Modulus		GPa	≥ 200
Hardness	HV1	-	1250
Maximum Service Temperature in Air		°C	1000
Linear Coefficient of Expansion	40 - 400 °C	10 ⁻⁶ / K	10.5
	40 - 800 °C	10 ⁻⁶ / K	11
Specific Heat		J / (kg * K)	400
Thermal conductivity	100 °C	W / (m * K)	2.5
Resistivity	20 °C	Ω * cm	1 * 10 ¹³
	300 °C	Ω * cm	1 * 10 ⁶
	500 °C	Ω * cm	1 * 10 ³
Typical Colour		-	White

The data indicated on this table are in line with the introductory German Industrial Standard DIN 60672-2 and relate to test specimens from which they were obtained. They are not unconditionally applicable to other forms of the same material. The data must be regarded as indicative only. All data refer to a temperature of 20 °C, unless otherwise specified.