

Material type: Mg-PSZ

FRIALIT FZM

Properties		Unit	Specific value	
Main components		-	ZrO ₂ , MgO	
Purity		wt-%	> 99.7	
Density		g / cm ³	≥ 5.7	
Open Porosity		vol.-%	0	
Average Size of Crystallites		µm	50	
Bending Strength σ_m	DIN EN 843-1	MPa	500	
Weibulls Modulus		-	> 15	
Toughness K_{Ic}	SEVNB	MPa * m ^{0.5}	6.3	
Compressive Strength		MPa	2000	
Young's Modulus		static	GPa	185
Poisson's Ratio		-	0.3	
Hardness	Knoop, 100 g	GPa	16	
Maximum Service Temperature in Air		°C	900	
Linear Coefficient of Expansion	20 - 100 °C	10 ⁻⁶ / K	9.3	
	20 - 500 °C	10 ⁻⁶ / K	10.4	
	20 - 900 °C	10 ⁻⁶ / K	10.6	
Specific Heat	20 °C	J / (kg * K)	400	
Thermal conductivity	20 °C	W / (m * K)	3	
	500 °C	W / (m * K)	2.3	
	900 °C	W / (m * K)	2	
Resistivity	20 °C	Ω * cm	10 ¹⁰	
	900 °C	Ω * cm	84	
Typical Colour		-	yellow	

The data indicated on this table are in line with the introductory German Industrial Standard DIN 40680 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.

The material is extremely resistant to corrosion.

We should be pleased to send you brochures about the corrosion resistance of oxide ceramics.