FZM

2023.04.03

Material Type: Mg-PSZ (magnesia partially stabillized zirconia) (ZrO_2, MgO)

MECHANICAL & PHYSICAL CHARACTERISTICS (TYP.)

Purity		[wt.-%]	>99.7
Density		[g/cm³]	≥5.70
Open porosity		[vol.-%]	0
Average size of crystallites		[µm]	50
Bending strength σ_m DIN EN 843-1		[MPa]	500
Weibull 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 HV1		[-]	1220
Maximum service temperature in air		[°C]	900
Linear coefficient of expansion	**-100 - 20 °C** **20 - 500 °C** **20 - 900°C**	[10^{-6}/K]	7.7 10.4 10.6
Specific heat 20 °C		[J/(kg*K)]	400
Thermal conductivity	**20 °C** **500 °C** **900° C**	[W/(m*K)]	3 2.3 2
Resistivity	**20 °C** **900 °C**	[Ω*cm]	10^{10} 84
Typical colour		[-]	yellow

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

KYOCERA Fineceramics Europe GmbH

E-Mail: info@kyocera-fineceramics.de · www.kyocera-fineceramics.de