

## DEGUSSIT FZY

2021.06.29

Material Type: Y-PSZ (yttria partially stabilized zirconia) ( $ZrO_2$ ,  $Y_2O_3$ ,  $Al_2O_3$ )

### MECHANICAL & PHYSICAL CHARACTERISTICS (TYP.)

Purity		[wt.-%]	>99.7
Density		[g/cm <sup>3</sup> ]	≥5.60
Open porosity		[vol.-%]	0
Average size of crystallites		[μm]	30
Bending strength $\sigma_m$ DIN EN 843-1		[MPa]	400
Compressive strength		[MPa]	2000
Young's modulus (static)		[GPa]	200
Hardness HV1		[-]	1400
Maximum service temperature in air		[°C]	1700
Linear coefficient of expansion	20 - 100°C	[10 <sup>-6</sup> /K]	9.2
	20 - 500°C		10.4
	20 - 1000°C		10.9
Specific heat 20 °C		[J/(kg*K)]	400
Thermal conductivity	100 °C	[W/(m*K)]	2.5
Resistivity	20 °C	[Ω*cm]	10 <sup>10</sup>
	600 °C		4*10 <sup>2</sup>
	1000 °C		15
Typical colour		[-]	white

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.