

## ANCeram – Technical Data

Alumina			96 %	99,6 %
$\rho_{th}$	Density (theoretical)	(g/cm <sup>3</sup> )	3,85	3,96
$\rho_m$	Density (as measured)	(g/cm <sup>3</sup> )	> 3,75	> 3,85
$\sigma_B$	Flexural strength	(MPa)	350	> 400
$\sigma_D$	Compressive strength	(GPa)	3	4
$K_{IC}$	Fracture toughness	(MPa m <sup>1/2</sup> )		5,4
E	Young's modulus	(GPa)	380	400
$\lambda$	Thermal conductivity	(W/mK)	19 ± 3	25 ± 4
$\alpha$	Coeff. of thermal expansion RT - 100 °C RT - 500 °C RT - 1000 °C	(10 <sup>-6</sup> K <sup>-1</sup> )		6,9 7,4 8,3
$c_p$	Specific heat	(J/kgK)		900 ± 20
	Volume resistivity	( $\Omega$ cm)	> 10 <sup>12</sup>	> 10 <sup>13</sup>
	Dielectric strength	(kV/mm)	≥ 20	≥ 20
$\epsilon_r$	Dielectric constant (at 1 Mhz)			9,9
$\tan \delta$	Loss tangent (at 1 MHz)			0,3 x 10 <sup>-3</sup>
	Max. temperature			1500°C
	Chemical resistance		good	Extreme

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