



MATERIAL DATA SHEET

Material Type: A-99 (Aluminum Oxide)

Properties		Unit	Specific Value
Main components		-	Al ₂ O ₃
Purity		wt-%	> 99.5
Density		g/cm ³	≥ 3.9
Open Porosity		vol.-%	0
Average Size of Crystallites		μm	-
Bending Strength σ _m		MPa	≥ 360
Compressive Strength	static	MPa	2350
Young's Modulus		GPa	≥ 360
Hardness	HV1	-	1400
Maximum Service Temperature in Air		°C	1200
Linear Coefficient of Expansion	40 - 400 °C	10 ⁻⁶ / K	7.2
	40 - 800 °C	10 ⁻⁶ / K	8
Specific Heat		J / (kg * K)	780
Thermal conductivity	100 °C	W / (m * K)	29
Resistivity	20 °C	Ω * cm	1 * 10 ¹⁴
	300 °C	Ω * cm	1 * 10 ¹²
	500 °C	Ω * cm	1 * 10 ¹⁰
Typical Colour		-	Ivory

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.