



## MATERIAL DATA SHEET

Material Type: AN-170 (Direct Sintered Aluminum Nitride)

Properties		Unit	Specific Value
Main components		-	AlN
Purity		wt-%	> 99
Density		g/cm <sup>3</sup>	≥ 3.3
Open Porosity		vol.-%	0
Average Size of Crystallites		μm	-
Bending Strength σ <sub>m</sub>		MPa	≥ 350
Compressive Strength	static	MPa	-
Young's Modulus		GPa	≥ 320
Hardness	HV1	-	1000
Maximum Service Temperature in Air		°C	800
Linear Coefficient of Expansion	40 - 400 °C	10 <sup>-6</sup> / K	4.6
	40 - 800 °C	10 <sup>-6</sup> / K	5.3
Specific Heat		J / (kg * K)	740
Thermal conductivity	100 °C	W / (m * K)	170
Resistivity	20 °C	Ω * cm	1 * 10 <sup>14</sup>
	300 °C	Ω * cm	1 * 10 <sup>12</sup>
	500 °C	Ω * cm	1 * 10 <sup>10</sup>
Typical Colour		-	Grey

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.