



Alumina

PROPERTIES		MASS UNIT	AL99-G
CERAMIC TYPE	Colour Type according to DIN VDE 0335		white - yellow
CHEMICAL	Al ₂ O ₃	Weight %	99.7
PHYSIKALISCH	Melting point	°C	2050
	open pores	Vol.%	0
	Technical density	g/cm ³	3.90
	Theoretical density	g/cm ³	3.98
	Crystal size	µm	ca. 5
THERMAL	Expansion coefficient linear (20 - 1.000°C)	10 ⁻⁶ • °C ⁻¹	8
	Max. Working temperature	°C	1700
	Thermal conductivity at 100°C	W • m ⁻¹ • °C ⁻¹	3,5
	<u>Thermal Shock Resistance</u> <u>Is not suitable for inductive heating</u> <u>medium</u>		<u>medium</u>
MECHANICAL	Hardness (Mohs)		9
	Hardness (Vickers)	kg/mm ²	1900
	Flexural Strength (3 point support at 20°C)	MPa	400
	Modulus of elasticity	GPa	390
	K1C Hardness at 20°C MPa - m ^{1/2}	MPa • m ^{1/2}	3.5
	Wear resistance according to ASTM C704-76a cm ³	cm ³	0.03
ELECTRICAL	Electrical resistance		
	at 20°C	Ohm • cm	10 ¹⁴
	at 500°C	Ohm • cm	10 ¹⁰
	at 1.000°C	Ohm • cm	10 ⁷
at 1.500°C	Ohm • cm	10 ⁴	

All data given are to be regarded as guidelines.