

A998 Alumina Material Properties

To Our Customers:

For your benefit, the following is a copy of the Material Properties Sheet provided to us by our Supplier.

Thank you for your business, we appreciate you very much. Thermal Support

Physical Properties	Unit	A998 Alumina
Composition ¹	weight % Al ₂ O ₃	99.8
Density ²	g/cm ³	3.89
Porosity	volume %	Impervious
Crystal Size	micron	
Color		Ivory
Mechanical Properties		
Hardness (Knoop)	GPa	11.1
4-point Bend ³	MPa	325
Strength (MOR)	ksi	47
K1C		
Thermal Properties		
Maximum		
Service	°C	1650
Temperature		
Thermal Expansion		
Coefficient	°C ⁻¹ (25-700°C)	7.5 x 10 ⁻⁶
Thermal		
Conductivity	W/m·°K	35
(20°C)	Btu·in/ft ² ·hr·°F	242
Electrical Properties		
Dielectric Strength	Volts/mil	200
Dielectric Constant	@1MHz @ 20°C	10
Volume	Ohm·cm @ 25°C	1014
Resistivity	Ohm·cm @ 300°C	2.5 x 10 ¹¹
	Ohm·cm @ 500°C	5.5 x 10 ⁸

1. Controlled by the Batch Composition
2. Measured by Pycnometer Immersion Technique
3. Per ASTM C 1161-02c

Properties not recorded are in testing.