

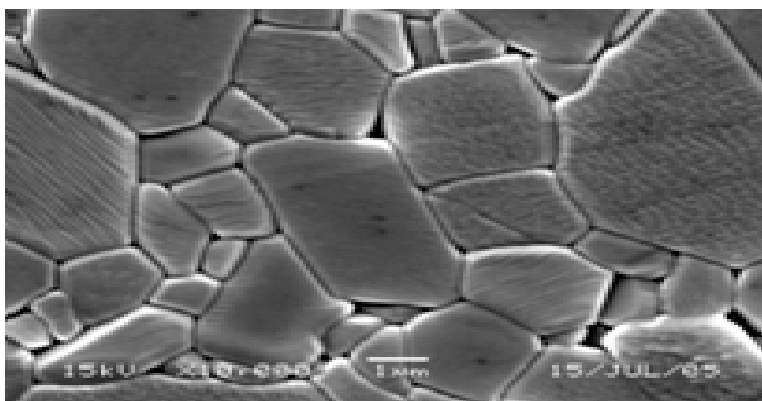
Al₂O₃ 99.8% Datasheet

Material Properties*

Properties	Test Standard	Unit	Value
Al ₂ O ₃ Content	GDMS	%	>99.80%
Color	--	--	Ivory
Density	ASTM-C20	g/cm ³	3.95
Porosity	--	--	Vacuum tight
Average Grain Size	Cross-Section	µm	15~20
Water Absorption	ASTM-373	%	0
Flexural Strength	ASTM-F417	MPa	375
Compressive Strength	ASTM-C773	MPa	2500
Elastic Modulus	ASTM-C848	GPa	380
Vickers Hardness	Vickers 1kg	GPa	18.1
Fracture Toughness K (1c)	Notched Beam	MPa m ^{1/2}	4.5
Thermal Expansion	ASTM-C372	x10 ⁶ /°C	8
Thermal Conductivity	ASTM-C408	W/m-K	30
Thermal Shock Resistance	--	Δ Tc	200
Dielectric Constant 1 mHz	ASTM-D150	--	9.9
Volume Resistivity	ASTM-D1829	ohm-cm	
20°C			>10 ¹⁴
300°C			10 ¹³
500°C			10 ¹⁰
Corrosion Resistance (weight loss)		Mg/cm ² /day 95% H ₂ SO ₄ @100°C	0.008
Dielectric Breakdown Strength	ASTM-D116	kV/mm	24

Typical Impurities*, ppm

Mg	150	Ga	<30
Na	100	Ti	<10
Ca	50	Cu	<5
Si	<50	Zn	<0.5
Fe	<20	Cr	<2
Zr	25	Ni	<1



The information contained in this document is believed to be accurate and reliable, but is presented without guarantee or warranty on the part of Advanced Ceramic Products LLC.



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