INTERNATIONAL CERAMIC ENGINEERING

235 Brooks Street, Worcester, MA 01606
phone: (508) 853-4700 fax: (508) 852-4101 email: sales@intlceramics.com

Engineering Answers in Advanced Ceramics

Aluminum Oxide (Al_2O_3) Property Data Sheet

Material Properties	*Units of Measure*	*AL203 94*	*AL203 96*	*AL203 99.5*	*AL203 99.8*
		PHYSICAL			
Color		White	White	White/Ivory	Ivory
Hardness	MOHS scale	9.0	9.0	9.0	9.0
Water Absorption	%	0	0	0	0
Specific Gravity	g/cc	3.96	3.96	3.85	3.92
		MECHANICAL			
Tensil Strength	PSI	25,000	25,000	25,000	22,000
Compressive	PSI	375,000	375,000	375,000	350,000
Flexural	PSI	45,000	45,000	45,000	43,000
Fracture Toughness	MPa x $m^{1/2}$	4.5	4.5	4.5	4.5
		THERMAL			
Thermal Conductivity	W/m ^oK @ 25 ^oC	22.4	24.7	35.6	38.9
Coefficient of Thermal Exp.	25-600 ^oC x 10^{-6} per ^oC	7.5	7.5	7.4	7.4
Max. usage temperature	^oC	1700	1750	1750	1750
		ELECTRICAL			
Te value	Temp @ which resistivity is 1 MEGOHM-CM C	840	840	940	1000
Dielectric constant	1 MHZ @ 25 ^oC	9.3	9.3	9.3	9.3
Dielectric strength	Volts/Mil	230	230	230	230
Loss factor	1 MHZ @ 25 ^oC	.0028	.0028	.0018	.0016

*The information set forth herein is offered by comparison only, and is not to be construed as absolute engineering data or constituting a warranty or representation for which we assume legal responsibility.

800-779-3321

Please visit our website at: **www.intlceramics.com**