

HUNAN STCERA CO., LTD.

Material Data Sheet

Properties	Unit	Alumina (Al ₂ O ₃)				
		96% Al ₂ O ₃	99% Al ₂ O ₃	99.5% Al ₂ O ₃	99.8% Al ₂ O ₃	99.9% Al ₂ O ₃
Color	—	White	White	Ivory	Ivory	Ivory
Density	g/cm ³	3.70	3.88	3.90	3.93	3.95
Water Absorption	%	0	0	0	0	0
Grain Size	μm	5~10	2~5	2~5	2~5	2~4
Flexural Strength	MPa	350	350	360	380	350
Fracture Toughness	MPa·m ^{1/2}	3~4	3~4	3~4	3~4	3~4
Vickers Hardness	GPa	13	14	15.5	16	16
Young' s Elastic Modulus	GPa	360	370	370	380	390
Thermal Conductivity	W/m·k	24	28	32	32	34
Thermal Expansion Coefficient	10 ⁻⁶ /°C	6.7	7.2	7.2	7.2	7.2
Dielectric Constant	—	9.1	9.5	9.6	9.6	9.9
Dielectric Loss Angle	—	0.0002	0.0001	0.0001	0.0001	0.0001
Dielectric Strength	V/m	15×10 ⁶	15×10 ⁶	15×10 ⁶	15×10 ⁶	15×10 ⁶
Specific Resistance	Ω·mm ² /m	> 10 ¹⁴	> 10 ¹⁴	> 10 ¹⁴	> 10 ¹⁴	> 10 ¹⁴