

DATASHEET: ALUMINA MATERIALS

PROPERTIES	Units	EA999	EA998	EA995	EA96	EA95	EA99P
Physical Properties							
% Alumina **	% wt	99.99	99.8	99.5	96	95	99.8
Density	g/cm ³	3.98	3.87	3.84	3.65	3.65	3.5
Open Porosity	%	0	0	0	0	0	1 - 7
Thermal Properties							
Max Operating Temp	°C	1900	1750	1750	1700	1650	1750
Max Operating Temp	°F	3450	3190	3190	3100	3000	3190
Thermal Conductivity (20 - 100oC)	W/m ^o K	29	27	25	23	22	20
Coefficient Thermal Expansion	x10 ⁻⁶ K ⁻¹	8.5	8.6	8.6	8.7	8.7	8.6
Mechanical Properties							
Flexural Strength	psi	50000	46400	45000	45000	41000	10150
Hardness- Mohs	Mohs	9	9	9	9	9	n/a
Tensile Strength	psi	25500	25,000	25,000	19,000	20,000	n/a
Electrical Properties							
Volume Resistivity at 20°C	ohm - cm	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹⁴	n/a
Volume Resistivity at 600°C	ohm - cm	10 ⁶	10 ⁶	10 ⁶	10 ⁶	10 ⁶	n/a
Dielectric Constant	25°C & 1 mhz	n/a	9.8	9.7	9.3	9.2	9

** - Full Chemical Analysis Available On Request

Additional material properties are available - please ask at enquiries@earthwaterfire.com

These values were established on test pieces and identify the characteristic data of our products. Transferring of these values into practice depends on individual geometry and application of each part.

For Further Information contact us at: enquiries@earthwaterfire.com