

MATERIAL SPECIFICATION CHART

Material Properties	Unit	Normal Porcelain	Dense Cordierite	Steatite Grade L-3	Steatite Grade L-5	Cordierite Porcelain	Cordio-Sillmanite Refractory	Cordierite Refractory	High Alumina Porcelain	Alumina Ceramic
Equivalent to DIN EN 60672		C-112	C-210	C-220	C-221	C-410	C-510	C-511	C-610	C-780
PHYSICAL PROPERTIES										
Colour		Cream/White/Grey	Off-white	Off White	Off White Satin Smooth	White	White/Buf	Brown	Off.White	Brown
Specific Geavity		2.3	2-2	2.6	2.7	2.3	1.8-1.9	1.9	2.6	3.2
Water Absorption	%	Less than 1	Less than 2%	0.5	0.0	0.0	22-24	15-20	0	0
Flexural Strength	Kg /cm ²	800	-	1200	1400	800	300	300	1200	2500
Compressive Strength	Kg /cm ²	2500	2500	4000	5000	2500	800	2000	3500	16000
Young's Modulus	Kg /cm ² X10 ⁶	0.7	-	0.8	1.0	0.75	-	-	1.0	2.0
Hardness	Moh's Scale	6-6.5	-	6-7	6-7	6-6.5	7-8	-	7.0	8.0
THERMAL PROPERTIRS										
Co-efficient of Thermal Expanzion (30-600 degree Celsius)	x 10 ⁻⁶ /°C	6-7	4-5	6-7	6-7	6-7	4-5	4-5	5-6	6-8
Thermal Shock Resistance Down Shock	°C	200	500	250	300	400	500	750	300	250
Thermal Conductivity	W/M°K	1.4-2.5	-	2-3	2-3	1.2-2.5	1.3-1.8	1.3-1.8	2-6	10-16
Safe Operation Temp.	°C	600	1000	1000	1050	600	1300	1000	1000	1100
Max. Temp.Withstanding Capacity	°C	1200	1200	1200	1200	1200	1350	1200	1200	1200
ELECTRICAL PROPERTIES										
Dielectric Strength (20°C)	KV/mm	8	-	10	20	10	-	-	10	18
Dielectric Costant(20°C::1MHz)		5.0	-	5.5	6.5	6.0	-	-	7.0	8.0
Volume Resistivity (20°C)	Ohm-cm	10 ¹¹	-	10 ¹¹	10 ¹¹	10 ¹⁰	-	-	10 ¹¹	10 ¹²
CHEMICAL COMPOSITION N.P.										
SiO ₂	%	70	70-75	60-65	60-65	70-72	45-50	55-57	40-45	-
Al ₂ O ₃	%	20	15-17	15-17	6-7	23-25	45-50	30-32	45-50	app. 80
Mg o	%	-	10-12	18-20	25-27	1-3	1-2	7-8	-	-
APPLICATION										
		LT Insulator, Lamp Holder, Media Lining Block etc.	Ferrules High heat Shock Items.	MCB Plates Beads, Insulators, Lamp Holders.	HRC Sq. Bodies, Band Heaters, EndSeabush, GrindingMedia, Liners.	HRC Round Bodies, Wire Wound, Resistor, Tube, Different Special Shape Insulators, Media.	Kiln Furniture Hot plates, Heating Element Support.	Bobbins, Multi Hole, Tubes, Heating Element Support.	High /Low Voltage Electrical Application Resistance Formers	Coil Formers, Wear Resistant Parts.