

Thermal	SI/Metric	Imperial
Coefficient of Expansion	–	–
CTE -100°C - 25°C	81 x 10 ⁻⁷ /°C	45 x 10 ⁻⁷ /°F
CTE 25°C - 300°C	90 x 10 ⁻⁷ /°C	50 x 10 ⁻⁷ /°F
CTE 25°C - 600°C	112 x 10 ⁻⁷ /°C	62 x 10 ⁻⁷ /°F
CTE 25°C - 800°C	123 x 10 ⁻⁷ /°C	68 x 10 ⁻⁷ /°F
Specific Heat, 25°C	0,79 kJ/kg°C	0.19 Btu/lb°F
Thermal Conductivity, 25°C	1,46 W/m°C	10.16 Btu.in/hr.ft²°F
Thermal Diffusivity, 25°C	7,3 x 10 ⁻⁷ m²/s	0.028 ft²/hr
Continuous Operating Temperature	800°C	1472°F
Maximum No Load Temperature	1000°C	1832°F

Mechanical	SI/Metric	Imperial
Density	2,52 g/cm³	157 lbs/ft³
Porosity	0%	0%
Young’s Modulus, 25°C (Modulus of Elasticity)	66,9 GPa	9.7 x 10 ⁶ PSI
Poisson’s Ratio	0,29	0.29
Shear Modulus, 25°C	25,5 GPa	3.7 x 10 ⁶ PSI
Knoop Hardness, 100g	250 kg/mm²	–
Modulus of Rupture, 25°C (Flexural Strength)	94 MPa (Minimum specified average value)	13 600 PSI
Compressive Strength (After polishing)	345 MPa (up to 900 MPa)	49 900 PSI (130 000 PSI)

Remark: The value is just for review, different using conditions will have a little difference.

Electrical	SI/Metric	Imperial
Dielectric Constant, 25°C	—	—
1 kHz	6,01	6,01
8,5 GHz	5,64	5,64
Loss Tangent, 25°C	—	—
1 kHz	0,0040	0.0040
8,5 GHz	0,0025	0,0025
Dielectric Strength (AC) avg. (25°C, under 0,3 mm thickness.)	45 kV/mm	1143 V/mil
Dielectric Strength (DC) avg. (25°C, under 0,3 mm thickness)	129 kV/mm	3277 V/mil
DC Volume Resistivity, 25°C	10 ¹⁷ Ohm.cm	10 ¹⁷ Ohm.cm

Chemical		Weight Loss (mg/cm²)		
Solution	pH	Time	Temp.	Gravimetric
5% HCl (Hydrochloric Acid)	0,1	24 hrs	95°C	~100
0,002 N HNO ₃ (Nitric Acid)	2,8	24 hrs	95°C	~0,6
0,1 N NaHCO ₃ (Sodium Bicarbonate)	8,4	24 hrs	95°C	~0,3
0,02 N Na ₂ CO ₃ (Sodium Carbonate)	10,9	6 hrs	95°C	~0,1
5% NaOH (Sodium Hydroxide)	13,2	6 hrs	95°C	~10
Chemical durability				Class
DIN 12111 / NF ISO 719		Water		HGB2
DIN 12116		Acid		4
DIN 52322 / ISO 695		Alkali		A3

Note: This value is for reference only and may vary slightly depending on the batch conditions.

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