



BASIC PROPERTIES

- High chemical purity
- Very low coefficient of thermal expansion
- Very high thermal choc resistance
- 1050°C working condition, 1200°C in peak.
- Shaped when molten, which allows complex shapes.
- Can be welded
- Very good optical properties. UV transmission



MATERIAL		QUARTZ (GE124)
Chemical Formula		SiO ₂
Aspect / color		White / transparent
Porosity		Impervious
Mechanical		Measuring unit
Poisson's ratio	-	0,17
Hardness Mohs	Mohs	7
Hardness Knoop		>600
Young modulus	GPa	70
Compression resistance	MPa	650-1100
Compression resistance	N/mm ²	1100
Tensile resistance	MPa	48
Flexion resistance	MPa	80
Tensile strength	N/mm ²	48
Tensile strength in usage	N/mm ²	6,9
Torsion modulus	N/mm ²	3,1 x 10 ³
Physical		
Maximum temperature use in neutral atmosphere	°C	1200
Absolute density	g/cm ³	2,2
Electrical resistivity at 20°	Ohm, m	10 ¹⁸
Electrical resistivity	Wcm	6 x 10 ¹⁰
Dielectric strength	kV/mm	25-40
Dielectric constant at 25°C and 1 MHz	Hz	3,8
Thermal		
Softening temperature	°K	1943
Specific heat at 25°	cal/g.°C	0,16
Expansion coefficient	x 10 ⁻⁶ K ⁻¹	0,58
Linear expansion coefficient 20-500°	x 10 ⁻⁶ /°C	0,45
Thermal conductivity at 20°	W/m.°K	1,40
Thermal shock resistance	Δ T°C	>1400
Optical		
Refractive index		1,4585

Diam. (in mm)	Long. (in mm)
1	1000
2	1000
3	1000
4	1000
5	1000
6	1000
7	1000
8	1000
9	1000
10	1000
11	1000
12	1000
13	1000
14	1000
15	1000
16	1000
17	1000
18	1000
19	1000
20	1000

*These values are for informational purposes only and do not bind company's responsibility.