

Quartz - Fused Balls

Formula: SiO₂

Diameter: 3mm

Quantity: 100 Pcs

Type: Precision Sphere

Sphericity: 0.625μm

CAS Number: 14808-60-7

UOM Code: 188-840-80

SKU: 1000073438

Product Code: SI61-SP-000130

Material Properties for Ceramics

Chemical Resistance

Element	Value
Acids - concentrated	Good
Acids - dilute	Good
Alkalis	Fair
Halogens	Good
Metals	Fair

Electrical Properties

Element	Value
Dielectric constant	3.8
Dielectric strength(kV mm ⁻¹)	25-40
Volume resistivity(Ohmcm)	10 ¹⁷ @25

Physical Properties

Element	Value
Refractive index	1.46
Useful optical transmission range	180-2500nm
Apparent porosity(%)	0
Water absorption - saturation(%)	0
Density(gcm ⁻³)	2.2

Thermal Properties

Element	Value
Melting point(C)	1715
Upper continuous use temperature(C)	1100-1400
Specific heat(J K ⁻¹ kg ⁻¹)	670-740@25°C
Thermal conductivity(W m ⁻¹ K ⁻¹)	1.46@20°C
Coefficient of thermal expansion(x10 ⁻⁶ K ⁻¹)	0.54@20-1000

Mechanical Properties

Element	Value
Tensile modulus(GPa)	72-74
Hardness - Knoop(kgf mm ⁻²)	820
Hardness - Vickers(kgf mm ⁻²)	1000
Shear strength(MPa)	70
Tensile strength(MPa)	48

Pultrusions

Element	Value
Compressive strength(MPa)	1100