

# Ruby Balls

**Formula:** Al<sub>2</sub>O<sub>3</sub>/Cr<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub>

**Diameter:** 0.5mm

**Quantity:** 10 Pcs

**Type:** Precision Sphere

**Sphericity:** 0.625μm

**CAS Number:** 1344-28-1

**UOM Code:** 015-927-37

**SKU:** 1000001988-group

**Product Code:** AJ60-SP-000120

## Material Properties for Ceramics

### Chemical Resistance

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

### Electrical Properties

Element	Value
Dielectric constant	7.5-11.5
Dielectric strength( kV mm <sup>-1</sup> )	15-50
Volume resistivity( Ohmcm )	10 <sup>12</sup> @25

### Physical Properties

Element	Value
Useful optical transmission range	150-5500nm
Apparent porosity( % )	0
Water absorption - saturation( % )	0
Density( gcm <sup>-3</sup> )	3.98

## Thermal Properties

Element	Value
Melting point( C )	2050
Upper continuous use temperature( C )	1800-1950
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	750@25°C
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	35-40@20°C
Coefficient of thermal expansion( x10 <sup>-6</sup> K <sup>-1</sup> )	5.8@20-1000°C

## Mechanical Properties

Element	Value
Tensile modulus( GPa )	350-390
Hardness - Knoop( kgf mm <sup>-2</sup> )	2000
Hardness - Vickers( kgf mm <sup>-2</sup> )	2500-3000
Tensile strength( MPa )	250-400

## Pultrusions

Element	Value
Compressive strength( MPa )	2100