

# Magnesia-stabilized Zirconia Rod (4% Magnesia)

**Formula:** ZrO<sub>2</sub>/MgO

**Diameter:** 5mm

**Length:** 50mm

**Stabilised With:** 4% Magnesia

**CAS Number:** 114168-16-0

**UOM Code:** 010-956-23

**SKU:** 1000001473-group

**Product Code:** ZR62-RD-000105

## Material Properties for Ceramics

### Chemical Resistance

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

### Physical Properties

Element	Value
Apparent porosity( % )	0
Water absorption - saturation( % )	0
Density( gcm <sup>3</sup> )	5.74

### Thermal Properties

Element	Value
Upper continuous use temperature( C )	1000
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	400-500@25°C
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	1.5-2.5@20°C
Coefficient of thermal expansion( x10 <sup>-6</sup> K <sup>-1</sup> )	5-10@20-1000°C

## **Mechanical Properties**

<b>Element</b>	<b>Value</b>
Tensile modulus( GPa )	200
Hardness - Vickers( kgf mm <sup>2</sup> )	1200
Shear strength( MPa )	414
Tensile strength( MPa )	300

## **Pultrusions**

<b>Element</b>	<b>Value</b>
Compressive strength( MPa )	1500-2000