

# Alumina Cylindrical Crucible

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

**Percentage Purity:** 99.8%

**Capacity:** 2.5ml

**Outside Diameter:** 16mm

**Inside Diameter:** 13.5mm

**Height:** 21mm

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

**UOM Code:** 106-670-20

**SKU:** 1000019695-group

**Product Code:** AL60-CB-000114

## 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                        | 9-10.1                |
| Dielectric strength( kV mm <sup>-1</sup> ) | Oct-35                |
| Volume resistivity( Ohmcm )                | >10 <sup>12</sup> @25 |

### Physical Properties

| Element                            | Value |
|------------------------------------|-------|
| Apparent porosity( % )             | 0     |
| Water absorption - saturation( % ) | 0     |
| Density( gcm <sup>-3</sup> )       | 3.9   |

## Thermal Properties

| Element   | Value        |
|---|--------------|
| Melting point( C )  | 2100         |
| Upper continuous use temperature( C )                                 | 1700         |
| Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )                   | 850-900@25°C |
| Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )             | 26-35@20°C   |
| Coefficient of thermal expansion( x10 <sup>-6</sup> K <sup>-1</sup> ) | 8@20-1000°C  |

## Mechanical Properties

| Element                                    | Value     |
|--|-----------|
| Tensile modulus( GPa )                     | 300-400   |
| Hardness - Knoop( kgf mm <sup>-2</sup> )   | 2100      |
| Hardness - Vickers( kgf mm <sup>-2</sup> ) | 1500-1650 |
| Shear strength( MPa )                      | 330       |
| Tensile strength( MPa )                    | 260-300   |

## Pultrusions

| Element                     | Value     |
|-----------------------------|-----------|
| Compressive strength( MPa ) | 2200-2600 |