

Al2O3 Alumina Ceramic Parts Datasheet

95% and 99% alumina rings, tubes, substrates and plates for insulation, wear and high temperature service up to 1650C.

Material: Alumina (Al2O3)

Performance advantages: high hardness, high strength, wear resistance, corrosion resistance, high temperature resistance of 1600 degrees, good heat dissipation, good insulation performance, high cost performance

Industry applications: machinery, electronics, chemicals, petroleum

Typical parts: special environment and electronic substrates, pump seals, wear resistant inserts, insulating washers or bushings, semiconductor components, aerospace components, automotive sensors, electrical or electronic insulators

99% 95% Al2O3 Alumina Ceramic Ring

Alumina ceramic (Aluminum Oxide or Al2O3) is an excellent electrical insulator and one of the most widely used advanced ceramic materials. Additionally, it is extremely resistant to wear and corrosion. Alumina components are used in a wide range of applications such as electronics, pump components and automotive sensors.

Material	Alumina ceramic
Size	Customized
Shape	Ring
Density	3.10-3.15 g/cm3
Rockwell Hardness	≥ 92HRA
Modulus of Elasticity	410 Mpa
Maximum use temperature	1600°C

Textile Machinery Ceramic Accessories

Alumina wear parts for textile machinery. Alumina ceramic has excellent thermal stability, is the material of choice for wear parts, is electrically insulating, and is insoluble in water and only slightly soluble in strong acid and alkaline solutions, which gives it high corrosion resistance.

Material	Alumina
Color	Pink, white, red, black
Size	D6*5 D8*8 D4*3 D9*9 D10*10 or custom
Shape	Custom

Refractory Alumina Ceramic Tube

Ceramic alumina tube widely used in highly corrosive and high-temperature environments like thermal power. We can supply the products according to the customer's drawings, dimension and performance requirement.

Color	White, pink
Density	3.85 g/cm3
MONS' Hardness	Grade 9

Maximum Use Temperature	1650°C
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Al2O3 Alumina Ceramic Substrates

Ceramic substrates are used in many electronic applications where a thin insulating layer of thermally stable material is required to conduct heat away from electronic components whilst electrically insulating them. Materials are alumina, zirconia, aluminum nitride and silicon nitride. Properties include excellent insulation, high mechanical strength, high thermal conductivity, low expansion coefficient, small dielectric constant, high-temperature resistance, excellent erosion and wear resistance, and good quality in chemical shock heat and cold.

Shape	Custom
Material	Alumina
Density	3.8 g/cm3
Working temperature	1600°C
MOQ	10 pcs
Min Thickness	0.1mm
Lead Time	1-2 days standard size in stock, 5-7 days customized size

99% Al2O3 Alumina Ceramic Sheet Blank Plate

White injection moulding 99% Al2O3 alumina ceramic sheet blank plate. High hardness, high strength, wear resistance, corrosion resistance, high temperature resistance of 1600 degrees, good heat dissipation, good insulation performance and high cost performance.

Size	Customized
Color	White, black
MOQ	1 pcs
Sample time	4-7 working days

99% Alumina Ceramic Properties

Physical Properties		
Color		Ivory/Beige
Density	g/cm3	3.85
Alumina Content	%	99%
Gas permeability		0
Water Absorption		0
Mechanical Properties		
MONS' Hardness	Grade	9
Rockwell Hardness	HRA	92
Vickers Hardness (Hv50)	Gpa(Kg/mm2)	15.7 (1600)
Flexural Strength (20C)	Mpa	330
Compressive Strength (20C)	Mpa	2000
Fracture Toughness (20C)	MPam1/2	4

Modulus of Elasticity	Gpa	350-400
Thermal Properties		
Thermal Conductivity (20C-400C)	W(m.K)	27.5
Thermal Expansion Coefficient	10-6/C	7.6
Thermal Shock Resistance	dT C	200
Maximum Use Temperature	C	1650
Electronic Properties		
Dielectric Strength	KV/mm	> 10
Dielectric Constant	Er	9.1
Dielectric Loss Angle (1MHz)		0.0002-0.0003
Volume Resistivity (20C)	ohm.cm	> 10^14

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