

Alumina Ceramic Aluminum Oxide Ceramic

Product Description

Alumina is the more common technical ceramic. UNIPRETEC provides a variety of alumina ceramic compositions with the different Al₂O₃ purity, including 95% / 96% / 99% / 99.5% / 99.8%. A grade is chosen for different using environment to ensure the alumina components meet the specific using requirement and cost-effective at the same time.



Product Advantages

- (1) Strongly acid and alkali corrosion resistant;
- (2) High hardness, wear and abrasion resistant;
- (3) High dielectric strength, electrical insulated;
- (4) Max. service temperature up to 1,700 degree C.

Advanced Finishing Service

- Precision grinding and lapping
- Laser machining
- Metallizing
- Metal joint ceramic brazing
- Threaded components
- Honing, glazing, drilling
- Mechanical assembly

Material Properties

Item	Unit	A950	A990	A995	A998
Material	—	95%Al ₂ O ₃	99%Al ₂ O ₃	99.5%Al ₂ O ₃	99.8%Al ₂ O ₃
Colour	—	White	Ivory	Ivory	Ivory
Density	Gpa	3.70	3.85	3.90	3.92
Vickers Hardness	g/cm ³	14	17	17.5	17.5
Flexural Strength	Mpa	310	360	370	380
Compressive Strength	Mpa	2200	2500	2600	2650
Electrical Resistivity	Ω*cm	≥10 ¹⁴	≥10 ¹⁴	≥10 ¹⁴	≥10 ¹⁴
Dielectric Strength	Kv/mm	15	17	17.5	17.5
Dielectric Constant	1MHz	8	9	9.5	9.6
Max. Working Temperature	°C	1500	1650	1700	1700
Thermal Conductivity	25°C,w/(m·k)	25	29	30	30.5
Resistance to Thermal Shock	ΔT(°C)	210	230	235	235

Typical Products



Ceramic Piston



Ceramic Filling Pump



Ceramic Plunger



Alumina Crucible



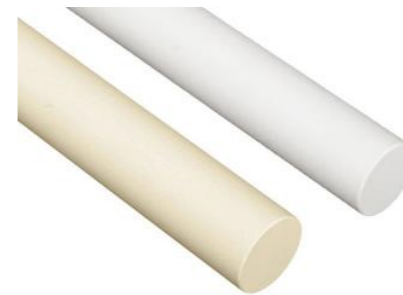
Ceramic Chamber Ring



Ceramic Washer

Main Application

Alumina ceramic components are used in a wide range of applications such as pump seals & shafts, electronic & electrical insulators, wear resistant inserts, semiconductor components, automotive sensors and etc.



Alumina Rod



Ceramic Setter



Alumina Tube

