

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 Al_2O_3 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

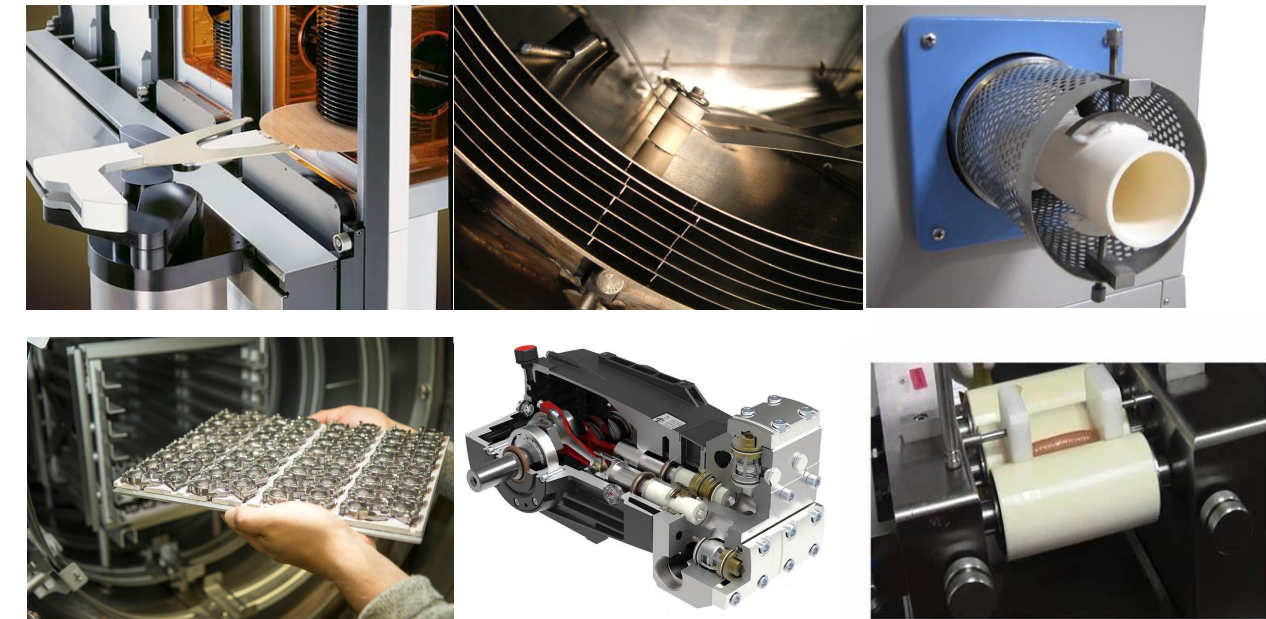
- Precision grinding and lapping
- Laser machining
- Metallizing
- Metal joint ceramic brazing
- Threaded components
- Honing, glazing, drilling
- Mechanical assembly

Material Properties

Item	Unit	A950	A990	A995	A998
Material	—	95%Al2O3	99%Al2O3	99.5%Al2O3	99.8%Al2O3
Colour	—	White	Ivory	Ivory	Ivory
Density	Gpa	3.70	3.85	3.90	3.92
Vickers Hardness	g/cm³	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

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.



Typical Products



Ceramic Piston



Ceramic Filling Pump



Ceramic Plunger



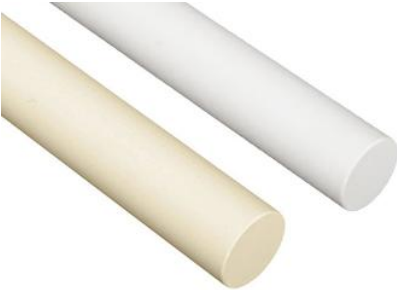
Alumina Crucible



Ceramic Chamber Ring



Ceramic Washer



Alumina Rod



Ceramic Setter



Alumina Tube