STANFORD
ADVANCED MATERIALS

Alumina

Aluminum Oxide
Al2O3

Exceeds or Meets Standard Industrial Specifications

Typical Products:

Alumina Plates
Alumina Tubes
Alumina Crucibles

Benefits

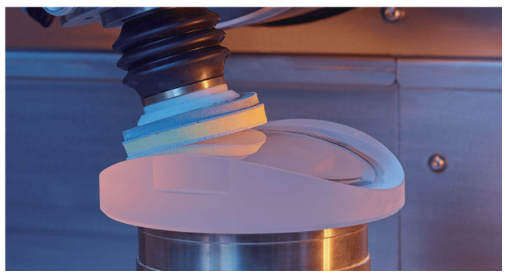
- High Hardness
- Wear Resistance
- Low Erosion Levels
- High Temperature Resistance
- Corrosion Resistance
- Bio-inertness

Alumina Ceramic Applications

Fillers / Abrasives / Refractories / Glass /Engineered Ceramics / Composite Fiber / Electrical Insulation / Cutting Tools / Military Uses / Bio Medical

Advanced Finishing Services

- Engineering design and support
- Precision grinding and lapping
- Laser machining
- Metallizing
- Ceramic-to-metal brazing
- Specialized coatings
- Threaded components
- Precision motion components
- Complex cleanroom assemblies



Alumina Tubes

Alumina Tube Specifications

	Unit	95% Al2O3	99% Al2O3
Bulk density	g /cm3	3.7	3.85
Hardness	HRA ≥	86	88
Flexure strength	Mpa≧	300	350
The max. temperature	℃	1500	1500
Linear expansion coefficient	×10-6/℃	7.5	8.2
Dielectric constant	εr20℃, 1MHz	9	9.2
Dielectric loss	tanδ×10-4, 1MHz	3	2
Volume resistivity	Ω·cm 20℃	10^13	10^14
Disruptive strength	KV/mm , DC≥	20	20
Acid resistance	mg/cm2 ≤	0.7	0.7
Alkali resistance	mg/cm2 ≤	0.2	0.1
Abrasive resistance	g/cm2 ≤	0.2	0.1
Compressive strength	MPa ≥	2500	2500
Rupture strength	MPa ≥	200	350
Elasticity modulus	GPa	300	350
Poisson ratio		0.2	0.22
Heat conductivity	W/m·K(20℃)	20	25

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