



STANFORD
ADVANCED MATERIALS



Alumina

Aluminum Oxide
 Al_2O_3

Exceeds or Meets Standard Industrial Specifications

Typical Products:

Alumina Plates
Alumina Tubes
Alumina Crucibles

Benefits

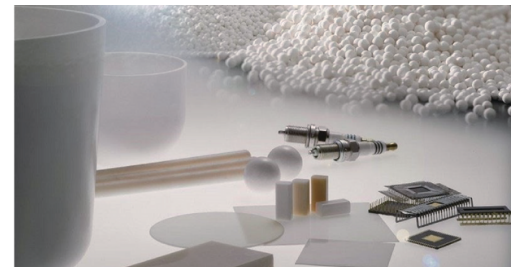
- High Hardness
- Wear Resistance
- Low Erosion Levels
- High Temperature Resistance
- Corrosion Resistance
- Bio-inertness

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% Al ₂ O ₃	99% Al ₂ O ₃
Bulk density	g /cm ³	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	ε _{20℃} , 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/cm ² ≤	0.7	0.7
Alkali resistance	mg/cm ² ≤	0.2	0.1
Abrasive resistance	g/cm ² ≤	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



Stanford Advanced Materials
23661 Birtcher Dr.
Lake Forest, California 92630
Tel: (949) 407-8904
Fax: (949) 812-6690
E-mail: sales@SAMaterials.com
Website: <https://www.samaterials.com>