



Tabular Alumina (Ultra-Low Na₂O)

General Characteristics

Chemical Formula	Al ₂ O ₃
Bulk Specific Gravity	3.55
Apparent Porosity	4.0%
Melting Temperature	2040°C
Refractive Index	1.76
Mohs' Hardness	9
Appearance	White Crystalline Granules or Powder

AluChem Tabular Aluminas are high density, fully shrunk, coarse crystalline alpha aluminas that have been converted to the corundum form. Tabular Alumina is produced by sintering ball-formed calcined alumina at a temperature just under the 2040°C fusion point of alumina oxide. These Tabular Alumina balls are then crushed, graded or screened, and ground to a wide variety of granular or powdered particle size distributions. Tabular Aluminas are presented in this product data. Some of these properties are highlighted by the following:

- Chemical inertness – resistant to most alkalis and mineral acids
- High density – true density of 3.96 with a bulk specific gravity of 3.55 and an apparent porosity of 4.0%
- Low water absorption – 1.0%
- Extreme hardness – 9 on the Mohs' scale and a Knoop hardness of 2,000
- High thermal conductivity - @100°C 0.068 cal/sec cm °C
- Good resistance to thermal and mechanical shock
- High heat capacity – specific heat @ 20°C 0.21 cal/gm/°C
- High electrical resistivity
- Excellent abrasion resistance
- De-ironed / De-Dusted
- Custom Particle Size Distribution(s) on crushed and ground products

Typical Chemical Composition

Properties	AC99
Al ₂ O ₃ , %	99.8
SiO ₂ , %	0.04
Fe ₂ O ₃ , %	0.02
Na ₂ O, %	< .05
L.O.I., (300-1200°C),%	0.00
Alpha Phase	99+

Tyler Sieve Specifications for Standard Products

Screened Converter - Discharge Balls Size
-3/4 inch + 1/2 inch

Crushed sizes Sieve Analysis
5% Max. On

Minus 1/4 inch	1/4 Inch
Minus 6 Mesh	6 Mesh
Minus 8 Mesh	8 Mesh
Minus 14 Mesh	14 Mesh
Minus 28 Mesh	28 Mesh

	Sieve Analysis
	2% Max On 5% Max Through
1/4 Inch to 8 Mesh	1/4 Inch 10 Mesh
3 Mesh to 6 Mesh	3 Mesh 8 Mesh
6 Mesh to 14 Mesh	6 Mesh 20 Mesh
8 Mesh to 14 Mesh	8 Mesh 20 Mesh
14 Mesh to 28 Mesh	14 Mesh 35 Mesh
28 Mesh to 48 Mesh	28 Mesh 65 Mesh

Ground Sizes Sieve Analysis
5% Max. On

Minus 48 Mesh	48 Mesh
Minus 60 Mesh	60 Mesh
Minus 100 Mesh	100 Mesh
Minus 325 Mesh	325 Mesh

