



ALUCHEM

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 purity – 99.5% Al₂O₃
- 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

Tabular Alumina

Typical Chemical Composition

Properties	AC99
Al ₂ O ₃ , %	99.5
SiO ₂ , %	0.04
Fe ₂ O ₃ , %	0.06
Na ₂ O, %	0.20
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
Minus 6 Mesh
Minus 8 Mesh
Minus 14 Mesh
Minus 28 Mesh

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

1/4 Inch to 8 Mesh
3 Mesh to 6 Mesh
6 Mesh to 14 Mesh
8 Mesh to 14 Mesh
14 Mesh to 28 Mesh
28 Mesh to 48 Mesh

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

Ground Sizes

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

Sieve Analysis
5% Max. On
48 Mesh
60 Mesh
100 Mesh
325 Mesh

