



# Calcined Aluminas



## General Characteristics

Chemical Formula  
Al<sub>2</sub>O<sub>3</sub>

Specific Gravity  
3.7-3.9

Melting Temperature  
2040°C

Refractive Index  
1.76

Mohs' Hardness  
9

Appearance  
White Crystalline Powder

## Typical Chemical Compositions

Properties	Normal Soda					Intermediate Soda	
	AC-1	AC-2	AC-2 (-325)	AC-13	AC-13 (-325)	AC-12	AC-12 (-325)
Al <sub>2</sub> O <sub>3</sub> , %	98.8	99.5	99.5	99.2	99.2	99.6	99.6
SiO <sub>2</sub> , %	0.01	0.01	0.01	0.02	0.02	0.02	0.02
Fe <sub>2</sub> O <sub>3</sub> , %	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Na <sub>2</sub> O (Total), %	0.38	0.30	0.30	0.20	0.20	0.17	0.17
L.O.I. (300-1200°C), %	0.75	0.14	0.14	0.30	0.30	0.14	0.14

## Typical Physical Properties

Ultimate Crystal Size, μm	<1	3-5	3-5	<1	<1	3-5	3-5
Surface Area, m <sup>2</sup> /gm	60-80	0.3-0.6	0.9	8-12	9-13	0.3-0.6	0.9
Specific Gravity	3.7	3.9	3.9	3.9	3.9	3.9	3.9
Bulk Density, Loose, lb/ft <sup>3</sup>	62	55	32	62	24	58	34
Bulk Density, Packed, lb/ft <sup>3</sup>	72	68	42	72	30	70	44

## Typical Tyler Standard Sieve Analysis

% on 100 Mesh	1-10	5-20	0	1-5	0	5-25	0
% on 200 Mesh	65-85	60-90	0.5	70-85	2	60-95	0.5
% on 325 Mesh	92-98	92-98	4	95-99	8	90-98	4
% through 325 Mesh	2-8	2-8	96	1-5	92	2-10	96
Median Particle Size by Sedigraph, in μm	-	-	5	-	2	-	5

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