GNPGraystar
Specialty Materials
AN ISO 9001 CERTIFIED COMPANY

TECHNICAL DATA SHEET
Calcined Bauxite

Typical Chemistry

	Typical	Specification
Aluminum Oxide (Al_2O_3)	91.1 %	87.0 % min.
Silicon Dioxide (SiO_2)	4.5 %	7.5 % max.
Titanium Dioxide (TiO_2)	3.1 %	3.5 % max.
Iron Oxide (Fe_2O_3)	1.1 %	1.75 % max.
Alkalis ($Na_2O + K_2O$)	< 0.03 %	---
Calcium Oxide (CaO)	< 0.02 %	---
Magnesium Oxide (MgO)	< 0.02 %	---
Phosphorus Pentoxide (P_2O_5)	< 0.05 %	---
LOI	0.15 %	0.50 % max.

Physical Characteristics

Bulk Density (g/cm^3): -6+12 USS via ASTM C357 Method	3.20	3.10 min.
Moisture	0.12 %	0.50 % max.

Sizes Available:
See Page 2 for Available Sizing

Description:

GNPGraystar offers Guyanese bauxite. Guyanese bauxite is the most refractory bauxite available in the world due to its higher alumina content and lower alkali and impurity content. Replacing Chinese bauxite with Guyanese bauxite results in a chemistry/performance upgrade in refractory mixes.

In mortars and plastics, this bauxite will extend the shelf life over Chinese bauxite considerably because it is less reactive in acid and phosphate-bonded refractories.

The mineralogy of Guyanese bauxite is alpha alumina and mullite, so there's no shrinkage or cracking when exposed to hot metal. This product actually has slight expansion at high temperatures versus the shrinkage in Chinese bauxite (containing alpha alumina and glass).

As a ceramic ball-milled product, this may also be used to substitute pricier calcined alumina material in bauxite and mullite mixes.

info@GNPGraystar.com

Rev. 02/2020

Northern Office
37 John Glenn Dr.
Amherst, NY 14228
716.759.6600

www.GNPGraystar.com

Southern Office
9 Simmonsville Rd.
Bluffton, SC 29910
843.815.5600

GNPGraystar
Specialty Materials
AN ISO 9001 CERTIFIED COMPANY

TECHNICAL DATA SHEET

Calcined Bauxite, cont.

Size	% Retained												
USS Sieve	3/8"	3	4	6	8	12	16	20	40	100	200	325	Pan
mm	9.5	6.7	4.74	3.35	2.36	1.7	1.18	0.85	0.425	0.15	0.075	0.045	
3 X 0	0	2 0-4		35 24-46		25 15-35		20 10-30					18 8-28
4 X 0		0	2 0-5		35 27-43			40 32-48					23 15-31
6 X 0			0	2 0-5	15 8-22			45 37-53	15 8-22				23 15-31
8 X 0				0	3 0-6			47 37-57	15 8-22				35 27-43
3 X 4	0	4 0-8	70 60-80	22 16-28									4 0-8
3 X 6	0	3 0-6		75 63-87	20 12-28								2 0-4
3 X 8	0	2 0-4	25 15-35		60 50-70			10 5-15					3 0-6
4 X 8		0	4 0-8		82 72-92			10 5-15					4 0-8
6 X 16			0	2 0-4		61 49-73	30 19-41						7 0-14
8 X 20				0	2.5 0-5			80 70-90					17.5 10-25
16 X 0					0		4 0-8	13 5-21	31 18-44	36 24-48			16 4-28
20 X 0						0		3 0-6	44 32-56	40 28-52			13 5-21
100 X 0									Tr.		40 32-48		60 52-68
200 X 0									Tr.		25 15-35		75 65-85
325 X 0									Tr.			25 15-35	75 65-85

Rev. 02/2020

Northern Office
37 John Glenn Dr.
Amherst, NY 14228
716.759.6600

www.GNPGraystar.com

Southern Office
9 Simmonsville Rd.
Bluffton, SC 29910
843.815.5600