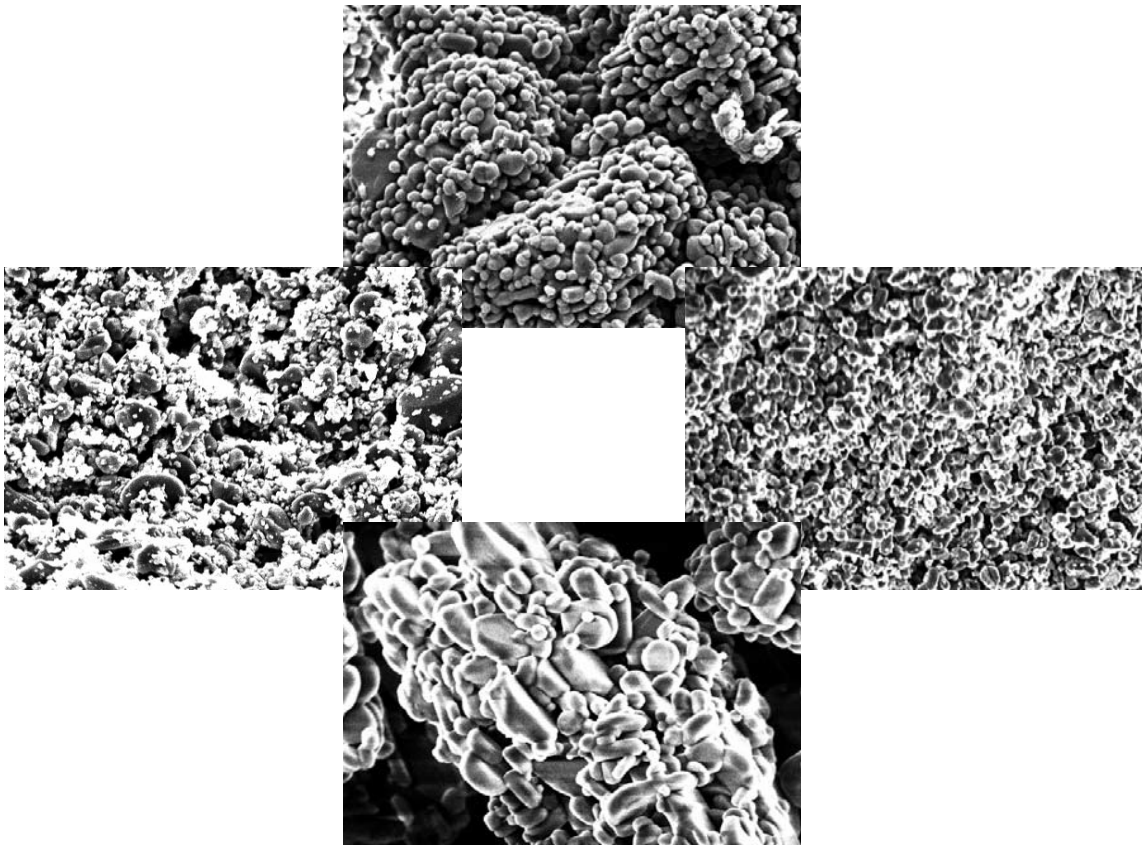
Americas Regional Product Data

ALMATIS

Calcined and Reactive Aluminas for Refractories



Ground Calcined Aluminas for Refractories

Ground		A 2 - 325			A 35 - 325			A 10 - 325			A 13 - 325		
Properties/Method	**Unit**	**Typical**	**Min.**	**Max.**	**Typical**	**Min.**	**Max.**	**Typical**	**Min.**	**Max.**	**Typical**	**Min.**	**Max.**
Specific Surface Area BET	[m^2/g]	0.6		1.1	0.7		1.1	0.5			11	7.5	17
Particle Size D50*	[µm]	5.9			5.8			7.9	6.5	9.7	3.6		
Wet -325 Mesh Sieve	[%]	97.6	95.0		97.3	95.0		98.5	95.0		96.0	90.0	
Chemical Composition													
Al_2O_3 by difference	[%]	99.6			99.7			99.7			99.8		
Na_2O	[%]	0.40		0.45	0.11		0.18	0.08		0.13	0.12		0.30
Fe_2O_3	[%]	0.02		0.04	0.02		0.04	0.02		0.07	0.02		0.03
SiO_2	[%]	0.02		0.05	0.02		0.04	0.02		0.14	0.01		0.03

The typical product properties are based upon the actual averages from production data. The min-max data show our standard product specification data for these products.
All data are based upon Almatis standard test methods. All test methods are available upon request.
Chemistry for all products is assured through process control and verification of incoming alumina chemistry.
Each product is certified to conform to the chemistry specifications listed, thus each product lot is not tested.
* Laser granulometry Bettersizer S3 Almatis global standard

Reactive Aluminas for High Performance Refractories

		A 1000 SG			RG 4000			A 152 SG			T60 / T64 -20 micron**		
Properties / method	**Unit**	**Typical**	**Min.**	**Max.**	**Typical**	**Min.**	**Max.**	**Typical**	**Min.**	**Max.**	**Typical**	**Min.**	**Max.**
Specific Surface Area BET	[m^2/g]	8.2	6.5	11.0	7.2	6.0	9.5	4.3	3.5	4.8			
Particle Size D50*	[µm]	0.5	0.4	0.7	0.6	0.4	0.8	1.2	1.1	1.4	3.7		5.0
Particle Size D90*	[µm]	1.6		2.5	2.0		3.0	2.5		3.0			
Particle Size +0.020mm	[%]										5.0		10.0
Wet -325 Mesh Sieve	[%]	99.6	99.2					99.8	99.4				
Grain Size Distribution		Mono-modal			Mono-modal			Mono-modal					
Chemical Composition													
Al_2O_3	[%]	99.8			99.8			99.8			99.3		
Na_2O	[%]	0.07		0.10	0.08		0.10	0.06		0.10			0.40
Fe_2O_3	[%]	0.02		0.03	0.02		0.04	0.02		0.05			
MgO	[%]	0.05		0.06	0.03			0.07		0.10			
SiO_2	[%]	0.03		0.05			0.08	0.03		0.08			0.15
CaO	[%]	0.02		0.05	0.03			0.02		0.05			
Fe Magnetic	[%]												0.02

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*Laser granulometry Bettersizer S3 Almatis global standard
**SDS number for this product is 154

Reactive Aluminas for High Performance Refractories

		A 20 SG			A 220 SG			A 3000 FL			CL 370		
Properties / method	**Unit**	**Typical**	**Min.**	**Max.**	**Typical**	**Min.**	**Max.**	**Typical**	**Min.**	**Max.**	**Typical**	**Min.**	**Max.**
Specific Surface Area BET	[m^2/g]	1.3	0.8	1.8	0.9	0.5	1.7	2.5	1.6	3.8	3.0	2.6	3.4
Particle Size D50*	[µm]	2.9	2.2	4.1	4.9	3.6	6.3	2.6	2.0	3.1	2.2	1.6	2.8
Particle Size D90*	[µm]	8.3		11.1	14.5						7.5	5.0	10.0
Wet -325 Mesh Sieve	[%]	99.7			99.6			99.8					
Grain Size Distribution		Mono-modal			Mono-modal			Bi-modal			Bi-modal		
Chemical Composition													
Al_2O_3	[%]	99.6			99.6			99.8			99.7		
Na_2O	[%]	0.23		0.35	0.35		0.45	0.07		0.10	0.10		0.14
Fe_2O_3	[%]	0.02		0.05	0.02		0.05	0.02		0.03	0.03		0.04
SiO_2	[%]	0.02		0.08	0.02		0.08	0.02		0.03	0.03		0.07
CaO	[%]	0.03			0.03			0.03			0.03		

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Standard Packaging

- 50 lb paper bags - 70 per pallet
- 25 kg paper bags - 40 per pallet
- 2500 lb super sacks - 1 per pallet
- 1 mt super sacks - 1 per pallet
- Other options are available with upcharge

Calcined Aluminas for Refractories

Product Description

Due to the excellent high temperature properties of α-Alumina, Calcined Aluminas are used in many refractory applications, both in monolithic and shaped products.

Depending on the degree of milling and crystal size, Calcined Aluminas serve a variety of different functions in refractory formulations.

Most important are:
- Upgrade product performance by increasing overall Alumina content of these formulations using natural raw materials in order to improve refractoriness and mechanical properties.
- Improve particle packing by increasing the amount of fine particles resulting in better mechanical strength and abrasion resistance.
- Form a matrix of high refractoriness and good thermal shock resistance by reacting with binder components like Calcium Aluminate Cement and / or clays.

Reactive Aluminas for High Performance Refractories

Product Description

The fully ground reactive aluminas are specially designed for the production of high performance refractories, where defined particle packing, rheology and consistent placement characteristics are as important as superior physical properties of the final product.

The highly controlled fine particle size distribution down to the sub-micron range and their excellent sintering reactivity give Reactive Aluminas unique functions in refractory formulations.

Most important are:
- Reduce mixing water of monolithic refractories by helping to optimize particle packing.
- Increase abrasion resistance and mechanical strength by the formation of strong ceramic bonds.
- Increase high temperature mechanical performance by substitution of other superfine materials of lower refractoriness.

Contact for sales, technical information and application assistance

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