TECHNICAL DATASHEET

A F T A B
آفتاب تجارت امن بین‌الملل

Calcined Alumina for Technical Ceramics Industry

AFTAB COMPANY offers a wide range of calcined alumina used in technical ceramic parts production. Alumina is an important precursor for production of technical ceramics. Parameters influencing the properties of final product are calcination degree, soda content and particle size distribution. Calcined alumina is classified as hard calcined and determines the crystal size of alpha phase. The higher calcination degree, the larger crystal sizes and lower BET surface area. Soda content is controlled according to customer need. Grinding can be continuous or batch. Enough milling eliminates any residue agglomerates,making particle size distribution approach toward crystal size distribution.

Advantages

High chemical corrosion resistance Superior thermal and electrical resistance High mechanical strength, hardness and wear resistance Dimensional stability and good ability to dissipate heat at high temperatures.

Applications

These grades of calcined alumina are used in wide range of applications such as grinding media, lining, wear parts, high voltage insulators, spark plugs, catalyst carriers, porous ceramics, filtration, ceramic rollers, ceramic honeycombs, investment casting, glasses, IC packages, and semiconductors.

Chemical Analysis and Physical Specifications

	Typical Values [1]	Hard Calcined						Medium Calcined						Low Calcined	
		Unground			Ground [2]			Unground				Ground		Unground	
		Normal Soda	Medium Soda	Low Soda	Normal Soda	Medium Soda	Low Soda	Normal Soda	Low Soda	Normal Soda	Low Soda	Low Soda		Normal Soda	
Physical Properties	Unit	AH200	AH210	AH220	AH202-45	AH212-45	AH222-45	AM100	AM120	AM300	AM320	AM121	AM321	AL100	AL500
BET	m^2/g	1-2	1-2	1-2	1-2	1-2	1-2	2-3	2-3	3-5	3-5	2-3	3-5	15-20	35-40
D_{50}	µm	75	75	75	6	6	6	80	80	80	80	1.7	2	85	85
Screen Residue >45 µm	%	-	-	-	<2	<2	<2	-	-	-	-	<0.1	<0.1	-	-
Chemical Properties															
Alpha Alumina Content	%	≈95	≈95	≈95	≈95	≈95	≈95	≈93	≈93	≈90	≈90	≈93	≈90	<70	<70
Al_2O_3	%	99.6	99.7	99.7	99.6	99.7	99.7	99.6	99.7	99.6	99.7	99.7	99.7	99.6	99.6
Na_2O	ppm	3500	2500	1500 [3]	3500	2500	1500 [3]	3500	1500 [3]	3500	1500 [3]	1500 [3]	1500 [3]	3500	3500
CaO	ppm	150	150	150	150	150	150	150	150	150	150	150	150	150	150
SiO_2	ppm	100	550	850	100	550	850	100	850	100	850	850	850	100	100
Fe_2O_3	ppm	115	115	115	115	115	115	115	115	115	115	115	115	115	115

[1] For allowable range of properties refer to datasheets
[2] Also available in narrower particle size distribution and lower top cuts
[3] Also available in ultra low soda values (≤1500)

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