



ARCIRESA

ARCILLAS REFRACTARIAS, S.A

IS PROUD TO INTRODUCE

THE BEST CALCINED BAUXITE IN THE WORLD



FROM A UNIQUE DEPOSIT IN GUYANA, PROPERTY OF FBX- FIRST BAUXITE CORPORATION (USA) WHERE IT IS BEING MINED THE BEST LOW-IRON RAW BAUXITE IN THE WORLD

BauxSTAR

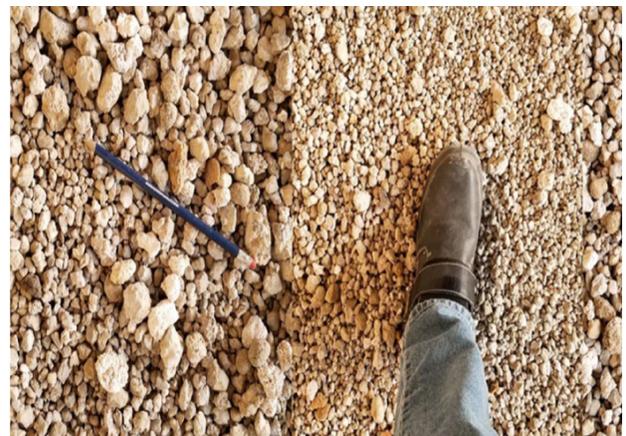
IS THE HIGHEST QUALITY BAUXITE FROM THE BONASIKA DEPOSITS IN GUYANA, CALCINED IN SPAIN, WITH VERY HIGH ALUMINA, LOW IRON CONTENT AND HIGH DENSITY FOR THE EXCLUSIVE PRODUCTION IN EUROPE OF REFRACTORY BAUXITE FOR ALUMINA BRICKS AND CONCRETES.



Arciresa Factory Spain

Since 1952 ARCIRESA is the European benchmark in the calcination and milling of refractory raw materials. Arciresa calcines its productions of chamottes, expanded clay, metakaolin, light weight chamotte, bauxites, mullites and FBA (BFA alternative) in its two rotary kilns. Located in the north of Spain and close (20km) to Avilés and Gijón ports, optimal for importing into EU the most suitable raw materials, and later exporting finished products worldwide.

- » Millings are performed in three impact mills, designed for not adding free-metal iron to the final products.
- » Finer sizes are manufactured in three pendular mills, obtaining finished less than 90-50 microns products.
- » An alumina ball “maxxmil” is able to obtain 5 micron products.
- » A modern high-frequency sieving facility was specifically designed for producing fepa sizes, mostly destined to abrasive and foundry sectors.
- » In addition to several facilities for crushing coarser sizes, and others for processing softer minerals, a total of 15 griding and screening facilities are available for processing more than 70.000 mt. per year.
- » All production processes are equipped with high intensity electromagnets.
- » Bulk materials, in big bags or bagged and palletized are shipped to our customers by ship, container or truck.
- » Typical sizes are 0-1mm / 1-3mm / 3-5mm / 5-10mm / din70. - other sizes on request.



Washing Plant Guyana

PRODUCTION CAPACITY OF CALCINED PRODUCTS EXCEEDS 100.000 MT. PER YEAR.

ARCIRESA HAS THE MOST MODERN AND EFFICIENT CALCINING AND GRINDING TECHNIQUES.

THE CONTINUOUS QUALITY CONTROLS ACCORDING TO UNE/EN/ISO9001 ASSURES THE SUITABILITY OF THE CALCINED PRODUCT.

BauxSTAR

Chemical Analysis (ROK)

%	Typical	Guaranteed
Al ₂ O ₃	91.39	Min 90%
SiO ₂	4.94	Max 6.5%
Fe ₂ O ₃	0.73	Max 0.9%
TiO ₂	2.82	Max 4%
CaO	<0.1	—
MgO	<0.1	—
Na ₂ O	0.03	Max 0.1%
K ₂ O	< 0.1	Max 0.1%

Physical Properties

	Bulk density		Water absorption		Apparent porosity			
	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed		
ND	3.17 g/cm ³	3.10 g/cm ³	ND	4.21%	-	ND	13%	-
HD	3.24 g/cm ³	3.20 g/cm ³	HD	3.51%	-	HD	11%	-
SHD	3.29 g/cm ³	3.24 g/cm ³	SHD	2.15%	-	SHD	7%	-

Mineralogical spec.

Main Phase	α- alumina
Secondary Phase	Mullite



CHEMICAL ANALYSIS (ROK)			PHYSICAL PROPERTIES (ROK)		
	Specifications	Typical		Typical	Specifications
%Al ₂ O ₃	Min.90	92	Bulk density,g/cm ³	3.55	Min.3.50
%SiO ₂	Max.6		Water absorption,%	0.8	Max.1.2
%TiO ₂	Max.4		Apparent porosity,%	3.00	Max.4
%Fe ₂ O ₃	Max.0.9		PHASE ANALYSIS		
%CaO	***		Major phase	α-alumina(corundum)	
%MgO	***		Minor phases	mullite	tialite
%Na ₂ O	Max.0.1				
%K ₂ O	Max.0.1				
AVAILABLE SIZES					
Din70	0-0.2mm	0-0.5mm			
0-1mm	1-3mm	2-6mm			

OTHER INFORMATION

FBA is a high-alumina sintered raw material, alternative to brown fused alumina (BFA) in various refractory applications.

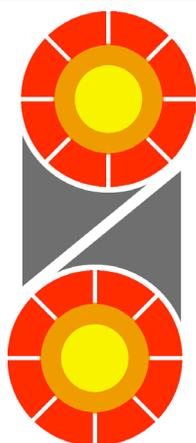
FBA production technology is based on 2 high-temperature firing stages of top quality bauxite ore, that previously under goes an homogenization process. As a result, **FBA** aggregates exhibit the following properties:

- High homogeneity (all sizes are chemically uniform).
- High rate of densification, minimum water absorption and very low open porosity.
- Absence of residual carbides and metallic impurities.

	Products										
	Al ₂ O ₃ (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	TiO ₂ (%)	CaO (%)	MgO (%)	Na ₂ O (%)	K ₂ O (%)	C (%)	B.D. g/cm ³	A.P. (%)
ACEGUNIT-SETTING ACCELERANT	3,00				34,00		19,00				
ALUMINA (EX. G-4)	99,68	0,014	0,017		0,018		0,24				
ALUMINA (TABULAR)	99,50	0,15	0,05				0,21			3,59	3
ANDALUSITE	59,00	38,10	0,80	0,22	0,10	0,11	0,05	0,35		3,10	
ARCAST 47	46,54	48,78	1,12	3,10	0,14	0,10	0,09	0,09		2,59	4
AREXPAN - EXPANDED CLAY	17,00	59,50	14,30	0,90	2,00	1,50	0,50	3,00			
ARSOSIL (SODIUM SILICATE)		26,70					8,20				
CLAY 32	35,30	47,90	1,50	0,29	0,23	0,48	0,10	1,44			
BAUXITE CH 75	75,90	17,07	2,08	3,19	0,45	0,27	0,06	0,54		2,65	
BAUXITE CH 80	80,54	12,46	2,09	3,24	0,43	0,13	0,05	0,13		2,95	
BAUXITE CH RK 85-88	86,05	8,25	1,56	3,24	0,30	0,12	0,03	0,13		3,19	6
BAUXSTAR 85	85,62	10,54	0,82	2,72	<0,1	<0,1	0,03	<0,1		3,04-3,14	12
BAUXSTAR 86	86,27	8,19	1,18	3,30	0,26	0,14	0,04	0,11		3,14	8
BAUXSTAR 90 ND/HD/SHD	91,39	4,94	0,73	2,82	<0,01	<0,1	0,03	<0,1		3,17/3,24/3,29	13/11/7
BENTOAR ULTRA	14-17	48-52	14-16	1-2	1,5-2,5	1-2	2-3				
CEMENT A-725	51,8	7,3	1,8		33,2						
CEMENT ISTRA 40	38-42	6,00	13-17		36-40	1,50					
CEMENT ISTRA 50	50-53	6,00	3,00		40,00	1,50					
CHAMOTTE N 38/40	39,08	56,56	1,12	2,81	0,22	<0,1	0,07	<0,1		2,56	3
CHAMOTTE N 40/42	40,72	54,61	1,25	2,94	0,15	0,09	0,05	0,09		2,57	4
CHAMOTTE N 42/44	42,73	51,91	1,18	3,19	0,22	0,21	0,11	0,09		2,59	4
CHAMOTTE N 44/46	44,76	49,89	1,25	3,01	0,22	0,21	0,1	0,09		2,62	4
CHAMOTTE LIGHTWEIGHT	39,04	55,7	1,77	0,55	0,3	0,5	0,07	1,65		1,00	
FBA	92,00	<6	<0,9	<4			<0,1	<0,1		3,55	3
FUSED ALUMINA (WHITE)	99,53	0,05	0,03				0,24			3,60	
FUSED ALUMINA (CHROME)	85,00	0,05	0,05	0,01	0,01	1,1	0,05	2,7	Cr ₂ O ₃ 11,00	3,6-3,8	
FUSED ALUMINA (BROWN)	95,38	1,12	0,17	2,6	0,18	0,2	0,03	0,08		3,85	2
FUSED SILICA		99,99									
GRAPHITE +194/+894									94,36		
GRAPHITE -280 (AMORPHOUS)									80,9		
GRAPHITE (EXPANDABLE)									91,20		
KYANITE	57,50	40,30	0,60	1,20	<0,04	<0,03	<0,04	<0,07		3,2 - 3,7	
MAGNESITE 90	0,85	2,50	1,59	0,13	1,60	92,80	0,02	0,03		3,15	
MAGNESITE 95	0,52	1,85	0,70		1,43	95,16				3,24	
MAGNESITE 97 (ELECTROFUSED)	0,09	0,59	0,48		1,28	97,25				3,51-3,52	
MAGNESITE AS	0,1	0,75	0,01		2,51	96,61					
METAKAOLIN SUPER		94,69			0,10	0,11					
MULPESER 60	60,53	34,02	1,41	2,36	0,25	0,65	0,4	0,08		2,70	2
MULPESER 70	69,78	25,52	1,56	2,56	0,22	0,10	0,18	0,05		2,84	3
SILICA FUME	0,21	94,82	0,10		0,40	0,30	0,15	0,40			
SILICON CARBIDE											
VERMICULITE	12,50	41,00	5,80			24,7		5,00			
WOLLASTONITE		48-52	<0,5	<0,05	42-46	<2					

B.D.=Bulk density

A.P.=Apparent porosity



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