



TECHNICAL DATA SHEET

PRODUCT: White fused alumina

NAME: White fused alumina

Description:

White fused alumina was made from the high quality alumina by melting above 2200°C in the electric arc furnace and cooling.

White fused alumina is white with the main crystal phase alpha-Al₂O₃. It is produced in titling electric arc furnace has the advantage of high bulk density and low porosity and the volume stability and thermal shock resistance can be improved.

Physical properties:

Physical Properties	
Hardness: Vicker	2200-2400kg/mm ²
Hardness: Mohs	9.0 min
Specific Gravity	3.96g/cm ³
Bulk Density	1.55-1.95g/cm ³
Particle Shape	Blocky, Sharp
Color	white
Melting Point	2050 °C

Typical Chemical Composition

Item	Grain F8-F220	Micro Powder F230-F2000	Fraction 0-1-3-5-8mm	Fine Powder 100F,200F,325F
AL ₂ O ₃	99.53%	99.32%	99.59%	99.28%
SiO ₂	0.06%	0.14%	0.04%	0.14%
NA ₂ O	0.23%	0.28%	0.24%	0.27%
Fe ₂ O ₃	0.07%	0.03%	0.02%	0.05%
CaO	0.03%	0.05%	0.02%	0.04%

Applications

Bonded abrasive tool

Coated abrasive tool

Reusable abrasive

Grinding, lapping & polishing medium

Industrial ceramics

Wear resistant coating

Typical Size

Grit designation	Mean diameter in um
F4	4890
F5	4125
F6	3460
F7	2900
F8	2460
F10	2085
F12	1765
F14	1470
F16	1230
F20	1040
F22	885
F24	745
F30	625
F36	525
F40	438
F46	370
F54	310
F60	260
F70	218
F80	185
F90	154
F100	129
F120	109
F150	82
F180	69
F220	58

Grit designation	D3(um)	D50(um)	D94 (um)
F230	<82	53.0±3.0	>34
F240	<70	44.5±2.0	>28
F280	<59	36.5±1.5	>22
F320	<49	29.2±1.5	>16.5
F360	<40	22.8±1.5	>12
F400	<32	17.3±1.0	>8
F500	<25	12.8±1.0	>5
F600	<19	9.3±1.0	>3
F800	<14	6.5±1.0	>2
F1000	<10	4.5±0.8	>1
F1200	<7	3.0±0.5	>1(at 80%)
F1500	<5	2.0±0.4	>0.8(at 80%)
F2000	<3.5	1.2±0.3	>0.5(at 80%)

JIS Grit Size	D0(Micron)	D3(Micron)	D50(Micron)	D94(Micron)
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#240	≤ 127	≤ 103	57.0±3.0	≥ 40
#280	≤ 112	≤ 87	48.0±3.0	≥ 33
#320	≤ 98	≤ 74	40.0±2.5	≥ 27
#360	≤ 86	≤ 66	35.0±2.0	≥ 23
#400	≤ 75	≤ 58	30.0±2.0	≥ 20
#500	≤ 63	≤ 50	25.0±2.0	≥ 16
#600	≤ 53	≤ 41	20.0±1.5	≥ 13
#700	≤ 45	≤ 37	17.0±1.5	≥ 11
#800	≤ 38	≤ 31	14.0±1.0	≥ 9.0
#1000	≤ 32	≤ 27	11.5±1.0	≥ 7.0
#1200	≤ 27	≤ 23	9.5±0.8	≥ 5.5
#1500	≤ 23	≤ 20	8.0±0.6	≥ 4.5
#2000	≤ 19	≤ 17	6.7±0.6	≥ 4.0
#2500	≤ 16	≤ 14	5.5±0.5	≥ 3.0
#3000	≤ 13	≤ 11	4.0±0.5	≥ 2.0
#4000	≤ 11	≤ 8.0	3.0±0.4	≥ 1.8
#6000	≤ 8.0	≤ 5.0	2.0±0.4	≥ 0.8
#8000	≤ 6.0	≤ 3.5	1.2±0.3	≥ 0.6

SECTION SAND AND FINE POWDER										
Size	Unit	Certified Value		Typical Value						
8-5mm	mm	+8.00	-4.00	+9.52	+8.00	+6.70	+5.60	+4.75	-4.00	-
	%	5	5	0	0-5	35-55	75-95	90-100	0-5	
6-3mm	mm	+5.60	-2.80	+8.00	+6.70	+5.60	+4.75	+3.35	+2.80	-2.80
	%	40max	10max	0	0-5	15-35	40-65	75-95	90-100	0-10
5-3mm	mm	+4.75	-2.80	+5.6	+4.75	+3.35	+2.80	-2.80		
	%	10max	10max	0	0-10	60-80	90-100	0-10		
3-1mm	mm	+2.80	-1.0	+4.75	+3.35	+2.80	+2.00	+1.18	+1.00	-1.00
	%	10max	10max	0	0-5	1-10	30-50	70-90	90-100	0-10
1-0mm	mm	+1.00	-0.212	+1.18	+1.00	+0.50	+0.212	-0.212		
	%	5max	35max	0	0-5	30-50	65-85	0-35		
100mesh	mm	+0.15	-	+0.200	+0.150	-0.150				
	%	5max	-	0	0-5	95-100				
200mesh	mm	+0.075	-	+0.100	+0.075	-0.075				
	%	5max	-	0	0-5	95-100				
325mesh	mm	+0.045	-	+0.075	+0.045	-0.045				
	%	5max	-	0	0-5	95-100				

The shown values are typical characteristics of the material and shall not be used to prepare specifications. They are submitted to tolerances of the production and meet the present standard of technique. We reserve our right for changes within the scope of technical progress or internal improvement.

