

TECHNICAL DATA SHEET

BROWN EMERY

Brown Emery is made from Calcined Bauxite. It is a hard and tough material, used in manufacturing of grinding wheels (both vitrified and resin bonded) and coated products. These grains are also used for shot blasting and as polishing media.

PHYSICAL PROPERTIES

Specific Weight	3.96 g/ cm ³
Mohs Hardness	9.0
Crystal form	α-Al ₂ O ₃
Melting Point	2250°C



1. Used for refractory, casting, foundry and Painting etc

TYPICAL CHEMICAL ANALYSIS [%]

Size	Al ₂ O ₃	Fe ₂ O ₃	SiO ₂	TiO ₂	CaO	MgO
0-1mm 1-3mm 3-5mm 5-8mm	≥95.0	≤0.30	≤1.0	1.7-3.4	≤0.42	/
200F 325F	≥92.5	≤1.0	≤3.0	3.0-5.0	≤0.60	/



2. Used for abrasives, blasting, grinding, ceramic, rust removal, surface treatment, floor coating, abrasion resistant layer etc

TYPICAL CHEMICAL ANALYSIS [%]

Al ₂ O ₃	Fe ₂ O ₃	SiO ₂	MgO	CaO	TiO ₂	Na ₂ O	K ₂ O	LOI
≥95.0	≤0.30	≤1.0	/	0.42	1.7-3.4	/	/	< 0.09

PARTICLE SIZE DISTRIBUTION

F8	+4000um	0	+2800um	≤20%	+2360um	≥45%	+2360+2000um	≥70%	-1700um	≤3%
F10	+3350um	0	+2360um	≤20%	+2000um	≥45%	+2000+1700um	≥70%	-1400um	≤3%
F12	+2800um	0	+2000um	≤20%	+1700um	≥45%	+1700+1400um	≥70%	-1180um	≤3%
F14	+2360um	0	+1700um	≤20%	+1400um	≥45%	+1400+1180um	≥70%	-1000um	≤3%
F16	+2000um	0	+1400um	≤20%	+1180um	≥45%	+1180+1000um	≥70%	-850um	≤3%
F20	+1700um	0	+1180um	≤20%	+1000um	≥45%	+1000+850um	≥70%	-710um	≤3%
F22	+1400um	0	+1000um	≤20%	+850um	≥45%	+850+710um	≥70%	-600um	≤3%
F24	+1180um	0	+850um	≤25%	+710um	≥45%	+710+600um	≥65%	-500um	≤3%
F30	+1000um	0	+710um	≤25%	+600um	≥45%	+600+500um	≥65%	-425um	≤3%
F36	+850um	0	+600um	≤25%	+500um	≥45%	+500+425um	≥65%	-355um	≤3%



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F46	+600um	0	+425um	≤30%	+355um	≥40%	355+300um	≥65%	-250um	≤3%
F54	+500um	0	+355um	≤30%	+300um	≥40%	+300+250um	≥65%	-212um	≤3%
F60	+425um	0	+300um	≤30%	+250um	≥40%	250+212um	≥65%	-180um	≤3%
F70	+355um	0	+250um	≤25%	+212um	≥40%	+212+180um	≥65%	-150um	≤3%
F80	+300um	0	+212um	≤25%	+180um	≥40%	+180+150um	≥65%	-125um	≤3%
F90	+250um	0	+180um	≤20%	+150um	≥40%	+150+125um	≥65%	-106um	≤3%
F100	+212um	0	+150um	≤20%	+125um	≥40%	+125+106um	≥65%	-75um	≤3%
F120	+180um	0	+125um	≤20%	≥40%	≥40%	+106+90um	≥65%	-63um	≤3%
F150	+150um	0	+106um	≤15%	+75um	≥40%	+75+63um	≥65%	-45um	≤3%
F180	+125um	0	+90um	≤15%	+75um	*	+75+63um	≥40%	-53um	*
F220	+106um	0	+75um	≤15%	+63um	*	+63+53um	≥40%	-45um	*



3. Used for Grinding, polishing, lapping, whetstone, polishing pads, ceramic membrane etc

TYPICAL CHEMICAL ANALYSIS [%]

Al ₂ O ₃	Fe ₂ O ₃	SiO ₂	FeO	MgO	CaO	TiO ₂	Na ₂ O	K ₂ O	LOI
92.5-96.0	≤0.75	≤2.0	/	≤0.50	/	1.7-3.4	/	/	< 0.09

PARTICLE SIZE DISTRIBUTION

HAPTER I (JIS STANDARD)

Size	DO(um)	D3(um)	D50(um)	D94(um)
#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

CHAPTER II (FEPA STANDARD)

Size	D3(um)	D50(um)	D94 (um)
F230	< 82	53.0±3.0	>34



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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

Mainly Applications

- Bonded Abrasives and Coated abrasives
- Refractory, casting, foundry, and painting etc
- Wet and dry blast media, grinding and polishing etc
- PCB plate (PCBA, FPC, LED) blasting
- Polishing wax, Grinding stones, polishing pads etc
- removal of scale, rust and old coatings
- ceramics shapes
- Grinding wheels, Cup wheels etc
- brake and friction linings



PACKAGING

