PARMADAR

ABRASIVE

Brown Aluminium Oxide

Brown Aluminum Oxide delivers high-hardness, tough, self-sharpening abrasive performance with superior heat and chemical resistance.

Brown Fused Aluminum Oxide (BFA) is produced by fusing high-quality bauxite in an electric arc furnace at elevated temperatures. The result is a durable abrasive with high hardness, toughness, self-sharpening ability, heat resistance, and chemical stability.

BFA is widely used in the manufacture of bonded abrasives, coated abrasives, vitrified/resin grinding tools, and refractories

Performance

- **Hardness & Toughness:** Provides strong cutting force and durability
- **Self-Sharpening:** Maintains abrasive efficiency during use
- **Heat Resistance:** Withstands high operating temperatures
- **Chemical Stability:** Resistant to degradation in harsh environments
- **Grain Shapes:** Available in angular and cubic forms for varied applications

Features

- **AF (Bonded Abrasives):** High hardness, self-sharpening, excellent heat resistance. Suitable for resin-bonded cut-off wheels, vitrified wheels, and grinding cast iron, steel, carbon steel, and non-ferrous metals.
- **AP (Coated Abrasives):** High toughness, strong cutting force, electrostatic absorption. Ideal for sanding tool steels, cast iron, aluminum, copper, hardwood, and fiberboard.
- **AC (Calcined):** Reddish-brown, heat-treated for higher purity, cleanliness, hydrophilicity, toughness, and strength. Suitable for high-grade coated and bonded abrasives.
- **ACH (High-Temperature Calcined):** Blue color, heat-treated at high calcination temperatures. Offers higher strength, hydrophilicity, eliminates abnormal expansion, prevents cracks and rust spots. Suitable for top-grade abrasives.
- **ACC (Ceramic Coated):** Enhanced bonding with resin, improved hydrophilicity, heat resistance, self-sharpening, and grinding efficiency. Extends abrasive lifetime and performance.

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Major Industries & Applications

Bonded Abrasives

Cut-off and grinding wheels

Coated Abrasives

Sanding and polishing tools

Refractories

High-temperature linings

Metalworking

Cast iron, steel, non-ferrous metals

Woodworking

Hardwood, fiberboard finishing

Surface Prep

Sand blasting (second grade)

Chemical Composition (Typical)

	Brown	White	Pink
Al_2O_3	94.5 -97%	>99%	>99%
TiO_2	1.5 – 3.8%	N/A	N/A
Fe_2O_3	<0.5%	<0.1%	N/A
SiO_2	<1.5%	<0.1%	<0.1%
CaO	<0.6%	<0.1%	<0.1%
Na_2O	N/A	0.35%	0.35%
Cr_2O_3	N/A	N/A	0.35%

Physical Characteristics (Typical)

Bulk Density	2.4 T/M^3
Hardness (Mohs)	9
Shape	Angular, Blocky
Specific Gravity	3.9 to 3.95
Melting Point	Approx. 1850°C
Colour	Brown / White / Pink

Available Sizes

Grade	Microns	Grade	Microns
8	2360 - 2800	**46**	355 - 425
10	2000 - 2360	**60**	250 - 300
12	1700 - 2000	**80**	180 - 212
14	1400 - 1700	**100**	125 - 150
16	1400 - 1180	**120**	106 - 125
20	1000 - 1180	**150**	75 - 106
24	710 - 850	**180**	63 - 90
30	600 - 710	**220**	53 - 75
36	500 - 600	**240**	53 - 75

Other sizes available on request

Packaging

25 kg bags packed in 1 MT bulk bag