

# BROWN ALUMINUM OXIDE (TECHNICAL DATA SHEET)



Brown Aluminum Oxide (BFA) is produced by the fusion of high- quality bauxite in an electric arc furnace at high temperatures. Our Brown Aluminum Oxide has high compression strength, high toughness, excellent self-sharpening, low coefficient of thermal expansion, and excellent hydrophilia and cleanliness.



## CHEMICAL COMPOSITION

### Fixed Furnace (Resin BFA)

Specification	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>
F12-F54	94.50 ± 0.5 %	≤ 1.5%	≤ 0.30%	2.0~3.5%
F60-F120	94.00 ± 0.5 %	≤ 1.8%	≤ 0.30%	2.2~3.5%
F150-F240	93.00 ± 0.5 %	≤ 2.2%	≤ 0.40%	2.5~3.5%

### Tilting Furnace (Verified BFA)

Specification	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>
F12-F54	95.50 ± 0.5 %	≤ 1.2%	≤ 0.12%	2.0~3.5%
F60-F120	95.00 ± 0.5 %	≤ 1.5%	≤ 0.15%	2.2~3.5%
F150-F240	94.50 ± 0.5 %	≤ 1.8%	≤ 0.30%	2.3~3.5%

## PHYSICAL PROPERTIES

Principal Crystalline Phase	α-Al <sub>2</sub> O <sub>3</sub>
Crystal Color	Brown
True Specific Gravity	≥ 3.90 g/cm <sup>3</sup>
Mohs hardness	≥ 9.00
Micro Hardness	HV1800-2200
Grinding Ability	≥ 0.10

## GRITS AVAILABLE

- F12 to F220, P12 to P220, #240 to #4000 In accordance with the current GB / FEPA / JIS / ANSI sieve standards. Other sizes available on request.

## APPLICATIONS

- **Bonded and Coated Abrasives:** A vital component in production of standard and verified resin-bonded cutting and grinding wheels as well as coated abrasives such as sandpaper and sanding cloth. Can be used to cut steel, cast iron, and nonferrous metals such as bronze.
- **Surface Preparation:** Widely used as a durable and cost-effective medium in processes such as blasting, descaling, etching, deburring, removal of paints and coatings, cleaning, and metal finishing.
- **Flooring:** Due to its hardness and wear-resistance, used to achieve durable non-skid textures in resinous flooring systems.