

ALKALI-RESISTANT BRICK (AR-55)

Alkali-Resistant Brick AR-55 is a specially engineered high-alumina refractory designed to resist chemical attack from alkalis, sulfates, and chlorides commonly present in aggressive process environments. This brick exhibits excellent resistance to alkali vapours and salt infiltration, making it ideal for linings exposed to fluctuating chemical loads and high temperatures.

TECHNICAL SPECIFICATIONS

PROPERTY	VALUE
Al ₂ O ₃ (%)	≥ 55
SiO ₂ (%)	≤ 35
Apparent Porosity (%)	≤ 22
Bulk Density (g/cm ³)	≥ 2.35
Cold Crushing Strength (MPa)	≥ 45
Refractoriness Under Load (0.2 MPa, °C)	≥ 1450
Thermal Shock Resistance (cycles at 950°C water quench)	≥ 25

KEY FEATURES

- Outstanding resistance to alkali and chemical attack
- Strong mechanical strength and structural stability
- Excellent refractoriness under load
- Good thermal shock resistance

APPLICATION AREAS

- Cement kiln preheaters and calciners
- Cyclones and tertiary air ducts
- Waste incineration and biomass boilers
- Lime kilns exposed to alkali vapours

INSTALLATION NOTES

- Compatible with high-alumina mortars for joints ≤ 3 mm
- Preheating recommended to eliminate residual moisture
- Installation under supervision is advised to ensure proper expansion joints in alkali-rich zones



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