

CHROME-ALUMINA BRICK (CRAL-80)

**ENGINEERED FOR EXTREME EROSION RESISTANCE & CORROSIVE ENVIRONMENTS
 IN NON-FERROUS AND PETROCHEMICAL OPERATIONS**

The **Chrome-Alumina Brick (CRAL-80)** is a premium-quality, high-density refractory brick made with high-purity alumina and fused chromia. This brick is designed to offer **outstanding resistance to corrosive slags, vapours, and high mechanical wear** in intense thermal environments. The CRAL-80 performs exceptionally well in **non-ferrous smelters, slag cleaning units, and coal chemical applications**, where chemical attack and structural erosion are common failure modes.

TECHNICAL SPECIFICATIONS

PROPERTY	CRAL-80
Cr ₂ O ₃ (Chromia)	≥ 18%
Al ₂ O ₃ (Alumina)	≥ 75%
Fe ₂ O ₃ (Iron Oxide)	≤ 0.8%
Apparent Porosity	≤ 17%
Bulk Density	≥ 3.20 g/cm ³
Cold Crushing Strength (CCS)	≥ 90 MPa
Refractoriness Under Load	≥ 1700 °C @ 0.2 MPa
Thermal Conductivity (1000°C)	4.5–5.2 W/m·K

TYPICAL APPLICATIONS

- **Flash Smelters & Converters** – Non-ferrous metallurgy
- **Slag Cleaning Furnaces** – Lead, copper, and nickel operations
- **Gasifiers and Reactors** – Petro chemical and coal chemical units
- **Tapping Channels & Launderers** – Handling of aggressive molten slags
- **Shaft Kilns & Chimneys** – Where acidic vapours are present

PERFORMANCE CHARACTERISTICS

- **Superior Chemical Resistance:** Resists attack from chromite-rich slags and aggressive vapours.
- **High Mechanical Strength:** Maintains structural integrity in high-pressure applications.
- **Thermal Stability:** Withstands rapid heating and cooling cycles.
- **Low Porosity:** Enhances erosion resistance and prevents slag penetration.
- **Extended Campaign Life:** Ideal for critical process zones with minimal replacement needs.

INSTALLATION & HANDLING

- Can be installed using chromia-compatible mortars where required.
- Store bricks in a dry, ventilated warehouse and avoid direct moisture exposure.
- Use protective handling practices to avoid chipping or breakage.

QUALITY & COMPLIANCE

- Produced under ISO 9001:2015 certified facilities.
- Material batches are tested for dimensional tolerances, physical strength, and compositional accuracy.
- Custom grades available on request to match specific operating conditions.



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