

DIRECT-BONDED MAGNESIA-CHROME BRICK (DMC-88)

HIGH STRENGTH, SLAG RESISTANCE & STRUCTURAL INTEGRITY FOR METALLURGICAL FURNACES

The Direct-Bonded Magnesia-Chrome Brick DMC-88 is manufactured from high-purity sintered magnesia and specially selected chromite ore. It features a **direct bonding structure** that ensures outstanding corrosion resistance, high mechanical strength, and excellent refractoriness under load. This brick is ideal for critical wear zones in non-ferrous, iron & steel, and thermal processing industries

TECHNICAL SPECIFICATIONS

PROPERTY	DMC-88
MgO (%)	≥ 68
Cr ₂ O ₃ (%)	≥ 15
Apparent Porosity (%)	≤ 18
Bulk Density (g/cm ³)	≥ 3.08
Cold Crushing Strength (MPa)	≥ 80
Modulus of Rupture at 1400°C (MPa)	≥ 10
Refractoriness Under Load (0.2 MPa, °C)	≥ 1700
Thermal Conductivity at 1000°C (W/m·K)	2.3 – 2.6
Permanent Linear Change (PLC, 1500°C x 3h)	±0.3 %
Maximum Service Temperature (°C)	1750
Bond Type	Direct-Bonded

KEY APPLICATIONS

- Copper and Nickel Converters
- Electric Arc Furnace Roofs and Walls
- Anode Furnace Sidewalls
- Incinerator Rotary Kilns and Secondary Combustion Chambers
- Gasifiers and Smelting Reduction Reactors
- RH Degassers and VOD Units

PERFORMANCE CHARACTERISTICS

- Superior **slag corrosion resistance**, especially in high-chrome environments
- Excellent dimensional stability at high temperatures
- Low porosity and high mechanical integrity
- Suitable for intense thermal cycling and oxidising/reducing atmospheres

PACKAGING & SUPPLY

- Delivered on export-grade pallets, shrink-wrapped and labelled
- Available in standard shapes and custom configurations for specific furnace geometries
- Comprehensive QA records with batch tracking and test certificates

INSTALLATION NOTES

- Install using high-performance magnesia-chrome mortar
- Observe tight joint tolerances (<2mm)
- Compatible with slagline linings, safety linings, and structural arches

ENVIRONMENTAL & SAFETY NOTES

- Chromium oxide within safety thresholds; hexavalent chromium strictly <2 ppm
- Fully recyclable through controlled brick reclamation programs
- Enhances furnace life, reducing material turnover and waste



www.dgc-africa.com

REACH OUT TO US
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