DGC REFRACTORIES TECHNICAL DATA SHEET

MAGNESIA-SPINEL BRICK (MSP-92/MA)

OPTIMISED FOR ROTARY KILNS, TRANSITION ZONES & HIGH MECHANICAL LOAD AREAS

The Magnesia-Spinel Brick (MSp-92/MA) is a high-grade basic refractory brick composed of **fused magnesia and synthetic magnesium aluminate spinel.** It delivers exceptional **thermal shock resistance, structural integrity, and resistance to clinker infiltration,** making it ideal for **rotary cement kilns, lime kilns, and non-ferrous furnaces** with fluctuating thermal loads. Engineered to support long campaign durations and reduced wear rates, this product is a preferred lining solution for **transition zones and cooling zones.**

TECHNICAL SPECIFICATIONS

PROPERTY	MSp-92/MA
MgO (%)	≥ 88
Al_2O_3 (%)	≥ 5
Apparent Porosity (%)	≤ 16
Bulk Density (g/cm³)	≥ 2.95
Cold Crushing Strength (MPa)	≥ 60
Modulus of Rupture at 1400°C (MPa)	≥ 10
Refractoriness Under Load (0.2 MPa, °C)	≥ 1650
Thermal Conductivity at 1000°C (W/m·K)	2.8 – 3.2
Maximum Service Temperature (°C)	1750
Standard Brick Size	230×114×65 mm or shaped options
Bond Type	Sintered grain bonding with spinel

PACKAGING & SUPPLY

- Delivered on export-standard wooden pallets
- Plastic-wrapped and moisture-sealed for storage stability
- Batch-tested and traceable with QC certification

INSTALLATION NOTES

- Install with compatible phosphate-bonded mortars
- Avoid over-tight jointing—allow for thermal expansion
- Follow kiln-specific laying patterns for optimal stress absorption

ENVIRONMENTAL & SAFETY NOTES

- Manufactured with low-emission kilns and recycled refractory content
- Free from chrome or other hazardous heavy metals
- Engineered for long life and minimal environmental impact

KEY APPLICATIONS

- Rotary Cement Kilns (especially transition & burning zones)
- Lime Kilns
- Non-Ferrous Metal Furnaces
- High-alkali and high-load areas
- Kiln Hood and Cooler Bull Nose

PERFORMANCE CHARACTERISTICS

- Excellent thermal shock resistance, ideal for rotary environments
- High resistance to infiltration by clinker, alkalis, and sulphates
- Good mechanical load-bearing capacity in high-stress zones
- Prolonged campaign life for lower total cost of ownership
- Tailored grain sizing improves erosion resistance and bonding

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