

MAGNESIA-BASED BRICKS

DGC Refractories offers a wide selection of magnesia-based refractories designed to meet the demanding requirements of high-temperature industrial processes, particularly in the non-ferrous, iron & steel, and cement industries. These bricks are engineered to deliver exceptional resistance to basic slags, thermal shock, corrosion, and mechanical stress. Below is an expanded summary of each technical grade in our magnesia-based brick range.

MAGNESIA BRICK (MGE-98A & MGE-98B)

These are high-purity magnesia bricks containing $\geq 98\%$ MgO, developed from fused or sintered magnesia. They offer superior resistance to basic slag corrosion and high thermal stability, making them ideal for high-wear areas such as furnaces, kilns, and regenerators. The A and B grades provide flexibility in cost-performance optimisation depending on service temperature and mechanical load.

FUSED MAGNESIA-CHROME BRICK (FMGE-94)

Composed of fused magnesia and chrome ore, this brick provides excellent corrosion resistance in basic slag environments. It is especially suited for non-ferrous and steel furnaces where both thermal conductivity and structural integrity are essential. The fused grain structure enhances slag penetration resistance and campaign life.

FUSED REBONDED MAGNESIA-CHROME BRICK (FMGE-95)

A premium version of the fused magnesia-chrome family, FMGe-95 uses high-grade fused grains with superior thermal and mechanical bonding. It is designed for the most critical zones in copper and nickel smelting operations, where longevity and structural stability are paramount. The rebonded matrix improves overall toughness and corrosion resistance.

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

Engineered through sintering magnesia and chrome ore at ultra-high temperatures, DMC-88 achieves direct crystal bonding, delivering excellent resistance to slag penetration and erosion. It is particularly used in kilns and furnaces operating under fluctuating thermal and chemical loads. Its thermal shock stability makes it a reliable choice for areas with repeated cycling.

MAGNESIA-CHROME BRICK (MC-70)

With a balanced blend of magnesia ($\geq 70\%$) and chrome ore, this product is a cost-effective solution for general-purpose applications requiring moderate corrosion resistance. It offers good refractoriness under load and structural integrity, making it suitable for secondary zones in rotary kilns and smelting furnaces.

MAGNESIA HERCYNITE BRICK (MH-92)

This advanced composite brick combines high-purity magnesia with synthetic spinel (hercynite), producing a material with **excellent resistance to alkali corrosion and structural spalling**. It performs well in kilns, incinerators, and steel ladles, especially in operations with high chemical volatility. The spinel phase enhances both shock resistance and mechanical strength.

MAGNESIA-ALUMINA BRICK (MA-75)

Formulated with fused magnesia and alumina, MA-75 is tailored for applications requiring high thermal conductivity and **moderate corrosion resistance**. It provides a good cost-to-performance ratio for steel, lime, and ferroalloy industries. Its consistent structure ensures durability in both oxidising and reducing conditions.



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