DGC REFRACTORIES CONSOLIDATED TECHNICAL OVERVIEW

DGC Refractories offers a comprehensive portfolio of high-performance refractory bricks, developed for industrial applications in metallurgy, cement production, glass manufacturing, power generation, and chemical processing. This overview consolidates the key attributes, intended use cases, and technical strengths of our full product range, based on validated technical data sheets.

ALUMINA-BASED BRICKS

These bricks are foundational in high-temperature operations due to their strength, thermal stability, and resistance to chemical corrosion.

- **High Alumina Brick (HA-75):** Designed with 75% Al_2O_3 content, this brick offers good load-bearing capacity and thermal resistance, ideal for secondary refining, incinerators, and kiln linings.
- **High Alumina Brick (HA-80):** With a higher alumina content (80%), this brick provides enhanced corrosion resistance and thermal insulation for foundry, steel ladles, and reheat furnaces.
- **Anti-Spalling High Alumina Brick (ASHA-75):** Specially formulated to resist thermal shock and spalling under frequent temperature fluctuations, ideal for rotary kilns and areas subject to rapid cycling.
- **Andalusite-Mullite Brick (AM-65):** Combines natural andalusite and synthetic mullite to enhance thermal shock resistance, dimensional stability, and chemical durability in furnace linings.
- **Multilayer Mullite Brick (MM-65):** Developed with multiple compositional layers, this brick offers excellent resistance to heat gradients, progressive insulation, and long-lasting mechanical performance.

CHROME & CHROME-CORUNDUM BRICKS

These bricks provide superior corrosion resistance in environments with aggressive slags, making them ideal for non-ferrous metallurgy and steelmaking.

- **Chrome-Alumina Brick (CRAL-80):** A composite of Cr_2O_3 and Al_2O_3 with exceptional resistance to slag and high-temperature wear, suitable for smelters and metallurgical reactors.
- **Chrome-Corundum Brick (CRAL-90):** Offers higher Cr_2O_3 content for extreme resistance in burner blocks, tap holes, and furnace walls.
- **Chrome-Corundum Brick (CR-90):** A premium-grade refractory used in tap channels and ladles exposed to extreme erosion and thermal load.

MAGNESIA-BASED BRICKS

These basic bricks are engineered for applications involving basic slags, high temperatures, and high mechanical loads.

- **Magnesia Brick (MGe-98A & MGe-98B):** Containing over 98% MgO, these bricks offer excellent refractoriness and resistance to basic slags, used in cement kilns and copper converters.
- **Magnesia-Chrome Brick (MC-70):** A versatile combination of MgO and Cr_2O_3, offering good slag resistance and dimensional stability in rotary kilns and non-ferrous furnaces.
- **Direct-Bonded Magnesia-Chrome Brick (DMC-88):** Provides enhanced infiltration resistance and high strength retention at elevated temperatures for aggressive furnace environments.
- **Fused Magnesia-Chrome Brick (FMGe-94):** Manufactured using fused grains, this brick delivers excellent corrosion resistance in electric furnaces and metallurgical reactors.
- **Fused Rebonded Magnesia-Chrome Brick (FMGe-95):** Designed for the harshest smelting and gasifier conditions, offering unmatched durability and mechanical resistance.
- **Magnesia Hercynite Brick (MH-92):** Combines MgO with hercynite spinel to reduce thermal expansion and improve resistance to alkali vapour and clinker.
- **Magnesia-Spinel Brick:** Known for its thermal shock resistance and mechanical strength, ideal for cement kiln sintering zones and lime kilns.
- **Magnesia-Alumina Brick (MA-75):** Balances wear resistance and volume stability, used in transition zones of cement and lime kilns.
- **Magnesia-Alumina Spinel Brick (MA-85):** Offers elevated resistance to slag attack and mechanical stress in rotary kilns and metallurgical furnaces.

SILICA AND SPECIALTY BRICKS

These bricks address niche requirements such as acid corrosion, alkali resistance, and high-volume stability at elevated temperatures.

- **Silica Brick (SI-94):** Offers excellent volume stability and thermal shock resistance, commonly used in coke ovens, regenerators, and glass tank crowns.
- **Alkali-Resistant Brick (AR-55):** Specifically formulated to withstand alkali vapor penetration, ideal for cement preheater linings and waste incinerators.
- **SiC-Mullite (Andalusite) Brick (SM-70A):** High thermal conductivity and abrasion resistance, perfect for zones exposed to alkali and mechanical wear.
- **Special Acid-Resistant Brick (SiC-90):** With high silicon carbide content, this brick is used in chemical processing, flue gas treatment, and acid environments requiring strong corrosion resistance.