

Refractories - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

Refractories Market Analysis

The Refractories Market size is estimated at 57.36 Million tons in 2025, and is expected to reach 69.75 Million tons by 2030, at a CAGR of 3.99% during the forecast period (2025-2030). This forward momentum reflects the ability of the refractories market to adapt to shifting steelmaking technologies, expanding energy-intensive industries, and rising regulatory expectations. Capacity expansions across Asian steel plants, the pivot toward hydrogen-based direct-reduced-iron (DRI) furnaces, and the scale-up of next-generation battery, cement, and waste-to-energy facilities all reinforce near-term demand. At the same time, tighter silica-dust limits and carbon-border tariffs are accelerating materials innovation and spurring strategic consolidation among leading suppliers. RHI Magnesita, for example, delivered 7% growth in 2023 Adjusted EBITA to EUR 409 million despite softer volumes, underscoring how disciplined pricing and targeted acquisitions can buffer cyclical swings.

Global Refractories Market Trends and Insights

Rapid Capacity Expansions in Asian Iron and Steel Plants

Steel capacity additions across Asia are driving unprecedented refractory demand, with China commissioning 12 new blast furnaces totaling 18.97 million tons in H1 2024. Replacing aging units with high-efficiency furnaces lengthens campaign life expectations and raises thermal loads, prompting the refractories market to innovate higher-grade magnesia-carbon and monolithic solutions. India's surge is equally pivotal; RHI Magnesita India posted INR 3,781 crore (USD 453 million) FY 2023-24

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revenue while serving more than 700 customers across nine sites, highlighting the depth of domestic pull. Regional concentration benefits local producers through shorter lead times yet challenges Western suppliers to sustain share. Meanwhile, Korean production fell 5.7% in 2024, underscoring uneven growth within the broader refractories market.

Shift Toward Hydrogen-Based Direct-Reduced-Iron Furnaces

Hydrogen-based DRI alters temperature profiles and atmospheres, demanding refractories with superior thermal-shock resistance and hydrogen embrittlement resilience. Magnesita research confirms that electric melting furnaces intended for "green steel" require novel refractory chemistries capable of withstanding hydrogen-rich gases. Although the process can slash steelmaking CO₂ emissions to 0.1 tons per ton of steel, capex and energy-price hurdles persist; ArcelorMittal's 2025 withdrawal from a German project and return of EUR 1.3 billion in subsidies highlights the economic uncertainties. Nevertheless, the Institute for Energy Economics forecasts a ten-fold rise in DR-grade iron ore demand by 2050, signaling long-run opportunities for specialized DRI refractories,

Carbon-Emission Penalties on Mag-Carbon Bricks

EU carbon-border tariffs and North American decarbonization policies are curbing demand for traditional magnesia-carbon bricks. Life-cycle assessments show that carbonless magnesia alternatives deliver lower environmental impacts but still need broader industrial validation. US antidumping duties on certain Chinese and Mexican mag-carbon bricks-reaching 236% for some producers-add cost pressure and push the refractories market toward lower-carbon solutions. RHI Magnesita's high-recycling mag-carbon series offers an interim path, yet long-term trajectories favor carbon-free bonds and ceramic-matrix composites.

Other drivers and restraints analyzed in the detailed report include:

Cement Kilns Switching to Alternative Fuels / Growth of Large Utility-Scale Energy-Storage Batteries Using High-Temperature Ceramics / Volatility in Metallurgical-Grade Bauxite and Magnesite Supply /

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Non-clay refractories grew at a 4.76% CAGR during the review period and continue to outpace clay grades through 2030. They thrive on superior corrosion and thermal-shock resistance critical in hydrogen-based steelmaking, advanced batteries, and waste-to-energy incinerators. Magnesite bricks dominate basic steelmaking for their resistance to slag chemistry, while zirconia bricks excel in severe cycling and extremely high temperature zones. Silica bricks remain indispensable for coke-oven checker walls, yet usage is moderated by rising crystalline-silica exposure rules capping dust at 50 µg/m³. Chromite bricks maintain a foothold in non-ferrous smelting thanks to strong metal-penetration resistance. Together, these non-clay categories underpin value growth even as clay refractories retain volume leadership.

Clay refractories, topped by high-alumina variants, captured 55.43% of refractories market share in 2024, reflecting their cost-effectiveness across multiple furnace linings. Fireclay bricks serve moderate-temperature ladles and boilers, while insulating refractories unlock energy savings across industries. Researchers have achieved 84 MPa compressive strength in fly-ash geopolymer bricks after 1,100 C exposure, hinting at circular-economy pathways for clay refractories. Saint-Gobain's ultra-high-temperature ceramics, particularly SiC and zirconia, stretch performance ceilings above 1,400 C and illustrate how hybrid formulations blur the traditional clay/non-clay divide.

The Refractories Market Report is Segmented by Product Type (Non-Clay Refractories and Clay Refractories), End-User Industry

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(Iron and Steel, Cement, Energy and Chemicals, Non-Ferrous Metals, Glass, Ceramic, and Other End-User Industries), and Geography (Asia-Pacific, North America, Europe, South America, and Middle East and Africa). The Market Forecasts are Provided in Terms of Volume (Tons).

Geography Analysis

Asia-Pacific owned 73.81% of the refractories market in 2024 and is slated to grow at a 4.22% CAGR through 2030. China continues modernizing blast furnaces while shutting obsolete capacity, driving sustained uptake of higher-grade bricks and castables. India outpaces all peers; RHI Magnesita's CEO forecasts 6-13% annual domestic refractory growth, reflecting large-scale steel and cement expansions. Japan's shift toward EAF technology, supported by JFE Holdings' USD 2.26 billion investment, redirects lining specifications toward EAF-optimized basic mixes. South Korea encountered a 5.7% production dip in 2024 but aims to pivot toward higher-value steel products that still require premium refractories. Accelerating lithium-ion battery gigafactory construction across China and Southeast Asia cements the region's role as the growth nucleus of the refractories market.

North America remains a mature yet strategically vital arena. HarbisonWalker International's USD 13.9 million expansion in Fulton, Missouri, will lift lightweight monolithic output by 60% and embodies the region's commitment to high-value applications. Heightened OSHA silica-dust limits incentivize investment in sealed handling and low-dust materials, reshaping product portfolios. Canada eyes leadership in green-iron exports, which could stimulate specialized DRI refractory demand. Mexico's competitiveness, however, is tempered by US antidumping duties that inflate costs for mag-carbon bricks.

Europe sets the pace on environmental policy. The EU Carbon Border Adjustment Mechanism raises the cost of high-carbon refractories, propelling adoption of carbon-free bonds and recycling solutions. ArcelorMittal's decision to return EUR 1.3 billion in subsidies for a German hydrogen-steel project illustrates the economic strain in the green transition. Yet R&D pipelines stay robust; Saint-Gobain's planned USD 40 million NorPro plant in Wheatfield, New York, although US-based, will serve European catalysts and emphasizes trans-Atlantic supply-chain integration. The Middle East and Africa offer emergent promise through Saudi industrial diversification and South African mining ventures, although political certainty and infrastructure gaps influence project pacing.

List of Companies Covered in this Report:

Chosun Refractories / Gouda Refractories Group / HarbisonWalker International / IFGL / Imerys / Krosaki Harima Corporation / Liaoning Qinghua Refractory Material Co., Ltd. / Monolithisch India Limited / Morgan Advanced Materials / Puyang Refractories Group Co.,Ltd. / Rath-Group / Refratechnik / RHI Magnesita / Saint-Gobain / SHINAGAWA REFRACTORIES CO., LTD. / Vesuvius /

Additional Benefits:

 The market estimate (ME) sheet in Excel format /
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