Friction Material - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2026 - 2031)

Market Report | 2026-02-09 | 120 pages | Mordor Intelligence

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Report description:

Friction Material Market Analysis

Friction Material Market size in 2026 is estimated at 825.29 million units, growing from 2025 value of 791.04 million units with 2031 projections showing 1020.5 million units, growing at 4.33% CAGR over 2026-2031. Regulatory milestones such as the Euro 7 particulate limits, brisk demand for low-dust discs and pads, and rising vehicle parc volumes keep the friction material market on a steady growth path. Manufacturers are re-engineering pad chemistry to remain copper-free, while adoption of sensor-enabled "smart pads" is broadening maintenance-as-a-service revenue models. The Asia-Pacific's vehicle production strength and deep aftermarket ecosystem anchor the largest regional volume share, whereas cost-optimized Eastern European plants help global suppliers balance margin pressure from volatile prices of copper, aramid, and ceramic fiber. Competitive intensity is shaped by mid-sized regional specialists and large multinational players racing to embed software, predictive analytics, and recycled inputs into next-generation products.

Global Friction Material Market Trends and Insights

Growing need for industrial and off-highway machinery

Heavy mining, construction, and agricultural equipment consume friction components that tolerate extreme heat and contamination, lifting unit volumes well above those of passenger vehicles. Autonomous mining trucks now feature sensor-fed disc and pad sets that transmit wear data in real-time to fleet dashboards, reducing unscheduled downtime. Original-equipment

manufacturers adopt higher-density linings to extend service life in emerging markets where on-site support is scarce. Integrated drivetrain suppliers bundle brake, clutch, and retarder systems, boosting cross-selling potential. Industrial procurement teams increasingly select suppliers with localized stock points to reduce lead times on oversized discs, particularly in Southeast Asia. The driver's mid-term impact remains firm as governments fund infrastructure expansion and commodities continue to move at high tonnage.

Surging global vehicle parc and brake-pad replacement cycles

Vehicle fleets in India, Indonesia, and Vietnam are growing faster than new-car sales, as the average car age climbs past nine years, sustaining aftermarket pad demand. Replacement intervals shorten in dense urban traffic because stop-and-go conditions accelerate pad wear, offsetting electrification-driven volume losses. Subscription and ride-hailing fleets impose proactive maintenance schedules that favor predictable-wear ceramic pads despite higher ticket prices. OEM-aligned service networks stock multi-platform pad lines to streamline inventory across model generations. Premium pad brands utilize online channels, leveraging fitment data, to target do-it-yourself consumers. Over the long term, this driver adds the largest positive swing to the global CAGR.

High lifecycle cost versus regenerative-braking wear reduction

Electric passenger cars in urban duty show pad life stretching past 100,000 miles, slashing replacement events relative to internal-combustion models. Fleet calculations weigh the pricing of low-dust pads against fewer interventions, placing margin pressure on aftermarket channels. Hybrid SUVs with aggressive regen reclaim still demand robust pad friction for emergency stops, forcing costly dual-compound solutions. Municipal bus operators report a drop in total brake system cost of ownership once regenerative braking reaches recovery, delaying pad changeouts. Suppliers shift their revenue focus from volume to value-added coatings and analytics, but the restraint remains a noticeable drag on the CAGR of the friction material market.

Other drivers and restraints analyzed in the detailed report include:

Stricter copper-free and low-noise regulations accelerating material reformulationRapid electrification of two-wheelers and micro-mobility fleets in AsiaVolatile prices of copper, aramid and ceramic fibers

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

Segment Analysis

Brake pads captured 40.85% of the friction material market share in 2025 and continue to form the backbone of the global replacement business. The friction material market size tied to pads reflects high wear rates and standardized design templates that simplify cross-platform supply. Discs, however, post the quickest 5.59% CAGR as integrated electronic braking systems demand larger rotors with precise metallurgy, nudging average selling prices upward.

Pad upgrades center on copper-free organic blends that limit dust without compromising coefficient stability. Rotor demand gains a tailwind from premium SUVs specifying ventilated or carbon-ceramic discs, which reduce unsprung mass. Block and lining volumes remain steady in rail and heavy industry, although automation is extending block change intervals. Other niche components, such as clutch facings, leverage growth in robotics and industrial automation. Aggregate dynamics keep pads dominant, although discs accrue incremental revenue faster, thereby widening the strategic focus for global suppliers.

Semi-metallic recipes accounted for 37.95% of the friction material market size in 2025, thanks to proven cost-performance trade-offs. These blends combine steel or copper fibers with organic binders, providing a balance between fade resistance and

noise control. Ceramic formulations trail but expand at 5.98% CAGR, propelled by Euro 7 dust caps and high-performance electric vehicle demand.

Brembo's Greentell laser-deposited rotor coating reduces PM10 and demonstrates the ceramic's potential to shift the economics of regulatory compliance. Sintered metals remain essential for rail and aircraft, but they account for a smaller slice. Aramid-rich pads capture a niche share in the aerospace and performance motorcycle markets due to their lightweight strength. Incremental research and development efforts focus on bio-based binders, aiming to reduce the carbon footprint without compromising durability.

The Global Friction Material Market Report is Segmented by Product Type (Discs, Pads, Blocks, Linings, and Other Types), Material (Ceramic, Asbestos, Semi-Metallic, and More), Application (Clutch and Brake Systems, Gear Tooth Systems, and Other Applications), End-User Industry (Automotive, Railway, and More), and Geography (Asia-Pacific, North America, and More). The Market Forecasts are Provided in Terms of Volume (Units).

Geography Analysis

The Asia-Pacific region held a commanding 45.90% market share of the friction material market in 2025, thanks to its entrenched supply chains, cost-competitive labor, and soaring vehicle ownership across China, India, and ASEAN. Chinese rotor producers integrate foundries and machining shops within a single industrial park, slashing logistics costs and supporting global export competitiveness. India reported a revenue growth in H1 2024, as two-wheeler sales rebounded and aftermarket networks expanded. Japan contributed premium disc technology exports tied to performance vehicle programs and maintained leadership in electric-motorcycle braking kits.

North America and Europe together form a mature volume base governed by environmental leadership. Euro 7 and California's copper restrictions position these markets as test beds for low-dust discs and sensorized pads, knowledge that subsequently scales to the Asia-Pacific region. Production shifts eastward to Romania, Poland, and Mexico, keeping cost parity, while design and validation centers stay in Germany, Italy, and the United States.

The Middle East and Africa represent the fastest-growing regional CAGR at 4.66%, driven by construction booms, mineral extraction, and the demand for imported passenger vehicles, which require climate-resilient pads. Gulf Cooperation Council projects funnel capital into metro networks and light-rail, spurring block and lining demand. Sub-Saharan mining fleets utilize oversized wet-disc brakes, specifically designed for heavy-haul trucks. South America exhibits a tempered outlook as currency volatility restrains aftermarket spending, despite a gradual recovery in Brazilian auto output.

List of Companies Covered in this Report:

ABS Friction Akebono Brake Industry Co., Ltd. ASK FRAS-LE FRICTION PVT LTD. Brembo S.p.A. Carlisle Brake & Friction (CentroMotion) ContiTech Deutschland GmbH EBC Brakes Haldex Hindustan Composites Ltd. ITT Inc. Japan Brake Industrial Co., Ltd. Miba AG Nisshinbo Holdings Inc. SGL Carbon Tenneco Inc. Yantai Haina Brake Technology Co., Ltd.

Additional Benefits:

 The market estimate (ME) sheet in Excel format
3 months of analyst support

Table of Contents:

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