

Carbon and Graphite Felt Market is Expected to Reach a Valuation of USD 1,452 Million in 2035 | Fact.MR Report

Carbon and graphite felt market is growing rapidly, driven by demand in energy storage, high-temperature insulation, and clean energy applications worldwide.

ROCKVILLE, MD, UNITED STATES, August 19, 2025 /EINPresswire.com/ -- The global [carbon felt and graphite felt market](#) is charting impressive growth, with the industry projected to surge from approximately USD 569.9 million in 2025 to an estimated USD 1,452 million by 2035. This remarkable expansion reflects a compound annual growth rate (CAGR) of 9.8% over the decade. The increasing adoption of these materials across multiple industries is reshaping the competitive landscape and highlighting their pivotal role in modern industrial applications.



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Market Segmentation Overview

The carbon felt and graphite felt market can be segmented by raw material, type, application, and region. In terms of raw materials, polyacrylonitrile (PAN), pitch, and rayon are the three major categories driving market dynamics. PAN-based felts are expected to lead growth due to their superior thermal stability and adaptability in high-performance applications. Pitch-based felts are also gaining traction as they offer consistent performance for specialized industrial uses, while rayon-based felts remain relevant in applications requiring specific technical properties.

When evaluated by region, significant differences in growth trajectories become evident. China is

emerging as the fastest-growing market, reflecting its rapid industrialization and expanding energy infrastructure. The United States is also seeing robust growth, supported by strong demand from aerospace, defense, and clean energy sectors. In Europe, countries like Germany are making notable progress, underpinned by advancements in high-precision industries and regulatory support for energy-efficient solutions. Collectively, these regional markets are contributing to the global momentum and demonstrating diverse opportunities for manufacturers.

The market is also segmented by type, distinguishing between carbon felt and graphite felt, each with unique properties and application suitability. In terms of application, the range extends from high-temperature furnaces and filtration systems to battery electrodes, seals, and advanced industrial processes. This breadth illustrates how these materials have moved from niche applications into mainstream industrial supply chains.

Growth Trajectory and Key Value Drivers

The rise from USD 569.9 million in 2025 to USD 1,452 million by 2035 reflects more than just numerical growth; it highlights the expanding role of carbon felt and graphite felt in the global economy. Several factors are fueling this upward trajectory. One of the most important drivers is the need for high-temperature insulation in industries such as metallurgy, semiconductors, and specialized manufacturing. The materials' lightweight composition, thermal resistance, and durability make them indispensable in these environments.

Another critical growth driver is the accelerating demand for advanced energy storage solutions. Carbon and graphite felts are increasingly used in battery electrodes, fuel cells, and related systems, where their conductivity and resilience provide significant performance benefits. The global push toward decarbonization and clean energy is reinforcing this trend, as governments and companies invest heavily in renewable technologies and sustainable infrastructure. As energy systems evolve, these materials are becoming essential components of the transition.

Recent Developments and Innovation

The market is being shaped by rapid technological progress and product innovation. Leading manufacturers are introducing new grades of felt that offer improved thermal conductivity and enhanced structural properties, enabling broader adoption in emerging industries such as electric vehicles and renewable power generation. Companies are also experimenting with novel production methods to achieve greater uniformity and performance consistency.

At the same time, demand is accelerating in sectors such as aerospace, vacuum furnaces, and electronics, where performance standards are rising in line with technological complexity. The Asia-Pacific region, in particular, is becoming a hub of growth due to its rapid industrial expansion, increased adoption of energy-efficient technologies, and growing role in global manufacturing supply chains. Moreover, regulatory frameworks worldwide are pushing

industries to adopt materials that improve energy efficiency and reduce environmental impact. This policy environment is creating favorable conditions for carbon felt and graphite felt adoption.

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Key Players and Competitive Dynamics

The competitive landscape of the carbon felt and graphite felt market is characterized by a mix of global leaders and regional specialists. Prominent players include SGL Carbon, Toray Industries, Kureha Corporation, Nippon Carbon Co., Mersen, Beijing Great Wall Co., Ltd., Morgan Advanced Materials Plc, Chemshine Carbon, CM Carbon, CeraMaterials, CGT Carbon GmbH, and Fiber Materials Inc. These companies are driving the industry forward through strategic research and development, product innovation, and regional expansion.

Carbon Felt and Graphite Felt Industry News:

In July 2024, Mersen expanded its graphite portfolio by acquiring U.S. companies, boosting capacity in specialty extruded graphite and insulating felts for aerospace, energy, and process industries.

Earlier, in August 2022, SGL Carbon opened a new carbonization plant in Germany to increase soft felt production for renewable energy systems and advanced insulation applications.

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