

# Global Silicon Carbide (SiC) Fiber Market 2024

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## Abstracts

Silicon Carbide (SiC) fibers represent a class of advanced ceramic materials primarily composed of silicon carbide molecules, known for their exceptional performance characteristics. The increasing demand for SiC fibers is attributed to their distinctive properties, including low density, lightweight, high stiffness, superior chemical resistance, remarkable tensile strength, and tolerance to high temperatures.

The global market for SiC fibers is categorized based on applications into aerospace, energy and power, industrial, among others, with the aerospace sector currently leading the market. This trend is anticipated to persist in the foreseeable future. SiC fibers find extensive application in aerospace engine components such as turbine blades, nozzles, and combustor liners. The market value of SiC fibers within the aerospace industry was estimated at USD 343 million in 2023, and it is projected to escalate to USD 1,112 million by 2029, achieving a Compound Annual Growth Rate (CAGR) of 18.3% during the forecast period.

Continuous fibers are increasingly preferred by end-users due to their high strength, resistance to heat and corrosion, especially under conditions exceeding 1000°C. These fibers are commonly used alongside ceramic fiber, carbon fiber, polymeric materials, and reinforced metals. The market for continuous SiC fibers was valued at USD 357 million in 2023, with projections indicating growth to USD 1,164 million by 2029, registering a CAGR of 18.4% throughout the forecast period.

In 2023, North America held the largest market share, a trend that is expected to continue until 2029. The region's dominance can be attributed to the strong presence of major SiC fiber manufacturers such as General Electric Company, American Elements, COI Ceramics, and Free Form Fibers. These companies are responding to the growing demand from the aerospace, energy, and power industries. Furthermore, the increase in production activities related to aerospace components significantly contributes to the

growth of the SiC fiber market in this region. The North American market for SiC fibers was estimated at USD 224 million in 2023, and it is forecasted to reach USD 723 million by 2029, with a CAGR of 18.2% during the forecast period.

This comprehensive industry report provides market estimates and forecasts, accompanied by a detailed examination of the fiber type, usage, end-user, and region aspects. It delivers a quantitative analysis of the market, empowering stakeholders to leverage existing market opportunities. Furthermore, the report identifies key segments for potential opportunities and strategies, drawing insights from market trends and the approaches of leading competitors.

The global baby bottle market has been extensively analyzed by categorizing it according to various sub-segments in order to provide accurate forecasts of industry size and assess trends within specific areas.

The global market for silicon carbide (SiC) fiber can be segmented by fiber type: continuous fiber, short fiber. Continuous fiber held the largest share in the global silicon carbide (sic) fiber market, accounting for 66.7% of the market in 2023. Moreover, the segment is anticipated to grow at the highest CAGR in the coming years.

Silicon carbide (SiC) fiber market is further segmented by usage: composites, non-composites. Composites held the largest share in the global silicon carbide (sic) fiber market in 2023 and is projected to portray the fastest growth rate in the coming years.

Based on end-user, the silicon carbide (SiC) fiber market is segmented into: aerospace, energy and power, industrial, others. Aerospace held the largest share in the global silicon carbide (sic) fiber market, accounting for 64.1% of the market in 2023. Moreover, the segment is anticipated to grow at the highest CAGR in the coming years.

On the basis of region, the silicon carbide (SiC) fiber market also can be divided into: North America, Europe, Asia-Pacific, MEA (Middle East and Africa), Latin America. North America held the highest share in the global silicon carbide (sic) fiber market. However, Asia-Pacific is forecast to register the highest CAGR during the forecast period 2024 %li%2030.

The report also provides a detailed analysis of several leading silicon carbide (SiC) fiber market vendors that include General Electric Company, Nippon Carbon Co., Ltd., Ube Industries Ltd., BJS Ceramics GmbH, SGL Carbon SE, COI Ceramics, Inc., Haydale Graphene Industries plc, American Elements Corp., Free Form Fibers LLC, Specialty

Materials, Inc., Suzhou Saifei Group Co., Ltd., among others. In this report, key players and their strategies are thoroughly analyzed to understand the competitive outlook of the market.

### Why Choose This Report

Gain a reliable outlook of the global silicon carbide (SiC) fiber market forecasts from 2024 to 2030 across scenarios.

Identify growth segments for investment.

Stay ahead of competitors through company profiles and market data.

The market estimate for ease of analysis across scenarios in Excel format.

Strategy consulting and research support for three months.

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Market Segments Covered in Global Silicon Carbide (SiC) Fiber Industry Analysis:

#### i.) Fiber type

Continuous fiber

Short fiber

#### ii.) Usage

Composites

Non-composites

#### iii.) End-user

Aerospace

Energy and power

Industrial

Others

iv.) Region

North America

Europe

Asia-Pacific

MEA (Middle East and Africa)

Latin America

viii.) Aerospace

Turbine blades

Nozzles

Combustor liners

Interior body panels

Others

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