

## **Silicon Carbide Market Size and Share Outlook - Forecast Trends and Growth Analysis Report (2025-2034)**

Market Report | 2025-08-11 | 179 pages | EMR Inc.

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### **Report description:**

The global silicon carbide market is projected to grow at a CAGR of 17.00% between 2025 and 2034.

#### Growing Crude Steel Production to Augment the Silicon Carbide Industry Growth

Based on end user, the steel segment is expected to account for a significant share in the market. Silicon carbide is utilised as a deoxidising agent in the steel sector and is a major raw material in the production of refractories, which is expected to significantly drive its demand in the steel industry. The thermal conductivity of silicon carbide refractories is five times higher than that of fireclay refractories. With increasing global crude steel output, there is expected to be a rise in demand for refractories, which, in turn, is expected to enhance the silicon carbide industry growth in the near future. Along with the steel sector's increased demand for silicon carbide, the electronics industry, which uses the material to make semiconductors, is also driving the market.

#### Global Silicon Carbide: Market Segmentation

Silicon carbide (SiC) semiconductors' favourable qualities, such as their ability to operate at high temperatures and their benefits over silicon make them ideal for applications in the automotive, aerospace, and defence industries.

By product, the market is divided into:

- Black
- Green

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- Others

Based on device, the market is bifurcated into:

- Discrete Devices
- Bare Die

Among these, the discrete devices segment is further divided into MOSFET, diode, and module, among others, based on type.

On the basis of end user, the market is segmented into:

- Steel
- Automotive
- Aerospace
- Defence and Military
- Healthcare
- Electrical and Electronics
- Others

On the basis of region, the market is segmented into:

- North America
- Europe
- Asia Pacific
- Latin America
- Middle East and Africa

Increasing Demand for Silicon Carbide Power Modules in Electric Vehicles Bolstering the Silicon Carbide Industry Growth

The rising demand for silicon carbide power modules in electric vehicles is boosting the growth of the silicon carbide industry. The expanding population in the Asia Pacific, together with the adoption of urbanisation, is likely to drive the development of smart cities and smart residences in the forecast period, which, in turn, is expected to enhance the demand for silicon carbide power modules in electric vehicles. China is one of the world's top automakers. In the coming years, it is expected that increased automotive production will stimulate the product demand. Furthermore, the expansion of the SiC semiconductors business is likely to be aided by the strategic initiatives taken by key participants in the semiconductor sector. As the product improves efficiency and decreases form factor in semiconductors and can operate at high temperatures, the rising semiconductor demand is projected to remain a key driving factor.

Key Industry Players in the Global Silicon Carbide Market

The report gives a detailed analysis of the following key players in the global silicon carbide market, covering their competitive landscape, capacity, and latest developments like mergers, acquisitions, and investments, expansions of capacity, and plant turnarounds:

- AGSCO Corp.
- Entegris, Inc.
- ESK-SIC GmbH

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- Grindwell Norton Ltd.
- Imerys Graphite & Carbon Ltd
- Xiamen Powerway Advanced Material Co., Ltd
- Others

The comprehensive EMR report provides an in-depth assessment of the market based on the Porter's five forces model along with giving a SWOT analysis.

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