

Silicon Carbide Market Report by Product (Black Silicon Carbide, Green Silicon Carbide, and Others), Application (Steel, Automotive, Aerospace, Military and Defense, Electrical and Electronics, Healthcare, and Others), and Region 2024-2032

Market Report | 2024-08-10 | 147 pages | IMARC Group

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Report description:

The global silicon carbide market size reached US\$ 6.0 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 9.5 Billion by 2032, exhibiting a growth rate (CAGR) of 5.1% during 2024-2032.

Silicon carbide (SiC), or carborundum, is a deoxidizing agent consisting of silicon and carbon used for the production of steel. It usually occurs as rare mineral moissanite and can be artificially synthesized in the form of SiC powder. It is commonly used in the manufacturing of automobile brakes, clutches, light-emitting diodes (LEDs), detectors, ceramic plates and bulletproof jackets and vests. In comparison to the traditionally used silicomanganese or ferrosilicon, silicon carbide has high thermal conductivity, resistance to abrasion and corrosion from acids and produces lesser sulfur, aluminum and nitrogen content. As a result, it finds extensive applications across various industries, including aviation, aerospace, medical, electronic, defense, automotive and telecommunication.

Significant growth in the steel industry across the globe is one of the key factors creating a positive outlook for the market. SiC is extensively used in the production of stainless steel as it enhances the yield rate and purifies molten steel. Moreover, widespread product adoption for the manufacturing of various semiconductors and other electronic components is providing a thrust to the market growth. It can function in high voltage and temperature conditions and is thereby also used to manufacture electronic vehicles (EVs). It aids in reducing the weight of the automobiles and improving overall efficiency. Other factors, including the increasing utilization of SiC devices in cellular base stations and radio-frequency operations, along with the implementation of favorable government policies promoting the use of renewable energy resources for power generation, are anticipated to drive the market toward growth.

Key Market Segmentation:

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IMARC Group provides an analysis of the key trends in each sub-segment of the global silicon carbide market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on product and application.

Breakup by Product:

- Black Silicon Carbide
- Green Silicon Carbide
- Others

Breakup by Application:

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

Breakup by Region:

- North America
 - o□United States
 - o□Canada
- Asia-Pacific
 - o□China
 - o□Japan
 - o□India
 - o□South Korea
 - o□Australia
 - o□Indonesia
 - o□Others
- Europe
 - o□Germany
 - o□France
 - o□United Kingdom
 - o□Italy
 - o□Spain
 - o□Russia
 - o□Others
- Latin America
 - o□Brazil
 - o□Mexico
 - o□Others
- Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being AGSCO Corp, Carborundum Universal Limited (Murugappa Group), Compagnie de Saint-Gobain S.A., Cree Inc., Entegris Inc., ESK-SIC GmbH, Fuji Electric Co. Ltd., General Electric Company, Genesic Semiconductor Inc., Infineon Technologies AG, Renesas Electronics

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Key Questions Answered in This Report

1. How big is the global silicon carbide market?
2. What is the expected growth rate of the global silicon carbide market during 2024-2032?
3. What are the key factors driving the global silicon carbide market?
4. What has been the impact of COVID-19 on the global silicon carbide market?
5. What is the breakup of the global silicon carbide market based on the product?
6. What is the breakup of the global silicon carbide market based on the application?
7. What are the key regions in the global silicon carbide market?
8. Who are the key players/companies in the global silicon carbide market?

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