

Silicon Carbide Market Size, Share, Trends and Forecast by Product, Application, and Region, 2025-2033

Market Report | 2025-09-01 | 139 pages | IMARC Group

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Report description:

The global silicon carbide market size reached USD 6.3 Billion in 2024. Looking forward, IMARC Group expects the market to reach USD 9.7 Billion by 2033, exhibiting a growth rate (CAGR) of 4.9% during 2025-2033.

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:

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 2025-2033. Our report has categorized the market based on product and

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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 Corporation and SNAM Abrasives Pvt Ltd.

Key Questions Answered in This Report

1.How big is the global silicon carbide market?

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- 2.What is the expected growth rate of the global silicon carbide market during 2025-2033?
- 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?

Table of Contents:

- 1 Preface
- 2 Scope and Methodology
 - 2.1 Objectives of the Study
 - 2.2 Stakeholders
 - 2.3 Data Sources
 - 2.3.1 Primary Sources
 - 2.3.2 Secondary Sources
 - 2.4 Market Estimation
 - 2.4.1 Bottom-Up Approach
 - 2.4.2 Top-Down Approach
 - 2.5 Forecasting Methodology
- 3 Executive Summary
- 4 Introduction
 - 4.1 Overview
 - 4.2 Key Industry Trends
- 5 Global Silicon Carbide Market
 - 5.1 Market Overview
 - 5.2 Market Performance
 - 5.3 Impact of COVID-19
 - 5.4 Market Forecast
- 6 Market Breakup by Product
 - 6.1 Black Silicon Carbide
 - 6.1.1 Market Trends
 - 6.1.2 Market Forecast
 - 6.2 Green Silicon Carbide
 - 6.2.1 Market Trends
 - 6.2.2 Market Forecast
 - 6.3 Others
 - 6.3.1 Market Trends
 - 6.3.2 Market Forecast
- 7 Market Breakup by Application
 - 7.1 Steel
 - 7.1.1 Market Trends
 - 7.1.2 Market Forecast
 - 7.2 Automotive
 - 7.2.1 Market Trends
 - 7.2.2 Market Forecast

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- 7.3 Aerospace
 - 7.3.1 Market Trends
 - 7.3.2 Market Forecast
- 7.4 Military and Defense
 - 7.4.1 Market Trends
 - 7.4.2 Market Forecast
- 7.5 Electrical and Electronics
 - 7.5.1 Market Trends
 - 7.5.2 Market Forecast
- 7.6 Healthcare
 - 7.6.1 Market Trends
 - 7.6.2 Market Forecast
- 7.7 Others
 - 7.7.1 Market Trends
 - 7.7.2 Market Forecast
- 8 Market Breakup by Region
 - 8.1 North America
 - 8.1.1 United States
 - 8.1.1.1 Market Trends
 - 8.1.1.2 Market Forecast
 - 8.1.2 Canada
 - 8.1.2.1 Market Trends
 - 8.1.2.2 Market Forecast
 - 8.2 Asia-Pacific
 - 8.2.1 China
 - 8.2.1.1 Market Trends
 - 8.2.1.2 Market Forecast
 - 8.2.2 Japan
 - 8.2.2.1 Market Trends
 - 8.2.2.2 Market Forecast
 - 8.2.3 India
 - 8.2.3.1 Market Trends
 - 8.2.3.2 Market Forecast
 - 8.2.4 South Korea
 - 8.2.4.1 Market Trends
 - 8.2.4.2 Market Forecast
 - 8.2.5 Australia
 - 8.2.5.1 Market Trends
 - 8.2.5.2 Market Forecast
 - 8.2.6 Indonesia
 - 8.2.6.1 Market Trends
 - 8.2.6.2 Market Forecast
 - 8.2.7 Others
 - 8.2.7.1 Market Trends
 - 8.2.7.2 Market Forecast
 - 8.3 Europe
 - 8.3.1 Germany

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- 8.3.1.1 Market Trends
- 8.3.1.2 Market Forecast
- 8.3.2 France
 - 8.3.2.1 Market Trends
 - 8.3.2.2 Market Forecast
- 8.3.3 United Kingdom
 - 8.3.3.1 Market Trends
 - 8.3.3.2 Market Forecast
- 8.3.4 Italy
 - 8.3.4.1 Market Trends
 - 8.3.4.2 Market Forecast
- 8.3.5 Spain
 - 8.3.5.1 Market Trends
 - 8.3.5.2 Market Forecast
- 8.3.6 Russia
 - 8.3.6.1 Market Trends
 - 8.3.6.2 Market Forecast
- 8.3.7 Others
 - 8.3.7.1 Market Trends
 - 8.3.7.2 Market Forecast
- 8.4 Latin America
 - 8.4.1 Brazil
 - 8.4.1.1 Market Trends
 - 8.4.1.2 Market Forecast
 - 8.4.2 Mexico
 - 8.4.2.1 Market Trends
 - 8.4.2.2 Market Forecast
 - 8.4.3 Others
 - 8.4.3.1 Market Trends
 - 8.4.3.2 Market Forecast
- 8.5 Middle East and Africa
 - 8.5.1 Market Trends
 - 8.5.2 Market Breakup by Country
 - 8.5.3 Market Forecast
- 9 SWOT Analysis
 - 9.1 Overview
 - 9.2 Strengths
 - 9.3 Weaknesses
 - 9.4 Opportunities
 - 9.5 Threats
- 10 Value Chain Analysis
- 11 Porters Five Forces Analysis
 - 11.1 Overview
 - 11.2 Bargaining Power of Buyers
 - 11.3 Bargaining Power of Suppliers
 - 11.4 Degree of Competition
 - 11.5 Threat of New Entrants

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- 11.6 Threat of Substitutes
- 12 Price Analysis
- 13 Competitive Landscape
 - 13.1 Market Structure
 - 13.2 Key Players
 - 13.3 Profiles of Key Players
 - 13.3.1 AGSCO Corp
 - 13.3.1.1 Company Overview
 - 13.3.1.2 Product Portfolio
 - 13.3.2 Carborundum Universal Limited (Murugappa Group)
 - 13.3.2.1 Company Overview
 - 13.3.2.2 Product Portfolio
 - 13.3.2.3 Financials
 - 13.3.3 Compagnie de Saint-Gobain S.A.
 - 13.3.3.1 Company Overview
 - 13.3.3.2 Product Portfolio
 - 13.3.4 Cree Inc.
 - 13.3.4.1 Company Overview
 - 13.3.4.2 Product Portfolio
 - 13.3.4.3 Financials
 - 13.3.4.4 SWOT Analysis
 - 13.3.5 Entegris Inc.
 - 13.3.5.1 Company Overview
 - 13.3.5.2 Product Portfolio
 - 13.3.5.3 Financials
 - 13.3.6 ESK-SIC GmbH
 - 13.3.6.1 Company Overview
 - 13.3.6.2 Product Portfolio
 - 13.3.7 Fuji Electric Co. Ltd.
 - 13.3.7.1 Company Overview
 - 13.3.7.2 Product Portfolio
 - 13.3.7.3 Financials
 - 13.3.7.4 SWOT Analysis
 - 13.3.8 General Electric Company
 - 13.3.8.1 Company Overview
 - 13.3.8.2 Product Portfolio
 - 13.3.8.3 Financials
 - 13.3.8.4 SWOT Analysis
 - 13.3.9 Genesic Semiconductor Inc.
 - 13.3.9.1 Company Overview
 - 13.3.9.2 Product Portfolio
 - 13.3.10 Infineon Technologies AG
 - 13.3.10.1 Company Overview
 - 13.3.10.2 Product Portfolio
 - 13.3.10.3 Financials
 - 13.3.11 Renesas Electronics Corporation
 - 13.3.11.1 Company Overview

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13.3.11.2 Product Portfolio
13.3.11.3 Financials
13.3.11.4 SWOT Analysis
13.3.12 SNAM Abrasives Pvt Ltd
13.3.12.1 Company Overview
13.3.12.2 Product Portfolio

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