

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

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Abstracts

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:

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

United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

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?
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?

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

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
 - 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

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

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

List Of Tables

LIST OF TABLES

Table 1: Global: Silicon Carbide Market: Key Industry Highlights, 2023 and 2032

Table 2: Global: Silicon Carbide Market Forecast: Breakup by Product (in Million US\$), 2024-2032

Table 3: Global: Silicon Carbide Market Forecast: Breakup by Application (in Million US\$), 2024-2032

Table 4: Global: Silicon Carbide Market Forecast: Breakup by Region (in Million US\$), 2024-2032

Table 5: Global: Silicon Carbide Market: Competitive Structure

Table 6: Global: Silicon Carbide Market: Key Players

List Of Figures

LIST OF FIGURES

Figure 1: Global: Silicon Carbide Market: Major Drivers and Challenges

Figure 2: Global: Silicon Carbide Market: Sales Value (in Billion US\$), 2018-2023

Figure 3: Global: Silicon Carbide Market Forecast: Sales Value (in Billion US\$), 2024-2032

Figure 4: Global: Silicon Carbide Market: Breakup by Product (in %), 2023

Figure 5: Global: Silicon Carbide Market: Breakup by Application (in %), 2023

Figure 6: Global: Silicon Carbide Market: Breakup by Region (in %), 2023

Figure 7: Global: Silicon Carbide (Black Silicon Carbide) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 8: Global: Silicon Carbide (Black Silicon Carbide) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 9: Global: Silicon Carbide (Green Silicon Carbide) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 10: Global: Silicon Carbide (Green Silicon Carbide) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 11: Global: Silicon Carbide (Other Products) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 12: Global: Silicon Carbide (Other Products) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 13: Global: Silicon Carbide (Steel) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 14: Global: Silicon Carbide (Steel) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 15: Global: Silicon Carbide (Automotive) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 16: Global: Silicon Carbide (Automotive) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 17: Global: Silicon Carbide (Aerospace) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 18: Global: Silicon Carbide (Aerospace) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 19: Global: Silicon Carbide (Military and Defense) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 20: Global: Silicon Carbide (Military and Defense) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 21: Global: Silicon Carbide (Electrical and Electronics) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 22: Global: Silicon Carbide (Electrical and Electronics) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 23: Global: Silicon Carbide (Healthcare) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 24: Global: Silicon Carbide (Healthcare) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 25: Global: Silicon Carbide (Other Applications) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 26: Global: Silicon Carbide (Other Applications) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 27: North America: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 28: North America: Silicon Carbide Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 29: United States: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 30: United States: Silicon Carbide Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 31: Canada: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 32: Canada: Silicon Carbide Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 33: Asia-Pacific: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 34: Asia-Pacific: Silicon Carbide Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 35: China: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 36: China: Silicon Carbide Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 37: Japan: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 38: Japan: Silicon Carbide Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 39: India: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 40: India: Silicon Carbide Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 41: South Korea: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 42: South Korea: Silicon Carbide Market Forecast: Sales Value (in Million US\$),

2024-2032

Figure 43: Australia: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 44: Australia: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 45: Indonesia: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 46: Indonesia: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 47: Others: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 48: Others: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 49: Europe: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 50: Europe: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 51: Germany: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 52: Germany: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 53: France: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 54: France: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 55: United Kingdom: Silicon Carbide Market: Sales Value (in Million US\$), 2018
& 2023

Figure 56: United Kingdom: Silicon Carbide Market Forecast: Sales Value (in Million
US\$), 2024-2032

Figure 57: Italy: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 58: Italy: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 59: Spain: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 60: Spain: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 61: Russia: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 62: Russia: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 63: Others: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 64: Others: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 65: Latin America: Silicon Carbide Market: Sales Value (in Million US\$), 2018 &
2023

Figure 66: Latin America: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 67: Brazil: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 68: Brazil: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 69: Mexico: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 70: Mexico: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 71: Others: Silicon Carbide Market: Sales Value (in Million US\$), 2018 & 2023

Figure 72: Others: Silicon Carbide Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 73: Middle East and Africa: Silicon Carbide Market: Sales Value (in Million US\$),
2018 & 2023

Figure 74: Middle East and Africa: Silicon Carbide Market: Breakup by Country (in %),
2023

Figure 75: Middle East and Africa: Silicon Carbide Market Forecast: Sales Value (in
Million US\$), 2024-2032

Figure 76: Global: Silicon Carbide Industry: SWOT Analysis

Figure 77: Global: Silicon Carbide Industry: Value Chain Analysis

Figure 78: Global: Silicon Carbide Industry: Porter's Five Forces Analysis

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