

Ceramic Matrix Composites Industry Research Report 2024

<https://marketpublishers.com/r/C9EA2EB6D932EN.html>

Date: April 2024

Pages: 128

Price: US\$ 2,950.00 (Single User License)

ID: C9EA2EB6D932EN

Abstracts

Composite materials are comprised of at least two parts: the reinforcement, which provides special mechanical properties such as stiffness or strength, and the matrix material, which holds everything together. Ceramic matrix composites (CMCs) are a special type of composite material in which both the reinforcement (refractory fibers) and matrix material are ceramics. In some cases the same kind of ceramic is used for both parts of the structure, and additional secondary fibers may also be included. Because of this, CMCs are considered a subgroup of both composite materials and ceramics.

Ceramic matrix composites behave much differently from conventional ceramics, and are far different from the high-performance metal alloys that used to be implemented. Like ceramics, they are hard and stable at higher temperatures. But they are also very lightweight (one-third the weight of the nickel superalloys they often replace) and possess significantly greater fracture toughness and thermal shock resistance.

There is an extremely wide range of CMC applications, such as: Heat exchangers, Turbine blades, Stator vanes, High-performance braking systems, Immersion burner tubes, Bulletproof armor, Heating elements, etc. The list of uses is growing quickly, too. CMC components are used in Electrical Engineering, Spaceflight, Aviation, electrical, and electronics industries, just to name a few.

According to APO Research, The global Ceramic Matrix Composites market was valued at US\$ million in 2023 and is anticipated to reach US\$ million by 2030, witnessing a CAGR of xx% during the forecast period 2024-2030.

GE Aviation, Safran, Rolls-Royce Group and CoorsTek are the top 4 players of Ceramic

Matrix Composites, with about 52% market shares.

Report Scope

This report aims to provide a comprehensive presentation of the global market for Ceramic Matrix Composites, with both quantitative and qualitative analysis, to help readers develop business/growth strategies, assess the market competitive situation, analyze their position in the current marketplace, and make informed business decisions regarding Ceramic Matrix Composites.

The report will help the Ceramic Matrix Composites manufacturers, new entrants, and industry chain related companies in this market with information on the revenues, sales volume, and average price for the overall market and the sub-segments across the different segments, by company, by Type, by Application, and by regions.

The Ceramic Matrix Composites market size, estimations, and forecasts are provided in terms of sales volume (KG) and revenue (\$ millions), considering 2023 as the base year, with history and forecast data for the period from 2019 to 2030. This report segments the global Ceramic Matrix Composites market comprehensively. Regional market sizes, concerning products by Type, by Application, and by players, are also provided. For a more in-depth understanding of the market, the report provides profiles of the competitive landscape, key competitors, and their respective market ranks. The report also discusses technological trends and new product developments.

Key Companies & Market Share Insights

In this section, the readers will gain an understanding of the key players competing. This report has studied the key growth strategies, such as innovative trends and developments, intensification of product portfolio, mergers and acquisitions, collaborations, new product innovation, and geographical expansion, undertaken by these participants to maintain their presence. Apart from business strategies, the study includes current developments and key financials. The readers will also get access to the data related to global revenue, price, and sales by manufacturers for the period 2019-2024. This all-inclusive report will certainly serve the clients to stay updated and make effective decisions in their businesses. Some of the prominent players reviewed in the research report include:

GE Aviation

Safran

Rolls-Royce Group

CoorsTek

COI Ceramics

BJS Ceramics GmbH

Composites Horizons

Ultramet

WPX Faser Keramik

Applied Thin Films

Walter E. C. Pritzkow Spezialkeramik

Ceramic Matrix Composites segment by Type

Oxide

Silicon Carbide

Carbon

Others

Ceramic Matrix Composites segment by Application

Aviation

Space

Electrical Engineering

Others

Ceramic Matrix Composites Segment by Region

North America

U.S.

Canada

Europe

Germany

France

U.K.

Italy

Russia

Asia-Pacific

China

Japan

South Korea

India

Australia

China Taiwan

Indonesia

Thailand

Malaysia

Latin America

Mexico

Brazil

Argentina

Middle East & Africa

Turkey

Saudi Arabia

UAE

Key Drivers & Barriers

High-impact rendering factors and drivers have been studied in this report to aid the readers to understand the general development. Moreover, the report includes restraints and challenges that may act as stumbling blocks on the way of the players. This will assist the users to be attentive and make informed decisions related to business. Specialists have also laid their focus on the upcoming business prospects.

Reasons to Buy This Report

1. This report will help the readers to understand the competition within the industries and strategies for the competitive environment to enhance the potential profit. The report also focuses on the competitive landscape of the global Ceramic Matrix Composites market, and introduces in detail the market share, industry ranking, competitor ecosystem, market performance, new product development, operation situation, expansion, and acquisition. etc. of the main players, which helps the readers to identify the main competitors and deeply understand the competition pattern of the

market.

2. This report will help stakeholders to understand the global industry status and trends of Ceramic Matrix Composites and provides them with information on key market drivers, restraints, challenges, and opportunities.

3. This report will help stakeholders to understand competitors better and gain more insights to strengthen their position in their businesses. The competitive landscape section includes the market share and rank (in volume and value), competitor ecosystem, new product development, expansion, and acquisition.

4. This report stays updated with novel technology integration, features, and the latest developments in the market

5. This report helps stakeholders to gain insights into which regions to target globally

6. This report helps stakeholders to gain insights into the end-user perception concerning the adoption of Ceramic Matrix Composites.

7. This report helps stakeholders to identify some of the key players in the market and understand their valuable contribution.

Chapter Outline

Chapter 1: Research objectives, research methods, data sources, data cross-validation;

Chapter 2: Introduces the report scope of the report, executive summary of different market segments (by region, product type, application, etc), including the market size of each market segment, future development potential, and so on. It offers a high-level view of the current state of the market and its likely evolution in the short to mid-term, and long term.

Chapter 3: Detailed analysis of Ceramic Matrix Composites manufacturers competitive landscape, price, production and value market share, latest development plan, merger, and acquisition information, etc.

Chapter 4: Provides profiles of key players, introducing the basic situation of the main companies in the market in detail, including product production/output, value, price, gross margin, product introduction, recent development, etc.

Chapter 5: Production/output, value of Ceramic Matrix Composites by region/country. It provides a quantitative analysis of the market size and development potential of each region in the next six years.

Chapter 6: Consumption of Ceramic Matrix Composites in regional level and country level. It provides a quantitative analysis of the market size and development potential of each region and its main countries and introduces the market development, future development prospects, market space, and production of each country in the world.

Chapter 7: Provides the analysis of various market segments by type, covering the market size and development potential of each market segment, to help readers find the blue ocean market in different market segments.

Chapter 8: Provides the analysis of various market segments by application, covering the market size and development potential of each market segment, to help readers find the blue ocean market in different downstream markets.

Chapter 9: Analysis of industrial chain, including the upstream and downstream of the industry.

Chapter 10: Introduces the market dynamics, latest developments of the market, the driving factors and restrictive factors of the market, the challenges and risks faced by manufacturers in the industry, and the analysis of relevant policies in the industry.

Chapter 11: The main points and conclusions of the report.

Chapter 11: The main points and conclusions of the report.

Contents

1 PREFACE

- 1.1 Scope of Report
- 1.2 Reasons for Doing This Study
- 1.3 Research Methodology
- 1.4 Research Process
- 1.5 Data Source
 - 1.5.1 Secondary Sources
 - 1.5.2 Primary Sources

2 MARKET OVERVIEW

- 2.1 Product Definition
- 2.2 Ceramic Matrix Composites by Type
 - 2.2.1 Market Value Comparison by Type (2019 VS 2023 VS 2030) & (US\$ Million)
 - 2.2.2 Oxide
 - 2.2.3 Silicon Carbide
 - 2.2.4 Carbon
 - 2.2.5 Others
- 2.3 Ceramic Matrix Composites by Application
 - 2.3.1 Market Value Comparison by Application (2019 VS 2023 VS 2030) & (US\$ Million)
 - 2.3.2 Aviation
 - 2.3.3 Space
 - 2.3.4 Electrical Engineering
 - 2.3.5 Others
- 2.4 Global Market Growth Prospects
 - 2.4.1 Global Ceramic Matrix Composites Production Value Estimates and Forecasts (2019-2030)
 - 2.4.2 Global Ceramic Matrix Composites Production Capacity Estimates and Forecasts (2019-2030)
 - 2.4.3 Global Ceramic Matrix Composites Production Estimates and Forecasts (2019-2030)
 - 2.4.4 Global Ceramic Matrix Composites Market Average Price (2019-2030)

3 MARKET COMPETITIVE LANDSCAPE BY MANUFACTURERS

- 3.1 Global Ceramic Matrix Composites Production by Manufacturers (2019-2024)
- 3.2 Global Ceramic Matrix Composites Production Value by Manufacturers (2019-2024)
- 3.3 Global Ceramic Matrix Composites Average Price by Manufacturers (2019-2024)
- 3.4 Global Ceramic Matrix Composites Industry Manufacturers Ranking, 2022 VS 2023 VS 2024
- 3.5 Global Ceramic Matrix Composites Key Manufacturers, Manufacturing Sites & Headquarters
- 3.6 Global Ceramic Matrix Composites Manufacturers, Product Type & Application
- 3.7 Global Ceramic Matrix Composites Manufacturers, Date of Enter into This Industry
- 3.8 Global Ceramic Matrix Composites Market CR5 and HHI
- 3.9 Global Manufacturers Mergers & Acquisition

4 MANUFACTURERS PROFILED

4.1 GE Aviation

- 4.1.1 GE Aviation Ceramic Matrix Composites Company Information
- 4.1.2 GE Aviation Ceramic Matrix Composites Business Overview
- 4.1.3 GE Aviation Ceramic Matrix Composites Production Capacity, Value and Gross Margin (2019-2024)
- 4.1.4 GE Aviation Product Portfolio
- 4.1.5 GE Aviation Recent Developments

4.2 Safran

- 4.2.1 Safran Ceramic Matrix Composites Company Information
- 4.2.2 Safran Ceramic Matrix Composites Business Overview
- 4.2.3 Safran Ceramic Matrix Composites Production Capacity, Value and Gross Margin (2019-2024)
- 4.2.4 Safran Product Portfolio
- 4.2.5 Safran Recent Developments

4.3 Rolls-Royce Group

- 4.3.1 Rolls-Royce Group Ceramic Matrix Composites Company Information
- 4.3.2 Rolls-Royce Group Ceramic Matrix Composites Business Overview
- 4.3.3 Rolls-Royce Group Ceramic Matrix Composites Production Capacity, Value and Gross Margin (2019-2024)
- 4.3.4 Rolls-Royce Group Product Portfolio
- 4.3.5 Rolls-Royce Group Recent Developments

4.4 CoorsTek

- 4.4.1 CoorsTek Ceramic Matrix Composites Company Information
- 4.4.2 CoorsTek Ceramic Matrix Composites Business Overview
- 4.4.3 CoorsTek Ceramic Matrix Composites Production Capacity, Value and Gross

Margin (2019-2024)

4.4.4 CoorsTek Product Portfolio

4.4.5 CoorsTek Recent Developments

4.5 COI Ceramics

4.5.1 COI Ceramics Ceramic Matrix Composites Company Information

4.5.2 COI Ceramics Ceramic Matrix Composites Business Overview

4.5.3 COI Ceramics Ceramic Matrix Composites Production Capacity, Value and

Gross Margin (2019-2024)

4.5.4 COI Ceramics Product Portfolio

4.5.5 COI Ceramics Recent Developments

4.6 BJS Ceramics GmbH

4.6.1 BJS Ceramics GmbH Ceramic Matrix Composites Company Information

4.6.2 BJS Ceramics GmbH Ceramic Matrix Composites Business Overview

4.6.3 BJS Ceramics GmbH Ceramic Matrix Composites Production Capacity, Value and Gross Margin (2019-2024)

4.6.4 BJS Ceramics GmbH Product Portfolio

4.6.5 BJS Ceramics GmbH Recent Developments

4.7 Composites Horizons

4.7.1 Composites Horizons Ceramic Matrix Composites Company Information

4.7.2 Composites Horizons Ceramic Matrix Composites Business Overview

4.7.3 Composites Horizons Ceramic Matrix Composites Production Capacity, Value and Gross Margin (2019-2024)

4.7.4 Composites Horizons Product Portfolio

4.7.5 Composites Horizons Recent Developments

4.8 Ultramet

4.8.1 Ultramet Ceramic Matrix Composites Company Information

4.8.2 Ultramet Ceramic Matrix Composites Business Overview

4.8.3 Ultramet Ceramic Matrix Composites Production Capacity, Value and Gross Margin (2019-2024)

4.8.4 Ultramet Product Portfolio

4.8.5 Ultramet Recent Developments

4.9 WPX Faser Keramik

4.9.1 WPX Faser Keramik Ceramic Matrix Composites Company Information

4.9.2 WPX Faser Keramik Ceramic Matrix Composites Business Overview

4.9.3 WPX Faser Keramik Ceramic Matrix Composites Production Capacity, Value and Gross Margin (2019-2024)

4.9.4 WPX Faser Keramik Product Portfolio

4.9.5 WPX Faser Keramik Recent Developments

4.10 Applied Thin Films

- 4.10.1 Applied Thin Films Ceramic Matrix Composites Company Information
- 4.10.2 Applied Thin Films Ceramic Matrix Composites Business Overview
- 4.10.3 Applied Thin Films Ceramic Matrix Composites Production Capacity, Value and Gross Margin (2019-2024)
- 4.10.4 Applied Thin Films Product Portfolio
- 4.10.5 Applied Thin Films Recent Developments
- 4.11 Walter E. C. Pritzkow Spezialkeramik
 - 4.11.1 Walter E. C. Pritzkow Spezialkeramik Ceramic Matrix Composites Company Information
 - 4.11.2 Walter E. C. Pritzkow Spezialkeramik Ceramic Matrix Composites Business Overview
 - 4.11.3 Walter E. C. Pritzkow Spezialkeramik Ceramic Matrix Composites Production Capacity, Value and Gross Margin (2019-2024)
 - 4.11.4 Walter E. C. Pritzkow Spezialkeramik Product Portfolio
 - 4.11.5 Walter E. C. Pritzkow Spezialkeramik Recent Developments

5 GLOBAL CERAMIC MATRIX COMPOSITES PRODUCTION BY REGION

- 5.1 Global Ceramic Matrix Composites Production Estimates and Forecasts by Region: 2019 VS 2023 VS 2030
- 5.2 Global Ceramic Matrix Composites Production by Region: 2019-2030
 - 5.2.1 Global Ceramic Matrix Composites Production by Region: 2019-2024
 - 5.2.2 Global Ceramic Matrix Composites Production Forecast by Region (2025-2030)
- 5.3 Global Ceramic Matrix Composites Production Value Estimates and Forecasts by Region: 2019 VS 2023 VS 2030
- 5.4 Global Ceramic Matrix Composites Production Value by Region: 2019-2030
 - 5.4.1 Global Ceramic Matrix Composites Production Value by Region: 2019-2024
 - 5.4.2 Global Ceramic Matrix Composites Production Value Forecast by Region (2025-2030)
- 5.5 Global Ceramic Matrix Composites Market Price Analysis by Region (2019-2024)
- 5.6 Global Ceramic Matrix Composites Production and Value, YOY Growth
 - 5.6.1 North America Ceramic Matrix Composites Production Value Estimates and Forecasts (2019-2030)
 - 5.6.2 Europe Ceramic Matrix Composites Production Value Estimates and Forecasts (2019-2030)
 - 5.6.3 China Ceramic Matrix Composites Production Value Estimates and Forecasts (2019-2030)
 - 5.6.4 Japan Ceramic Matrix Composites Production Value Estimates and Forecasts (2019-2030)

5.6.5 China Taiwan Ceramic Matrix Composites Production Value Estimates and Forecasts (2019-2030)

6 GLOBAL CERAMIC MATRIX COMPOSITES CONSUMPTION BY REGION

6.1 Global Ceramic Matrix Composites Consumption Estimates and Forecasts by Region: 2019 VS 2023 VS 2030

6.2 Global Ceramic Matrix Composites Consumption by Region (2019-2030)

6.2.1 Global Ceramic Matrix Composites Consumption by Region: 2019-2030

6.2.2 Global Ceramic Matrix Composites Forecasted Consumption by Region (2025-2030)

6.3 North America

6.3.1 North America Ceramic Matrix Composites Consumption Growth Rate by Country: 2019 VS 2023 VS 2030

6.3.2 North America Ceramic Matrix Composites Consumption by Country (2019-2030)

6.3.3 U.S.

6.3.4 Canada

6.4 Europe

6.4.1 Europe Ceramic Matrix Composites Consumption Growth Rate by Country: 2019 VS 2023 VS 2030

6.4.2 Europe Ceramic Matrix Composites Consumption by Country (2019-2030)

6.4.3 Germany

6.4.4 France

6.4.5 U.K.

6.4.6 Italy

6.4.7 Russia

6.5 Asia Pacific

6.5.1 Asia Pacific Ceramic Matrix Composites Consumption Growth Rate by Country: 2019 VS 2023 VS 2030

6.5.2 Asia Pacific Ceramic Matrix Composites Consumption by Country (2019-2030)

6.5.3 China

6.5.4 Japan

6.5.5 South Korea

6.5.6 China Taiwan

6.5.7 Southeast Asia

6.5.8 India

6.5.9 Australia

6.6 Latin America, Middle East & Africa

6.6.1 Latin America, Middle East & Africa Ceramic Matrix Composites Consumption
Growth Rate by Country: 2019 VS 2023 VS 2030

6.6.2 Latin America, Middle East & Africa Ceramic Matrix Composites Consumption by
Country (2019-2030)

6.6.3 Mexico

6.6.4 Brazil

6.6.5 Turkey

6.6.5 GCC Countries

7 SEGMENT BY TYPE

7.1 Global Ceramic Matrix Composites Production by Type (2019-2030)

7.1.1 Global Ceramic Matrix Composites Production by Type (2019-2030) & (KG)

7.1.2 Global Ceramic Matrix Composites Production Market Share by Type
(2019-2030)

7.2 Global Ceramic Matrix Composites Production Value by Type (2019-2030)

7.2.1 Global Ceramic Matrix Composites Production Value by Type (2019-2030) &
(US\$ Million)

7.2.2 Global Ceramic Matrix Composites Production Value Market Share by Type
(2019-2030)

7.3 Global Ceramic Matrix Composites Price by Type (2019-2030)

8 SEGMENT BY APPLICATION

8.1 Global Ceramic Matrix Composites Production by Application (2019-2030)

8.1.1 Global Ceramic Matrix Composites Production by Application (2019-2030) &
(KG)

8.1.2 Global Ceramic Matrix Composites Production by Application (2019-2030) &
(KG)

8.2 Global Ceramic Matrix Composites Production Value by Application (2019-2030)

8.2.1 Global Ceramic Matrix Composites Production Value by Application (2019-2030)
& (US\$ Million)

8.2.2 Global Ceramic Matrix Composites Production Value Market Share by
Application (2019-2030)

8.3 Global Ceramic Matrix Composites Price by Application (2019-2030)

9 VALUE CHAIN AND SALES CHANNELS ANALYSIS OF THE MARKET

9.1 Ceramic Matrix Composites Value Chain Analysis

- 9.1.1 Ceramic Matrix Composites Key Raw Materials
- 9.1.2 Raw Materials Key Suppliers
- 9.1.3 Ceramic Matrix Composites Production Mode & Process
- 9.2 Ceramic Matrix Composites Sales Channels Analysis
 - 9.2.1 Direct Comparison with Distribution Share
 - 9.2.2 Ceramic Matrix Composites Distributors
 - 9.2.3 Ceramic Matrix Composites Customers

10 GLOBAL CERAMIC MATRIX COMPOSITES ANALYZING MARKET DYNAMICS

- 10.1 Ceramic Matrix Composites Industry Trends
- 10.2 Ceramic Matrix Composites Industry Drivers
- 10.3 Ceramic Matrix Composites Industry Opportunities and Challenges
- 10.4 Ceramic Matrix Composites Industry Restraints

11 REPORT CONCLUSION

12 DISCLAIMER

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