

# Ceramic Matrix Composites Industry Research Report 2024

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## 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.

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