

Ceramic Matrix Composites - Global Market Outlook (2018-2027)

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Abstracts

According to Statistics MRC, the Ceramic Matrix Composites market accounted for \$8.43 billion in 2018 and is expected to reach \$22.4 billion by 2027 growing at a CAGR of 11.5% during the forecast period. Some of the key factors such as rising demand in aerospace & defense applications, increasing demand for lightweight & high performance materials and Rapid growth in automotive sector are driving the market growth. Moreover, standardization in the production of these composites and incorporation of low-cost production technologies will provide ample opportunities for the growth of the market. However, high customized requirements for end-user applications and higher costs in contrast to other metals and alloys act as the restraining factors for the market growth.

Ceramic matrix composites are defined as a subgroup of composite materials and technical ceramics comprising of ceramic fibers embedded in a ceramic matrix. They are inorganic and nonmetallic solids, which are crystalline in nature. Properties like electrical conductivity and high thermal stability have made ceramic matrix composites suitable for various thermal and related applications where weight to strength proportion and high efficiency is of most extreme significance. They exhibit improved crack resistance and don't rupture easily under heavy loads when compared with conventional technical ceramics.

By end-user, aerospace & defense segment is going to have a lucrative growth during the forecast period due to its properties like high damage resilience, fracture toughness, and high temperature, wear, & erosion resistance. It is anticipated that these composites will supplant titanium metal and other different composites-based segments in aircraft structures. By geography, North America is going to have a lucrative growth during the forecast period due to intense demand for these composites

from the aviation & defense application in the US which is expected to drive the market in this region. The US is the most important market for these composites in the region, where producers are investing in new matrix types and R&D activities.

Some of the key players in this market include Rolls-Royce Plc., General Electric Company, United Technologies, SGL Carbon, Applied Thin Films Inc., COI Ceramics Inc., CFC Carbon Co., Ltd., Coorstek Inc., Lancer Systems and Ultramet.

Sales Channels Covered:

Direct Sales

Distributor

Fiber Materials Covered:

Amorphous Ceramic Fibers (RCF)

Silicon Carbide Fibers (SIC)

Alumina Fibers

Other Fiber Materials

Production Methods Covered:

Sol-gel

Powder Dispersion

Polymer Impregnation and Pyrolysis

Liquid Precursors

Gaseous Infiltration/Chemical Vapor Infiltration

Reactive Melt Infiltration

Other Production Methods

Fiber Types Covered:

Long Continuous Fiber

Whiskers

Short Fiber

Other Fiber Types

Matrix Types Covered:

Alumina Matrices

Carbon/Carbon (C/C) Ceramic Matrix Composites

Oxide/Oxide (OX/OX) Ceramic Matrix Composites

Silicon Carbide/Silicon Carbide (SiC/SiC) Ceramic Matrix Composites

Carbon/Silicon Carbide (C/SiC) Ceramic Matrix Composites

Silicon Carbide/Carbon (SiC/C) Ceramic Matrix Composites

Other Matrix Types

End-Users Covered:

Sensors and Instrumentation

Mechanical and Chemical

Transportation

Industrial

Electrical & Electronics

Energy & Power

Aerospace & Defense

Automotive

Other End-Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

Ceramic Matrix Composites - Global Market Outlook (2018-2027)

Market share assessments for the regional and country level segments

Strategic recommendations for the new entrants

Market forecasts for a minimum of 9 years of all the mentioned segments, sub segments and the regional markets

Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)

Strategic analysis: Drivers and Constraints, Product/Technology Analysis, Porter's five forces analysis, SWOT analysis etc.

Strategic recommendations in key business segments based on the market estimations

Competitive landscaping mapping the key common trends

Company profiling with detailed strategies, financials, and recent developments

Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the clients interest (Note: Depends of feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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NOTE: Tables for North America, Europe, Asia Pacific, Middle East & Africa, and South America are represented in the same manner above.

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