

Growth Opportunities for Ceramics Matrix Composites in the Global Aerospace Industry 2016-2021: Trends, Forecast, and Market Analysis, April 2016

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Abstracts

According to a new market report published by Lucintel, the future of the aerospace CMC industry looks positive with opportunities in commercial aircraft, defense, and spacecraft applications. The global aerospace CMC industry is forecast to grow at a CAGR of 8.9% from 2016 to 2021. The major growth drivers of this market are increasing penetration of CMC in the future generation aircraft and spacecraft and its superior thermo-mechanical properties. CMCs have been developed to achieve a damage tolerant quasi-ductile fracture behavior and to maintain all other advantages of monolithic ceramics at high temperatures; and offer better performance than traditional inorganic fiber-polymer composites.

In this market, Oxide/Oxide, SiC/SiC and Carbon/Carbon are the three types of CMC. Lucintel predicts that the demand for the SiC/SiC CMC is likely to experience the highest growth in the forecast period supported by its excellent mechanical properties, such as oxidation resistance, corrosion resistance, and low density even at high temperatures.

Within the aerospace CMC market, commercial aircraft is expected to remain the largest market with the highest growth during forecast period due to increasing usage of CMC materials in commercial aircraft like A320Neo, B737Max, and C919 and aircraft brake disks.

By component, landing gear is expected to remain the largest market for CMC due to the usage of CMC in aircraft brakes. CMC consumption in aircraft engine is expected to witness the highest growth during the forecast period due to increasing usage of CMC in aero engines.

North America is expected to remain the largest as well as the highest growing region during the forecast period due to presence of major aircraft manufacturers, increasing penetration of CMC in aircraft, and usage of CMC in the hotter sections of engines. Recently, GE has started using CMC in shrouds of LeapX engine and Rolls-Royce has plans to use CMC in shrouds, combustor liner, airfoils in the upcoming engines.

For market expansion, the report suggests innovation and new product development, where the unique properties of CMC can be capitalized. The report further suggests the development of partnerships with customers to create win-win situations and the development of performance-driven solutions for end users.

Emerging trends, which have a direct impact on the dynamics of the industry, include application of CMC materials in heating areas, usage of CMCs in aerospace industry to reduce NO_x and CO₂ emission, and usage of CMC to reduce operating cost. 3M, GE Aviation, SGL Carbon SE, COI Ceramics Inc, and CoorsTek Inc. are among the major supplier of CMC in the aerospace industry. Some companies are opting for M&A as a strategic initiative for driving growth.

Lucintel, a leading global strategic consulting and market research firm, has analyzed ceramic matrix composites (CMC) in the global aerospace industry by CMC type, application type, and region, and has come up with a comprehensive research report, "Growth Opportunities for Ceramic Matrix Composites (CMC) in the Global Aerospace Industry 2016-2021: Trend, Forecast, and Market Analysis" The Lucintel report serves as a springboard for growth strategy, as it provides a comprehensive data and analysis on trends, key drivers, and directions. The study includes a forecast for the ceramic matrix composites (CMC) in the global aerospace industry through 2021, segmented by CMC type, application type, and region as follows:

By CMC type (Value \$ Million from 2010 to 2021)

Oxide/Oxide SiC/SiC Carbon/Carbon & Others

By application type (Value \$ Million from 2010 to 2021)

Commercial Aircraft Defense Space

By region (Value \$ Million from 2010 to 2021)

North America Europe Rest of World (Including APAC)

This report answers following 11 key questions:

Q.1. What are some of the most promising, high-growth opportunities for ceramics matrix composites in the global aerospace industry by material type, components, applications and regions?

Q.2. Which product /segments will grow at a faster pace and why?

Q.3. Which region will grow at a faster pace and why?

Q.4. What are the key factors affecting market dynamics? What are the drivers and challenges of the market?

Q.5. What are the business risks and threats of this market?

Q.6. What are the emerging trends in this market and reasons behind them?

Q.7. What are some changing demands of customers in the market?

Q.8. What are the new developments in the market? Which companies are leading these developments?

Q.9. Who are the major players in this market? What strategic initiatives are being implemented by key players for business growth?

Q.10. How is the competitive rivalry and threat of substitution in this market?

Q.11. What are M&A activities in the last 5 years in this market? What reasons to these activities and how have they impacted the industry?

This unique report from Lucintel will provide you with valuable information, insights, and tools needed to identify new growth opportunities and operate your business successfully in this market. This report will save hundreds of hours of your own personal research time and will significantly benefit you in expanding your business in this market. In today's stringent economy, you need every advantage that you can find.

To make business, investment, and strategic decisions, you need timely, useful information. This market report fulfills this core need and is an indispensable reference guide for multinational materials suppliers, product manufacturers, investors, executives, distributors, and many more that operate in this market.

Some of the features of "Growth Opportunities for Ceramics Matrix Composites in the Global Aerospace Industry 2016-2021: Trends, Forecast, and Market Analysis" include:

Market size estimates: Ceramics matrix composites in global aerospace industry size estimation in value (\$M) shipment. Trend and forecast analysis: Ceramics matrix composites in global aerospace industry trend (2010-2015) and forecast (2016-2021) by

region and segment. Segmentation analysis: Ceramics matrix composites in global aerospace industry size by various CMC material types such as oxide/oxide, SiC/SiC, C/C and others both in terms of value shipment. Regional analysis: Ceramics matrix composites in global aerospace industry breakdown by key regions such as North America, Europe, and Rest of World. Growth opportunities: Analysis on growth opportunities in different applications and regions. Strategic analysis: This includes M&A, new product development, competitive landscape, and expansion strategies of ceramics matrix composites products suppliers in global aerospace industry. Emerging applications: Emerging applications of ceramics matrix composites in global aerospace industry in various markets. Analysis of competitive intensity of the industry based on Porter's Five Forces model.

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