

# Structural Core Materials Market to Eyewitness Massive Growth USD 2.64 Billion by 2029 | Exactitude Consultancy

*The structural core materials market is driven by lightweighting demand, aerospace expansion, and wind energy expansion.*

LUTON, BEDFORDSHIRE, UNITED KINGDOM, November 22, 2023 /EINPresswire.com/ -- The [structural core materials market](#) is expected to grow at 6.45% CAGR from 2023 to 2029. It is expected to reach above USD 2.64 Billion by 2029 from USD 1.30 Billion in 2022.



Structural core materials are a crucial component in the manufacturing of composite materials used in various industries such as aerospace, automotive, wind energy, marine, and construction. These materials are used to provide strength and stiffness to the composite

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The structural core materials market has seen steady growth, driven by demand from aerospace, automotive, and renewable energy sectors, emphasizing lightweight and high-strength solutions.

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structures while maintaining a low weight. Some common types of structural core materials include foam cores, balsa wood, honeycomb cores, and others.

The increasing urbanisation, modernization, and expansion of the building and construction industries have all contributed to an increase in demand for structural core materials. The global surge in demand for sustainable energy is one of the key factors driving the growth of the structural core materials market. Honeycomb core materials are widely used in the automotive and aerospace industries because of their advantageous properties such as thermal stability, light weight, and high stiffness. As a result, the market value of structural core materials will

rise in the future. The growth and development of the various end-user verticals would

undoubtedly increase the demand for structural core materials.

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## Industry Developments

- 24 January 2023: Evonik has launched a new category of nutraceuticals called IN VIVO BIOTICS™. These next-generation synbiotics combine probiotics – healthy gut bacteria – with other health ingredients. IN VIVO BIOTICS™ are based on scientific understanding of human health with deep knowledge of the market for food ingredients and dietary supplements. Customers working on innovative nutraceuticals and health solutions benefit from Evonik's superior expertise in biotechnology and formulation, as well as reliable delivery, excellent quality standards and scalable production.
- 28 November 2022: Evonik's Coating Additives business line has added a new deaerator to its portfolio. Specially designed for radiation cured wood coatings the new deaerator, TEGO® Airex 923, is a highly compatible 100% active organic polymer that shows improved efficiency.

North America dominated 33% the global market in 2022; for the forecast period, this trend is anticipated to hold.

Through 2029, the rise of the wind energy, construction, and automotive industries, particularly in the developed parts of the United States and Canada, is anticipated to drive the market's expansion in this area. Asia Pacific is anticipated to have the industry's quickest growth rate, with a CAGR of 7.6% in terms of revenue from 2020 to 2029. Over the projected period, it is anticipated that the expansion of the commercial and residential construction industries will fuel demand for structural core materials. Another factor that is projected to have a large impact on regional growth is the region's fast-growing wind, automotive, and aerospace sectors, particularly in China and India.

Due to of the substantial demand from end-user industries including aerospace, automotive, and defence equipment, Europe is also expected to contribute to the expansion of the structural core materials market. In the electronics and automotive sectors, the Middle East and Africa are heavily represented, which is expected to benefit the structural core materials market.

Key Factors Influencing the Structural Core Materials Market Include:

- Increasing Demand in Aerospace and Defense: The aerospace and defense industry is a major consumer of structural core materials due to the need for lightweight yet strong materials for aircraft and spacecraft construction.

- **Growth in Wind Energy Sector:** The wind energy sector also contributes to the demand for structural core materials, especially in the manufacturing of wind turbine blades.
- **Automotive Lightweighting:** With an increasing focus on fuel efficiency and environmental concerns, the automotive industry has been incorporating more composite materials, including structural core materials, to reduce vehicle weight and improve fuel efficiency.
- **Marine Applications:** Structural core materials are extensively used in the marine industry for the construction of boats and other watercraft due to their lightweight and high-strength properties.
- **Construction Industry:** In the construction sector, structural core materials find applications in panels, facades, and other components where lightweight and durable materials are required.
- **Technological Advancements:** Ongoing research and development activities contribute to the development of advanced structural core materials with improved performance characteristics.
- **Environmental Regulations:** Increasing environmental regulations and a growing focus on sustainability may drive the adoption of eco-friendly structural core materials.

#### Structural Core Materials Market [Technological Trends](#)

- **Advanced Composite Materials:**

**High-Performance Foams:** Advanced foam materials, such as polymethacrylimide (PMI) and polyvinylidene fluoride (PVDF) foams, have been gaining popularity as structural core materials. These foams offer high strength-to-weight ratios and are used in aerospace and other high-performance applications.

- **3D Printing/Additive Manufacturing:**

**Application in Core Structures:** Additive manufacturing technologies are being explored for the production of complex core structures with optimized geometries. This allows for more efficient use of materials and enhanced performance.

- **Nanostructured Core Materials:**

**Integration of Nanomaterials:** The integration of nanomaterials, such as carbon nanotubes or nanoparticles, into core materials is being researched to improve mechanical properties and overall performance. These enhancements may include increased strength, stiffness, and resistance to environmental factors.

- Recyclable and Sustainable Materials:

Bio-Based Cores: There is a growing interest in developing structural core materials from renewable and bio-based sources. Bio-based cores, such as those derived from natural fibers or recycled materials, align with the increasing emphasis on sustainability and environmental responsibility.

- Digitalization and Simulation:

Digital Twin Technology: The use of digital twin technology allows for the virtual representation and simulation of structural core materials. This aids in the design and optimization processes, helping manufacturers enhance the performance of core materials before physical prototypes are produced.

#### Structural Core Materials Market Player

- IAB Group AB
- Evonik Industries AG
- Gurit Holding AG
- Schweiter Technologies AG
- Hexcel Corporation
- Armacell International Holding GmbH
- Changzhou Tiansheng New Materials Co. Ltd.
- The Gill Corporation
- Euro-Composites S.A.
- Plascore Inc

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#### Key Market Segments: Structural Core Materials Market

Structural Core Materials Market By Product, 2023-2029, (USD Billion), (Kilotons).

- Foam
- Honeycomb
- Balsa

Structural Core Materials Market By Outer Skin Type, 2023-2029, (USD Billion), (Kilotons).

- GFRP
- CFRP

- NFRP

Structural Core Materials Market By End-User Industry, 2023-2029, (USD Billion), (Kilotons).

- Aerospace
- Wind Energy
- Marine
- Transportation
- Construction

## Market Dynamics

### 1. Drivers:

a. Increasing Demand in Construction Industry: The construction industry is a significant driver for structural core materials, as these materials are used in applications like composite panels and sandwich structures.

b. Growth in Wind Energy Sector: The wind energy sector uses structural core materials in the manufacturing of wind turbine blades, contributing to the market's growth.

c. Weight Reduction Trends in Transportation: The aerospace and automotive industries are increasingly adopting lightweight materials to improve fuel efficiency, and structural core materials play a role in achieving weight reduction.

d. Growing Composites Industry: Structural core materials are integral to the composites industry, and the overall growth of composites in various applications contributes to the demand for these materials.

### 2. Restraints:

a. High Raw Material Costs: The cost of raw materials for manufacturing structural core materials, especially advanced or specialized materials, can be high, impacting the overall cost of the final products.

b. Challenges in Recycling: Recycling structural core materials can be challenging due to their composite nature, leading to environmental concerns and disposal challenges.

### 3. Opportunities:

a. Rising Investments in Infrastructure Development: Increasing investments in infrastructure projects globally create opportunities for the structural core materials market, especially in the construction sector.

b. Innovation in Material Development: Ongoing research and development to create new and improved structural core materials with enhanced properties present opportunities for market growth.

c. Expanding Applications in Renewable Energy: As renewable energy sources gain prominence, structural core materials find applications in the manufacturing of components for solar panels and other renewable energy systems.

#### 4. Challenges:

a. Technical Challenges: Developing structural core materials with the right balance of strength, weight, and cost can be technically challenging, requiring continuous innovation.

b. Regulatory Compliance: Adhering to environmental regulations and standards, especially regarding the use and disposal of composite materials, poses challenges for manufacturers in the market.

c. Global Economic Uncertainties: Economic uncertainties and fluctuations can impact the overall demand for structural core materials, especially in industries like construction and aerospace, which are sensitive to economic conditions.

#### Key Question Answered

1. What is the expected growth rate of the structural core materials market over the next 7 years?
2. Who are the major players in the structural core materials market and what is their market share?
3. What are the end-user industries driving demand for market and what is their outlook?
4. What are the opportunities for growth in emerging markets such as Asia-Pacific, Middle East, and Africa?
5. How is the economic environment affecting the structural core materials market, including factors such as interest rates, inflation, and exchange rates?
6. What is the expected impact of government policies and regulations on the structural core materials market?
7. What is the current and forecasted size and growth rate of the global structural core materials market?
8. What are the key drivers of growth in the structural core materials market?
9. What are the distribution channels and supply chain dynamics in the structural core materials market?

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