Report Information

More information from: https://www.marketresearchfuture.com/reports/unmanned-composites-market-9652

Unmanned Composites Market Research Report - Global Forecast till 2030

Report / Search Code: MRFR/A&D/8174-HCR **Publish Date:** January, 2024

Request Sample

Price	1-user PDF : $ 4455.0	Site PDF : $ 5355.0	Enterprise PDF : $ 6525.0

Description:

Global Unmanned Composites Market Overview

Unmanned Composites Market Size was valued at USD 1.09 billion in 2022. The unmanned composites market industry is projected to grow from USD 1.2 Billion in 2023 to USD 3.1 billion by 2030, exhibiting a compound annual growth rate (CAGR) of 16.21% during the forecast period (2023 - 2030). Increased investment in composite materials by manufacturers of unmanned systems and improved performance of unmanned systems using composite materials are the key market drivers enhancing the market growth.

Unmanned Composites Market Overview

Source Secondary Research, Primary Research, MRFR Database and Analyst Review

Unmanned Composites Market Trends

- **Composite materials' increasing dependability and durability are fueling market growth**

The market CAGR for unmanned composites is being driven by an increase in deliveries of unmanned systems and improved performance of unmanned systems using composite materials, rising reliability and durability of composite materials, growing adoption of unmanned vehicles for commercial applications, and developing choice of unmanned aeronautical vehicles for the military are some of the major and vital factors which will likely augment the growth of the unmanned In contrast, increasing levels of industrialist investment in the creation of unmanned vehicles as well as an increase in the number of product launches will further contribute by creating enormous opportunities that will fuel the expansion of the unmanned composite market in the previously mentioned anticipated timeframe.

Absence of composite material standards and high manufacturing costs are predicted to function as market inhibitors for the development of unmanned composite in the aforementioned anticipated timeframe. The biggest and most important obstacle to the market's growth will be the high maintenance costs of composite materials and their capacity to be recycled.

Some of the factors driving the worldwide compound unmanned systems market include rising need for lightweight unmanned systems, improved performance of compound unmanned systems, and increased usage of unmanned aerial vehicles for military and commercial applications. However, constraints such as the lack of standardization of composite materials and the high manufacturing costs of unmanned devices made from composite materials may impede the growth of the composite unmanned materials market. The commercialization of unmanned vehicles could lead to significant revenue potential in the worldwide unmanned composites industry.

Additionally, Government assistance the government is assisting in the development and procurement of unmanned systems.

In addition, the government is developing favorable regulations for the operation of unmanned systems.

Cost-effectiveness, Unmanned systems are less expensive than manned systems. The cost of running an unmanned system is less than that of running a manned system. Thus, driving the unmanned composites market revenue.

Unmanned Composites Market Segment Insights

Unmanned Composites Type Insights

The unmanned composites market segmentation, based on type includes Carbon Fiber Reinforced Polymer (CFRP), Glass Fiber Reinforced Polymer (GFRP), Aramid Fiber Reinforced Polymer (AFRP), Boron Fiber Reinforced Polymer (BFRP). The carbon fiber reinforced polymer (CFRP composites) segment of the unmanned composites market is expected to have the highest CAGR during the forecast period. The demand for lightweight and cost-effective unmanned system components is increasing from (EMs all over the world. Carbon fiber is a combination of carbon atoms that are aligned parallel to the main axis of the filament, providing durability to the structure and ease of use in all commercial applications. These factors influence the CFRP segment's growth.

Figure 1: Unmanned Composites Market, by Type, 2022 & 2030 (USD billion)

Source Secondary Research, Primary Research, MRFR Database and Analyst Review

Unmanned Composites Application Insights

The unmanned composites market segmentation, based on application includes interior and exterior. Interior segment dominated the market in 2022 due to rising demand for lightweight unmanned systems, which is expected to drive the segment's growth. Furthermore, benefits such as high strength and efficiency offered by unmanned composites are expected to increase demand for unmanned composites for manufacturing interior components and vehicles. Exterior Unmanned composites' benefits, such as lower maintenance costs, reliability, durability, and lightweight, are expected to drive the growth of the exterior segment in the market. As a result, during the forecast period, the segment is expected to grow at the fastest CAGR.

Unmanned Composites Platform Insights

The unmanned composites market segmentation, based on platform, includes the unmanned composites market has been divided into two platforms unmanned aerial vehicles and drones (UAV), Ground Unmanned Vehicle (UGV), Surface Unmanned Vehicle (US), Unmanned Submersible Vehicle (UUV), Remotely Operated Vehicle (ROV), passenger drone, and self-driving ship are all examples of autonomous vehicles. During the forecast period, the unmanned aerial vehicles and drones (UAV) segment is expected to dominate the market. UAVS, also known as drones, are widely used in a variety of military missions. Military UAVs, which are specifically used for aerial surveillance, law enforcement, search and rescue, armed attacks, reconnaissance, and maritime patrol, are in high demand. Because these UAVs use special composites such as boron fiber and aramid fiber, the demand for composites is increasing.

Unmanned Composites Regional Insights

By Region, the study provides the market insights into North America, Europe, Asia-Pacific and Rest of the World. North America dominated the unmanned composites market in 2022 due to the presence of prominent companies such as Excel Corporation and Teledyne Technologies Incorporated.

Further, the major countries studied in the market report are The U.S., Canada, German, France, the UK, Italy, Spain, China, Japan, India, Australia, South Korea, and Brazil.

Figure 2: UNMANNED COMPOSITES MARKET SHARE BY REGION 2022 (%)

Source Secondary Research, Primary Research, MRFR Database and Analyst Review

Europe’s unmanned composites market accounts for the second-largest market share due to the increasing presence of European companies in urban air mobility solutions and autonomous ships is expected to drive the growth of the regional unmanned composites industry. Further, the German unmanned composites industry held the largest market share, and the UK unmanned composites market was the fastest growing market in the European region.

The Asia-Pacific Unmanned Composites Market is expected to grow at the fastest CAGR from 2023 to 2030. This is due to rising military spending by countries such as China and India. Moreover, China’s unmanned composites industry held the largest market share, and the Indian unmanned composites industry was the fastest growing market in the Asia-Pacific region.

For instance, In December of 2020, introduced 50,000 sq. Approximately USD 15.0 million has been invested in the development of the Adani Elbit Unmanned Aerial Vehicles production facility in Hyderabad, India.

Unmanned Composites Key Market Players& Competitive Insights

Leading market players are significantly investing in R&D to enhance their product lines, which will help the unmanned composites market grow even more. Market participants are also engaging in a number of strategic initiatives to grow their worldwide presence, with significant market developments including new product launches, contractual agreements, mergers and acquisitions, increased investments, and collaboration with other organizations. To grow and survive in a more competitive and increasing market environment, the unmanned composites industry must provide cost-effective products.

One of the primary business strategies employed by manufacturers in the worldwide unmanned composites industry to assist customers and expand the market sector is local manufacturing to reduce operational costs. The unmanned composites industry has recently provided some of the

most important benefits to medicine. Rising demand, new product development, merger & acquisitions, and investment & expansion strategies are anticipated to offer growth potentials in the unmanned composites market during the forecast period. Major players in the unmanned composites market include Owens-Corning (US), Lavoisier Composites (France), Owens-Corning (US), Mitsubishi Rayon Co. Ltd. (Japan), and others.

Toray Industries, Inc. is a Japanese multinational firm that specializes in industrial goods based on organic synthetic chemistry, polymer chemistry, and biochemistry technologies. Fibers and textiles, as well as plastics and chemicals, were its founding business sectors. The company has also expanded into pharmaceuticals, biotechnology and research and development, medical products, reverse osmosis big membranes, electronics, IT-products, housing and engineering, and advanced composite materials. In March 2019, Toray Industries created Polyphenylene Sulfide Resin, a composite material with great flexibility, heat resistance, and chemical resistance, primarily for use in automotive applications.

Hexcel Company is a publicly traded American industrial materials firm headquartered in Stamford, Connecticut. The firm creates and manufactures structural materials. California Reinforced Plastics (established in 1948), Ciba Composites (bought in 1995), and Hercules Composites Products Division merged to form Hexcel (acquired 1995). The company provides its products in the commercial, military, and recreational markets for use in commercial and military aircraft, space launch vehicles and satellites, wind turbine blades, sporting goods, and automobiles. In March 2019, Hexcel Corporation collaborated with Lavoisier Composites (France) to broaden its product offering with carbon composite materials and by-products created by Lavoisier Composites.

Key Companies in the unmanned composites market include.

- Hexcel Corporation (US)
- Toray Industries Inc. (Japan)
- Stratasys Ltd. (US)
- Teledyne Technologies Incorporated (US)
- Gurit (Switzerland)
- Solvay (Belgium)
- Owens-Corning (US)
- Lavoisier Composites (France)
- Owens-Corning (US)
- Mitsubishi Rayon Co. Ltd. (Japan)

Unmanned Composites Industry Developments

In March of 2019, Hexcel Corporation has collaborated with Lavoisier Composites (France) to expand its product portfolio with carbon composite materials and by-products developed by Lavoisier Composites.

For instance, In March 2019, Toray Industries created Polyphenylene Sulfide Resin, a composite material with high flexibility, heat resistance, and chemical resistance that is primarily used in automotive applications.

For instance, In July of 2019, Tejin Limited acquired J. H. Ziegler GmbH (Germany) in order to expand its composites product portfolio for the automotive industry.

Unmanned Composites Market Segmentation

Unmanned Composites Market By Type Outlook

- Carbon Fiber Reinforced Polymer (CFRP)
- Glass Fiber Reinforced Polymer (GFRP)
- Aramid Fiber Reinforced Polymer (AFRP)
- Boron Fiber Reinforced Polymer (BFRP)

Unmanned Composites Market By Application Outlook

- Interior

- Exterior

Unmanned Composites Market By Platform Outlook

- UAV
- UGV
- USV
- AUV
- ROV
- Autonomous Ship
- Passenger Drone

Unmanned Composites Regional Outlook

- North America
    - US
    - Canada
- Europe
    - Germany
    - France
    - UK
    - Italy
    - Spain
    - Rest of Europe
- Asia-Pacific
    - China
    - Japan
    - India
    - Australia
    - South Korea
    - Australia
    - Rest of Asia-Pacific
- Rest of the World
    - Middle East
    - Africa
    - Latin America

Table of Content:

List of Tables