

Carbon Fiber Prepreg Market By Resins (Thermoset Resins, Thermoplastic Resins), By Process (Hot Melt Process, Solvent Dip Process) By End-Use Industry (Automotive, Aerospace and Defense, Sports and Leisure, Wind energy, Others): Global Opportunity Analysis and Industry Forecast, 2024-2030

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Abstracts

Carbon Fiber Prepreg Market

The carbon fiber prepreg market was valued at \$9.3 billion in 2023 and is projected to reach \$18.4 billion by 2030, growing at a CAGR of 10.2% from 2024 to 2030.

A carbon fiber prepreg is a composite of carbon fibers pre-impregnated with resins such as epoxy or thermoplastic prior to usage. It is a partially cured composite that retains adequate bonding properties for the final curing process. The key attributes of carbon fiber prepreg include its high strength, ease of use, durability, and coherent mechanical properties. The controlled quantity of resin enables manufacturers to easily cut & bend the prepreg and form desired shapes.

Increase in awareness regarding the benefits of lightweight materials in the automotive and aerospace industry is a key driver of the carbon fiber prepreg market. In addition, rise in focus on sustainability and fuel efficiency propels the market growth as lightweight automobiles require considerably less fuel for operation. The application of prepreg in the renewable energy sector, specifically wind energy systems, has been trending in the market in recent times. It is notably being used to manufacture long, lightweight wind turbine blades with high tensile strength and enhanced energy capture.



However, limited knowledge across diverse industries regarding the potential applications of carbon fiber prepreg hampers the development of the market. Furthermore, the preparation of prepreg is a capital-intensive process, which limits its adoption across budget-sensitive sectors and restrains the market growth. On the contrary, rise in demand for lightweight materials from the defense and space sectors is anticipated to present lucrative opportunities for the carbon fiber prepreg market. According to the 2025 Aerospace and Defense Industry Outlook by Deloitte, both industries are projected to focus on enhancing their unmanned systems, rocket technology, and space technology. Therefore, new avenues are projected to open for the carbon fiber prepreg market.

Segment Review

The carbon fiber prepreg market is segmented into resins, process, end-use industry, and region. On the basis of resins, the market is bifurcated into thermoset resins and thermoplastic resins. Depending on process, it is divided into hot melt process and solvent dip process. As per end-use industry, it is classified into automotive, aerospace & defense, sports & leisure, wind energy, and others. Region wise, it is analyzed across North America, Europe, Asia-Pacific, and LAMEA.

Key Findings

On the basis of resins, the thermoset resins segment held a high share of the market in 2023.

Depending on process, the hot melt process segment acquired a high stake in the market in 2023.

As per end-use industry, the aerospace & defense segment dominated the market in 2023.

Region wise, Europe was the highest revenue generator in 2023.

Competition Analysis

The major players in the global carbon fiber prepreg market include Toray Group, ZOLTEK Group, Hexcel Corporation, Mitsubishi Rayon Co., Ltd., GL Group, Royal TenCate N.V., Teijin Limited, Gurit Holdings AG, Axiom Materials, Inc., and Solvay S.A. These major players have adopted various key development strategies such as



business expansion, new product launches, and partnerships to strengthen their foothold in the competitive market.

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Manufacturing Capacity

Capital Investment breakdown

Industry life cycle assessment, by region



Investment Opportunities

Product Benchmarking / Product specification and applications

Product Life Cycles

Upcoming/New Entrant by Regions

Consumer Preference and Product Specifications

Go To Market Strategy

New Product Development/ Product Matrix of Key Players

Regulatory Guidelines

Strategic Recommendations

Additional company profiles with specific to client's interest

Additional country or region analysis- market size and forecast

Brands Share Analysis

Expanded list for Company Profiles

Historic market data

Key player details (including location, contact details, supplier/vendor network etc. in excel format)

Market share analysis of players at global/region/country level

Product Consumption Analysis

Volume Market Size and Forecast

Key Market Segments



By Resins Thermoset Resins Ероху Phenolic Bismaleimide Cyanate Ester Others Thermoplastic Resins By Process Hot Melt Process Solvent Dip Process By End-Use Industry Automotive Aerospace and Defense Sports and Leisure Wind energy Others



North America
U.S.
Canada
Mexico
Europe
France
Germany
Italy
Spain
UK
Rest of Europe
Asia-Pacific
China
Japan
India
South Korea
Australia
Rest of Asia-Pacific
LAMEA
Brazil



South Africa

Saudi Arabia
Rest of LAMEA
Key Market Players
Toray Group
ZOLTEK Group
Hexcel Corporation
Mitsubishi Rayon Co., Ltd.
GL Group
Royal TenCate N.V
Teijin Limited
Gurit Holdings AG
Axiom Materials, Inc.
Solvay S.A.



Contents

CHAPTER 1: INTRODUCTION

- 1.1. Report Description
- 1.2. Key Market Segments
- 1.3. Key Benefits
- 1.4. Research Methodology
 - 1.4.1. Primary Research
 - 1.4.2. Secondary Research
 - 1.4.3. Analyst Tools and Models

CHAPTER 2: EXECUTIVE SUMMARY

2.1. CXO Perspective

CHAPTER 3: MARKET LANDSCAPE

- 3.1. Market Definition and Scope
- 3.2. Key Findings
 - 3.2.1. Top Investment Pockets
 - 3.2.2. Top Winning Strategies
- 3.3. Porter's Five Forces Analysis
 - 3.3.1. Bargaining Power of Suppliers
 - 3.3.2. Threat of New Entrants
 - 3.3.3. Threat of Substitutes
 - 3.3.4. Competitive Rivalry
 - 3.3.5. Bargaining Power among Buyers
- 3.4. Market Dynamics
 - 3.4.1. Drivers
 - 3.4.2. Restraints
 - 3.4.3. Opportunities

CHAPTER 4: CARBON FIBER PREPREG MARKET, BY RESINS

- 4.1. Market Overview
- 4.1.1 Market Size and Forecast, By Resins
- 4.2. Thermoset Resins
 - 4.2.1. Key Market Trends, Growth Factors and Opportunities



- 4.2.2. Market Size and Forecast, By Region
- 4.2.3. Market Share Analysis, By Country
- 4.2.5. Epoxy
 - 4.2.5.1. Market Size and Forecast
- 4.2.6. Phenolic
 - 4.2.6.1. Market Size and Forecast
- 4.2.7. Bismaleimide
 - 4.2.7.1. Market Size and Forecast
- 4.2.8. Cyanate Ester
 - 4.2.8.1. Market Size and Forecast
- 4.2.9. Others
 - 4.2.9.1. Market Size and Forecast
- 4.3. Thermoplastic Resins
 - 4.3.1. Key Market Trends, Growth Factors and Opportunities
 - 4.3.2. Market Size and Forecast, By Region
 - 4.3.3. Market Share Analysis, By Country

CHAPTER 5: CARBON FIBER PREPREG MARKET, BY PROCESS

- 5.1. Market Overview
 - 5.1.1 Market Size and Forecast, By Process
- 5.2. Hot Melt Process
 - 5.2.1. Key Market Trends, Growth Factors and Opportunities
 - 5.2.2. Market Size and Forecast, By Region
 - 5.2.3. Market Share Analysis, By Country
- 5.3. Solvent Dip Process
 - 5.3.1. Key Market Trends, Growth Factors and Opportunities
 - 5.3.2. Market Size and Forecast, By Region
 - 5.3.3. Market Share Analysis, By Country

CHAPTER 6: CARBON FIBER PREPREG MARKET, BY END-USE INDUSTRY

- 6.1. Market Overview
 - 6.1.1 Market Size and Forecast, By End-use Industry
- 6.2. Automotive
 - 6.2.1. Key Market Trends, Growth Factors and Opportunities
 - 6.2.2. Market Size and Forecast, By Region
 - 6.2.3. Market Share Analysis, By Country
- 6.3. Aerospace And Defense



- 6.3.1. Key Market Trends, Growth Factors and Opportunities
- 6.3.2. Market Size and Forecast, By Region
- 6.3.3. Market Share Analysis, By Country
- 6.4. Sports And Leisure
- 6.4.1. Key Market Trends, Growth Factors and Opportunities
- 6.4.2. Market Size and Forecast, By Region
- 6.4.3. Market Share Analysis, By Country
- 6.5. Wind Energy
 - 6.5.1. Key Market Trends, Growth Factors and Opportunities
 - 6.5.2. Market Size and Forecast, By Region
 - 6.5.3. Market Share Analysis, By Country
- 6.6. Others
 - 6.6.1. Key Market Trends, Growth Factors and Opportunities
 - 6.6.2. Market Size and Forecast, By Region
 - 6.6.3. Market Share Analysis, By Country

CHAPTER 7: CARBON FIBER PREPREG MARKET, BY REGION

- 7.1. Market Overview
 - 7.1.1 Market Size and Forecast, By Region
- 7.2. North America
 - 7.2.1. Key Market Trends and Opportunities
 - 7.2.2. Market Size and Forecast, By Resins
 - 7.2.3. Market Size and Forecast, By Process
 - 7.2.4. Market Size and Forecast, By End-use Industry
 - 7.2.5. Market Size and Forecast, By Country
 - 7.2.6. U.S. Carbon Fiber Prepreg Market
 - 7.2.6.1. Market Size and Forecast, By Resins
 - 7.2.6.2. Market Size and Forecast, By Process
 - 7.2.6.3. Market Size and Forecast, By End-use Industry
 - 7.2.7. Canada Carbon Fiber Prepreg Market
 - 7.2.7.1. Market Size and Forecast, By Resins
 - 7.2.7.2. Market Size and Forecast, By Process
 - 7.2.7.3. Market Size and Forecast, By End-use Industry
 - 7.2.8. Mexico Carbon Fiber Prepreg Market
 - 7.2.8.1. Market Size and Forecast, By Resins
 - 7.2.8.2. Market Size and Forecast, By Process
 - 7.2.8.3. Market Size and Forecast, By End-use Industry

7.3. Europe



- 7.3.1. Key Market Trends and Opportunities
- 7.3.2. Market Size and Forecast, By Resins
- 7.3.3. Market Size and Forecast, By Process
- 7.3.4. Market Size and Forecast, By End-use Industry
- 7.3.5. Market Size and Forecast, By Country
- 7.3.6. France Carbon Fiber Prepreg Market
 - 7.3.6.1. Market Size and Forecast, By Resins
 - 7.3.6.2. Market Size and Forecast, By Process
 - 7.3.6.3. Market Size and Forecast, By End-use Industry
- 7.3.7. Germany Carbon Fiber Prepreg Market
 - 7.3.7.1. Market Size and Forecast, By Resins
 - 7.3.7.2. Market Size and Forecast, By Process
- 7.3.7.3. Market Size and Forecast, By End-use Industry
- 7.3.8. Italy Carbon Fiber Prepreg Market
 - 7.3.8.1. Market Size and Forecast, By Resins
 - 7.3.8.2. Market Size and Forecast, By Process
 - 7.3.8.3. Market Size and Forecast, By End-use Industry
- 7.3.9. Spain Carbon Fiber Prepreg Market
 - 7.3.9.1. Market Size and Forecast, By Resins
 - 7.3.9.2. Market Size and Forecast, By Process
- 7.3.9.3. Market Size and Forecast, By End-use Industry
- 7.3.10. UK Carbon Fiber Prepreg Market
 - 7.3.10.1. Market Size and Forecast, By Resins
 - 7.3.10.2. Market Size and Forecast, By Process
- 7.3.10.3. Market Size and Forecast, By End-use Industry
- 7.3.11. Rest Of Europe Carbon Fiber Prepreg Market
 - 7.3.11.1. Market Size and Forecast, By Resins
 - 7.3.11.2. Market Size and Forecast, By Process
 - 7.3.11.3. Market Size and Forecast, By End-use Industry
- 7.4. Asia-Pacific
 - 7.4.1. Key Market Trends and Opportunities
 - 7.4.2. Market Size and Forecast, By Resins
 - 7.4.3. Market Size and Forecast, By Process
 - 7.4.4. Market Size and Forecast, By End-use Industry
 - 7.4.5. Market Size and Forecast, By Country
 - 7.4.6. China Carbon Fiber Prepreg Market
 - 7.4.6.1. Market Size and Forecast, By Resins
 - 7.4.6.2. Market Size and Forecast, By Process
 - 7.4.6.3. Market Size and Forecast, By End-use Industry



- 7.4.7. Japan Carbon Fiber Prepreg Market
 - 7.4.7.1. Market Size and Forecast, By Resins
 - 7.4.7.2. Market Size and Forecast, By Process
- 7.4.7.3. Market Size and Forecast, By End-use Industry
- 7.4.8. India Carbon Fiber Prepreg Market
 - 7.4.8.1. Market Size and Forecast, By Resins
 - 7.4.8.2. Market Size and Forecast, By Process
 - 7.4.8.3. Market Size and Forecast, By End-use Industry
- 7.4.9. South Korea Carbon Fiber Prepreg Market
 - 7.4.9.1. Market Size and Forecast, By Resins
 - 7.4.9.2. Market Size and Forecast, By Process
 - 7.4.9.3. Market Size and Forecast, By End-use Industry
- 7.4.10. Australia Carbon Fiber Prepreg Market
 - 7.4.10.1. Market Size and Forecast, By Resins
 - 7.4.10.2. Market Size and Forecast, By Process
 - 7.4.10.3. Market Size and Forecast, By End-use Industry
- 7.4.11. Rest of Asia-Pacific Carbon Fiber Prepreg Market
 - 7.4.11.1. Market Size and Forecast, By Resins
 - 7.4.11.2. Market Size and Forecast, By Process
- 7.4.11.3. Market Size and Forecast, By End-use Industry

7.5. LAMEA

- 7.5.1. Key Market Trends and Opportunities
- 7.5.2. Market Size and Forecast, By Resins
- 7.5.3. Market Size and Forecast, By Process
- 7.5.4. Market Size and Forecast, By End-use Industry
- 7.5.5. Market Size and Forecast, By Country
- 7.5.6. Brazil Carbon Fiber Prepreg Market
 - 7.5.6.1. Market Size and Forecast, By Resins
 - 7.5.6.2. Market Size and Forecast, By Process
 - 7.5.6.3. Market Size and Forecast, By End-use Industry
- 7.5.7. South Africa Carbon Fiber Prepreg Market
 - 7.5.7.1. Market Size and Forecast, By Resins
 - 7.5.7.2. Market Size and Forecast, By Process
 - 7.5.7.3. Market Size and Forecast, By End-use Industry
- 7.5.8. Saudi Arabia Carbon Fiber Prepreg Market
- 7.5.8.1. Market Size and Forecast, By Resins
- 7.5.8.2. Market Size and Forecast, By Process
- 7.5.8.3. Market Size and Forecast, By End-use Industry
- 7.5.9. Rest of LAMEA Carbon Fiber Prepreg Market



- 7.5.9.1. Market Size and Forecast, By Resins
- 7.5.9.2. Market Size and Forecast, By Process
- 7.5.9.3. Market Size and Forecast, By End-use Industry

CHAPTER 8: COMPETITIVE LANDSCAPE

- 8.1. Introduction
- 8.2. Top Winning Strategies
- 8.3. Product Mapping Of Top 10 Player
- 8.4. Competitive Dashboard
- 8.5. Competitive Heatmap
- 8.6. Top Player Positioning, 2023

CHAPTER 9: COMPANY PROFILES

- 9.1. Toray Group
- 9.1.1. Company Overview
- 9.1.2. Key Executives
- 9.1.3. Company Snapshot
- 9.1.4. Operating Business Segments
- 9.1.5. Product Portfolio
- 9.1.6. Business Performance
- 9.1.7. Key Strategic Moves and Developments
- 9.2. ZOLTEK Group
 - 9.2.1. Company Overview
 - 9.2.2. Key Executives
 - 9.2.3. Company Snapshot
 - 9.2.4. Operating Business Segments
 - 9.2.5. Product Portfolio
 - 9.2.6. Business Performance
 - 9.2.7. Key Strategic Moves and Developments
- 9.3. Hexcel Corporation
 - 9.3.1. Company Overview
 - 9.3.2. Key Executives
 - 9.3.3. Company Snapshot
 - 9.3.4. Operating Business Segments
 - 9.3.5. Product Portfolio
 - 9.3.6. Business Performance
- 9.3.7. Key Strategic Moves and Developments



- 9.4. Mitsubishi Rayon Co., Ltd.
 - 9.4.1. Company Overview
 - 9.4.2. Key Executives
 - 9.4.3. Company Snapshot
 - 9.4.4. Operating Business Segments
 - 9.4.5. Product Portfolio
 - 9.4.6. Business Performance
 - 9.4.7. Key Strategic Moves and Developments
- 9.5. GL Group
 - 9.5.1. Company Overview
 - 9.5.2. Key Executives
 - 9.5.3. Company Snapshot
 - 9.5.4. Operating Business Segments
 - 9.5.5. Product Portfolio
 - 9.5.6. Business Performance
 - 9.5.7. Key Strategic Moves and Developments
- 9.6. Royal TenCate N.V
 - 9.6.1. Company Overview
 - 9.6.2. Key Executives
 - 9.6.3. Company Snapshot
 - 9.6.4. Operating Business Segments
 - 9.6.5. Product Portfolio
 - 9.6.6. Business Performance
 - 9.6.7. Key Strategic Moves and Developments
- 9.7. Teijin Limited
 - 9.7.1. Company Overview
 - 9.7.2. Key Executives
 - 9.7.3. Company Snapshot
 - 9.7.4. Operating Business Segments
 - 9.7.5. Product Portfolio
 - 9.7.6. Business Performance
 - 9.7.7. Key Strategic Moves and Developments
- 9.8. Gurit Holdings AG
 - 9.8.1. Company Overview
 - 9.8.2. Key Executives
 - 9.8.3. Company Snapshot
 - 9.8.4. Operating Business Segments
 - 9.8.5. Product Portfolio
 - 9.8.6. Business Performance



- 9.8.7. Key Strategic Moves and Developments
- 9.9. Axiom Materials, Inc.
 - 9.9.1. Company Overview
 - 9.9.2. Key Executives
 - 9.9.3. Company Snapshot
 - 9.9.4. Operating Business Segments
 - 9.9.5. Product Portfolio
 - 9.9.6. Business Performance
 - 9.9.7. Key Strategic Moves and Developments
- 9.10. Solvay S.A.
 - 9.10.1. Company Overview
 - 9.10.2. Key Executives
 - 9.10.3. Company Snapshot
 - 9.10.4. Operating Business Segments
 - 9.10.5. Product Portfolio
 - 9.10.6. Business Performance
 - 9.10.7. Key Strategic Moves and Developments



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