

# Global High-strength Carbon Fiber Supply, Demand and Key Producers, 2026-2032

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## Abstracts

The global High-strength Carbon Fiber market size is expected to reach \$ 8352 million by 2032, rising at a market growth of 13.0% CAGR during the forecast period (2026-2032).

High-strength Carbon Fiber refers to carbon fiber grades designed primarily around high tensile strength and high load-bearing capability, rather than only high stiffness or high modulus. It is usually supplied as continuous tow, filament yarn, fabric, prepreg or chopped fiber, and is widely used as reinforcement in advanced composites. In product positioning, high-strength carbon fiber is often associated with PAN-based carbon fiber grades that provide a strong balance of tensile strength, strain-to-failure, processability and structural reliability.

In 2025, global sales of High-strength Carbon Fiber reached approximately 161 K tons, with an average global market price of around US\$ 22/kg. Production capacity varies significantly among manufacturers, with gross profit margins ranging from approximately 30% to 60%.

High-strength Carbon Fiber is a technically demanding and qualification-driven segment of the carbon fiber market. Demand mainly comes from applications requiring lightweight structures, safety and high structural reliability. Compared with general-purpose reinforcing carbon fiber, high-strength carbon fiber places greater emphasis on tensile performance, fracture strain, batch consistency, defect control and interfacial compatibility with resin systems. Therefore, it is well suited for aerospace, pressure vessels, premium sporting goods, drones, automotive structural components and precision industrial parts. Downstream customers usually do not evaluate this material by tensile strength alone; they also consider fatigue performance, impact behavior,

processing stability and long-term supply reliability.

The market outlook for High-strength Carbon Fiber remains positive. Lightweighting in electric vehicles, hydrogen storage, low-altitude mobility, robotics, advanced equipment and the replacement of metal structural parts with composites are helping high-strength carbon fiber expand from traditional premium applications into broader industrial use. At the same time, advances in prepreg, filament winding, pultrusion, thermoplastic composites and automated layup technologies are improving processing efficiency and widening the application range. For downstream users, the value of high-strength carbon fiber is not limited to weight reduction; it also helps improve structural life, reduce corrosion risk and increase design freedom.

From a competitive perspective, the key barriers for High-strength Carbon Fiber lie in high-quality precursor, carbonization stability, surface treatment, sizing formulation, defect control and customer qualification capability. The future market is likely to become more segmented. Premium certified markets will continue to focus on aerospace, pressure vessels and high-reliability industrial structures, where performance stability and long-term validation are critical. Mid-to-high-end industrial markets will pay more attention to cost optimization, scalable supply and downstream process compatibility. Overall, competition in High-strength Carbon Fiber will not be driven only by capacity expansion, but by differentiation in performance consistency, application development capability, qualification resources and supply-chain stability.

This report studies the global High-strength Carbon Fiber production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for High-strength Carbon Fiber and provides market size (US\$ million) and Year-over-Year (YoY) Growth, considering 2025 as the base year. This report explores demand trends and competition, as well as details the characteristics of High-strength Carbon Fiber that contribute to its increasing demand across many markets.

Highlights and key features of the study

Global High-strength Carbon Fiber total production and demand, 2021-2032, (Tons)

Global High-strength Carbon Fiber total production value, 2021-2032, (USD Million)

Global High-strength Carbon Fiber production by region & country, production, value, CAGR, 2021-2032, (USD Million) & (Tons), (based on production site)

Global High-strength Carbon Fiber consumption by region & country, CAGR, 2021-2032 & (Tons)

U.S. VS China: High-strength Carbon Fiber domestic production, consumption, key domestic manufacturers and share

Global High-strength Carbon Fiber production by manufacturer, production, price, value and market share 2021-2026, (USD Million) & (Tons)

Global High-strength Carbon Fiber production by Type, production, value, CAGR, 2021-2032, (USD Million) & (Tons)

Global High-strength Carbon Fiber production by Application, production, value, CAGR, 2021-2032, (USD Million) & (Tons)

This report profiles key players in the global High-strength Carbon Fiber market based on the following parameters - company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Toray, Mitsubishi Chemical, Teijin, Hexcel, Hyosung Advanced Materials, SGL Carbon, Formosa Plastics, Aksa Carbon, Syensqo, UMATEx, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World High-strength Carbon Fiber market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US\$ Millions), volume (production, consumption) & (Tons) and average price (US\$/kg) by manufacturer, by Type, and by Application. Data is given for the years 2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

Global High-strength Carbon Fiber Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

#### Global High-strength Carbon Fiber Market, Segmentation by Type:

Regular Tow

Large Tow

#### Global High-strength Carbon Fiber Market, Segmentation by Precursor:

PAN-based

Pitch-based

Rayon-based

#### Global High-strength Carbon Fiber Market, Segmentation by Tow:

3K

6K

12K

24K

48K

Other

## Global High-strength Carbon Fiber Market, Segmentation by Application:

Aerospace and Defense

Sports/Leisure

Wind Energy

Pressure Vessel

Automotive

Other

## Companies Profiled:

Toray

Mitsubishi Chemical

Teijin

Hexcel

Hyosung Advanced Materials

SGL Carbon

Formosa Plastics

Aksa Carbon

Syensqo

UMATEX

Taekwang Industrial

Zhongfu Shenying

Jilin Chemical Fiber

Baowu Carbon

Weihai Guangwei Composites

Sinofibers Technology

Jiangsu Hengshen

Newtech Group

Key Questions Answered:

1. How big is the global High-strength Carbon Fiber market?
2. What is the demand of the global High-strength Carbon Fiber market?
3. What is the year over year growth of the global High-strength Carbon Fiber market?
4. What is the production and production value of the global High-strength Carbon Fiber market?
5. Who are the key producers in the global High-strength Carbon Fiber market?
6. What are the growth factors driving the market demand?

## Contents

### 1 SUPPLY SUMMARY

- 1.1 High-strength Carbon Fiber Introduction
- 1.2 World High-strength Carbon Fiber Supply & Forecast
  - 1.2.1 World High-strength Carbon Fiber Production Value (2021 & 2025 & 2032)
  - 1.2.2 World High-strength Carbon Fiber Production (2021-2032)
  - 1.2.3 World High-strength Carbon Fiber Pricing Trends (2021-2032)
- 1.3 World High-strength Carbon Fiber Production by Region (Based on Production Site)
  - 1.3.1 World High-strength Carbon Fiber Production Value by Region (2021-2032)
  - 1.3.2 World High-strength Carbon Fiber Production by Region (2021-2032)
  - 1.3.3 World High-strength Carbon Fiber Average Price by Region (2021-2032)
  - 1.3.4 North America High-strength Carbon Fiber Production (2021-2032)
  - 1.3.5 Europe High-strength Carbon Fiber Production (2021-2032)
  - 1.3.6 China High-strength Carbon Fiber Production (2021-2032)
  - 1.3.7 Japan High-strength Carbon Fiber Production (2021-2032)
  - 1.3.8 South Korea High-strength Carbon Fiber Production (2021-2032)
- 1.4 Market Drivers, Restraints and Trends
  - 1.4.1 High-strength Carbon Fiber Market Drivers
  - 1.4.2 Factors Affecting Demand
  - 1.4.3 High-strength Carbon Fiber Major Market Trends

### 2 DEMAND SUMMARY

- 2.1 World High-strength Carbon Fiber Demand (2021-2032)
- 2.2 World High-strength Carbon Fiber Consumption by Region
  - 2.2.1 World High-strength Carbon Fiber Consumption by Region (2021-2026)
  - 2.2.2 World High-strength Carbon Fiber Consumption Forecast by Region (2027-2032)
- 2.3 United States High-strength Carbon Fiber Consumption (2021-2032)
- 2.4 China High-strength Carbon Fiber Consumption (2021-2032)
- 2.5 Europe High-strength Carbon Fiber Consumption (2021-2032)
- 2.6 Japan High-strength Carbon Fiber Consumption (2021-2032)
- 2.7 South Korea High-strength Carbon Fiber Consumption (2021-2032)
- 2.8 ASEAN High-strength Carbon Fiber Consumption (2021-2032)
- 2.9 India High-strength Carbon Fiber Consumption (2021-2032)

### 3 WORLD MANUFACTURERS COMPETITIVE ANALYSIS

- 3.1 World High-strength Carbon Fiber Production Value by Manufacturer (2021-2026)
- 3.2 World High-strength Carbon Fiber Production by Manufacturer (2021-2026)
- 3.3 World High-strength Carbon Fiber Average Price by Manufacturer (2021-2026)
- 3.4 High-strength Carbon Fiber Company Evaluation Quadrant
- 3.5 Industry Rank and Concentration Rate (CR)
  - 3.5.1 Global High-strength Carbon Fiber Industry Rank of Major Manufacturers
  - 3.5.2 Global Concentration Ratios (CR4) for High-strength Carbon Fiber in 2025
  - 3.5.3 Global Concentration Ratios (CR8) for High-strength Carbon Fiber in 2025
- 3.6 High-strength Carbon Fiber Market: Overall Company Footprint Analysis
  - 3.6.1 High-strength Carbon Fiber Market: Region Footprint
  - 3.6.2 High-strength Carbon Fiber Market: Company Product Type Footprint
  - 3.6.3 High-strength Carbon Fiber Market: Company Product Application Footprint
- 3.7 Competitive Environment
  - 3.7.1 Historical Structure of the Industry
  - 3.7.2 Barriers of Market Entry
  - 3.7.3 Factors of Competition
- 3.8 New Entrant and Capacity Expansion Plans
- 3.9 Mergers, Acquisition, Agreements, and Collaborations

## **4 UNITED STATES VS CHINA VS REST OF THE WORLD**

- 4.1 United States VS China: High-strength Carbon Fiber Production Value Comparison
  - 4.1.1 United States VS China: High-strength Carbon Fiber Production Value Comparison (2021 & 2025 & 2032)
  - 4.1.2 United States VS China: High-strength Carbon Fiber Production Value Market Share Comparison (2021 & 2025 & 2032)
- 4.2 United States VS China: High-strength Carbon Fiber Production Comparison
  - 4.2.1 United States VS China: High-strength Carbon Fiber Production Comparison (2021 & 2025 & 2032)
  - 4.2.2 United States VS China: High-strength Carbon Fiber Production Market Share Comparison (2021 & 2025 & 2032)
- 4.3 United States VS China: High-strength Carbon Fiber Consumption Comparison
  - 4.3.1 United States VS China: High-strength Carbon Fiber Consumption Comparison (2021 & 2025 & 2032)
  - 4.3.2 United States VS China: High-strength Carbon Fiber Consumption Market Share Comparison (2021 & 2025 & 2032)
- 4.4 United States Based High-strength Carbon Fiber Manufacturers and Market Share, 2021-2026
  - 4.4.1 United States Based High-strength Carbon Fiber Manufacturers, Headquarters

and Production Site (States, Country)

4.4.2 United States Based Manufacturers High-strength Carbon Fiber Production Value (2021-2026)

4.4.3 United States Based Manufacturers High-strength Carbon Fiber Production (2021-2026)

4.5 China Based High-strength Carbon Fiber Manufacturers and Market Share

4.5.1 China Based High-strength Carbon Fiber Manufacturers, Headquarters and Production Site (Province, Country)

4.5.2 China Based Manufacturers High-strength Carbon Fiber Production Value (2021-2026)

4.5.3 China Based Manufacturers High-strength Carbon Fiber Production (2021-2026)

4.6 Rest of World Based High-strength Carbon Fiber Manufacturers and Market Share, 2021-2026

4.6.1 Rest of World Based High-strength Carbon Fiber Manufacturers, Headquarters and Production Site (State, Country)

4.6.2 Rest of World Based Manufacturers High-strength Carbon Fiber Production Value (2021-2026)

4.6.3 Rest of World Based Manufacturers High-strength Carbon Fiber Production (2021-2026)

## **5 MARKET ANALYSIS BY TYPE**

5.1 World High-strength Carbon Fiber Market Size Overview by Type: 2021 VS 2025 VS 2032

5.2 Segment Introduction by Type

5.2.1 Regular Tow

5.2.2 Large Tow

5.3 Market Segment by Type

5.3.1 World High-strength Carbon Fiber Production by Type (2021-2032)

5.3.2 World High-strength Carbon Fiber Production Value by Type (2021-2032)

5.3.3 World High-strength Carbon Fiber Average Price by Type (2021-2032)

## **6 MARKET ANALYSIS BY PRECURSOR**

6.1 World High-strength Carbon Fiber Market Size Overview by Precursor: 2021 VS 2025 VS 2032

6.2 Segment Introduction by Precursor

6.2.1 PAN-based

6.2.2 Pitch-based

### 6.2.3 Rayon-based

## 6.3 Market Segment by Precursor

### 6.3.1 World High-strength Carbon Fiber Production by Precursor (2021-2032)

### 6.3.2 World High-strength Carbon Fiber Production Value by Precursor (2021-2032)

### 6.3.3 World High-strength Carbon Fiber Average Price by Precursor (2021-2032)

## 7 MARKET ANALYSIS BY TOW

### 7.1 World High-strength Carbon Fiber Market Size Overview by Tow: 2021 VS 2025 VS 2032

### 7.2 Segment Introduction by Tow

#### 7.2.1 3K

#### 7.2.2 6K

#### 7.2.3 12K

#### 7.2.4 24K

#### 7.2.5 48K

#### 7.2.6 Other

### 7.3 Market Segment by Tow

#### 7.3.1 World High-strength Carbon Fiber Production by Tow (2021-2032)

#### 7.3.2 World High-strength Carbon Fiber Production Value by Tow (2021-2032)

#### 7.3.3 World High-strength Carbon Fiber Average Price by Tow (2021-2032)

## 8 MARKET ANALYSIS BY APPLICATION

### 8.1 World High-strength Carbon Fiber Market Size Overview by Application: 2021 VS 2025 VS 2032

### 8.2 Segment Introduction by Application

#### 8.2.1 Aerospace and Defense

#### 8.2.2 Sports/Leisure

#### 8.2.3 Wind Energy

#### 8.2.4 Pressure Vessel

#### 8.2.5 Automotive

#### 8.2.6 Other

### 8.3 Market Segment by Application

#### 8.3.1 World High-strength Carbon Fiber Production by Application (2021-2032)

#### 8.3.2 World High-strength Carbon Fiber Production Value by Application (2021-2032)

#### 8.3.3 World High-strength Carbon Fiber Average Price by Application (2021-2032)

## 9 COMPANY PROFILES

## 9.1 Toray

### 9.1.1 Toray Details

### 9.1.2 Toray Major Business

### 9.1.3 Toray High-strength Carbon Fiber Product and Services

### 9.1.4 Toray High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)

### 9.1.5 Toray Recent Developments/Updates

### 9.1.6 Toray Competitive Strengths & Weaknesses

## 9.2 Mitsubishi Chemical

### 9.2.1 Mitsubishi Chemical Details

### 9.2.2 Mitsubishi Chemical Major Business

### 9.2.3 Mitsubishi Chemical High-strength Carbon Fiber Product and Services

### 9.2.4 Mitsubishi Chemical High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)

### 9.2.5 Mitsubishi Chemical Recent Developments/Updates

### 9.2.6 Mitsubishi Chemical Competitive Strengths & Weaknesses

## 9.3 Teijin

### 9.3.1 Teijin Details

### 9.3.2 Teijin Major Business

### 9.3.3 Teijin High-strength Carbon Fiber Product and Services

### 9.3.4 Teijin High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)

### 9.3.5 Teijin Recent Developments/Updates

### 9.3.6 Teijin Competitive Strengths & Weaknesses

## 9.4 Hexcel

### 9.4.1 Hexcel Details

### 9.4.2 Hexcel Major Business

### 9.4.3 Hexcel High-strength Carbon Fiber Product and Services

### 9.4.4 Hexcel High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)

### 9.4.5 Hexcel Recent Developments/Updates

### 9.4.6 Hexcel Competitive Strengths & Weaknesses

## 9.5 Hyosung Advanced Materials

### 9.5.1 Hyosung Advanced Materials Details

### 9.5.2 Hyosung Advanced Materials Major Business

### 9.5.3 Hyosung Advanced Materials High-strength Carbon Fiber Product and Services

### 9.5.4 Hyosung Advanced Materials High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)

- 9.5.5 Hyosung Advanced Materials Recent Developments/Updates
- 9.5.6 Hyosung Advanced Materials Competitive Strengths & Weaknesses
- 9.6 SGL Carbon
  - 9.6.1 SGL Carbon Details
  - 9.6.2 SGL Carbon Major Business
  - 9.6.3 SGL Carbon High-strength Carbon Fiber Product and Services
  - 9.6.4 SGL Carbon High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)
  - 9.6.5 SGL Carbon Recent Developments/Updates
  - 9.6.6 SGL Carbon Competitive Strengths & Weaknesses
- 9.7 Formosa Plastics
  - 9.7.1 Formosa Plastics Details
  - 9.7.2 Formosa Plastics Major Business
  - 9.7.3 Formosa Plastics High-strength Carbon Fiber Product and Services
  - 9.7.4 Formosa Plastics High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)
  - 9.7.5 Formosa Plastics Recent Developments/Updates
  - 9.7.6 Formosa Plastics Competitive Strengths & Weaknesses
- 9.8 Aksa Carbon
  - 9.8.1 Aksa Carbon Details
  - 9.8.2 Aksa Carbon Major Business
  - 9.8.3 Aksa Carbon High-strength Carbon Fiber Product and Services
  - 9.8.4 Aksa Carbon High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)
  - 9.8.5 Aksa Carbon Recent Developments/Updates
  - 9.8.6 Aksa Carbon Competitive Strengths & Weaknesses
- 9.9 Syensqo
  - 9.9.1 Syensqo Details
  - 9.9.2 Syensqo Major Business
  - 9.9.3 Syensqo High-strength Carbon Fiber Product and Services
  - 9.9.4 Syensqo High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)
  - 9.9.5 Syensqo Recent Developments/Updates
  - 9.9.6 Syensqo Competitive Strengths & Weaknesses
- 9.10 UMATEX
  - 9.10.1 UMATEX Details
  - 9.10.2 UMATEX Major Business
  - 9.10.3 UMATEX High-strength Carbon Fiber Product and Services
  - 9.10.4 UMATEX High-strength Carbon Fiber Production, Price, Value, Gross Margin

and Market Share (2021-2026)

9.10.5 UMATEx Recent Developments/Updates

9.10.6 UMATEx Competitive Strengths & Weaknesses

9.11 Taekwang Industrial

9.11.1 Taekwang Industrial Details

9.11.2 Taekwang Industrial Major Business

9.11.3 Taekwang Industrial High-strength Carbon Fiber Product and Services

9.11.4 Taekwang Industrial High-strength Carbon Fiber Production, Price, Value,

Gross Margin and Market Share (2021-2026)

9.11.5 Taekwang Industrial Recent Developments/Updates

9.11.6 Taekwang Industrial Competitive Strengths & Weaknesses

9.12 Zhongfu Shenying

9.12.1 Zhongfu Shenying Details

9.12.2 Zhongfu Shenying Major Business

9.12.3 Zhongfu Shenying High-strength Carbon Fiber Product and Services

9.12.4 Zhongfu Shenying High-strength Carbon Fiber Production, Price, Value, Gross

Margin and Market Share (2021-2026)

9.12.5 Zhongfu Shenying Recent Developments/Updates

9.12.6 Zhongfu Shenying Competitive Strengths & Weaknesses

9.13 Jilin Chemical Fiber

9.13.1 Jilin Chemical Fiber Details

9.13.2 Jilin Chemical Fiber Major Business

9.13.3 Jilin Chemical Fiber High-strength Carbon Fiber Product and Services

9.13.4 Jilin Chemical Fiber High-strength Carbon Fiber Production, Price, Value, Gross

Margin and Market Share (2021-2026)

9.13.5 Jilin Chemical Fiber Recent Developments/Updates

9.13.6 Jilin Chemical Fiber Competitive Strengths & Weaknesses

9.14 Baowu Carbon

9.14.1 Baowu Carbon Details

9.14.2 Baowu Carbon Major Business

9.14.3 Baowu Carbon High-strength Carbon Fiber Product and Services

9.14.4 Baowu Carbon High-strength Carbon Fiber Production, Price, Value, Gross

Margin and Market Share (2021-2026)

9.14.5 Baowu Carbon Recent Developments/Updates

9.14.6 Baowu Carbon Competitive Strengths & Weaknesses

9.15 Weihai Guangwei Composites

9.15.1 Weihai Guangwei Composites Details

9.15.2 Weihai Guangwei Composites Major Business

9.15.3 Weihai Guangwei Composites High-strength Carbon Fiber Product and

## Services

9.15.4 Weihai Guangwei Composites High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.15.5 Weihai Guangwei Composites Recent Developments/Updates

9.15.6 Weihai Guangwei Composites Competitive Strengths & Weaknesses

## 9.16 Sinofibers Technology

9.16.1 Sinofibers Technology Details

9.16.2 Sinofibers Technology Major Business

9.16.3 Sinofibers Technology High-strength Carbon Fiber Product and Services

9.16.4 Sinofibers Technology High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.16.5 Sinofibers Technology Recent Developments/Updates

9.16.6 Sinofibers Technology Competitive Strengths & Weaknesses

## 9.17 Jiangsu Hengshen

9.17.1 Jiangsu Hengshen Details

9.17.2 Jiangsu Hengshen Major Business

9.17.3 Jiangsu Hengshen High-strength Carbon Fiber Product and Services

9.17.4 Jiangsu Hengshen High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.17.5 Jiangsu Hengshen Recent Developments/Updates

9.17.6 Jiangsu Hengshen Competitive Strengths & Weaknesses

## 9.18 Newtech Group

9.18.1 Newtech Group Details

9.18.2 Newtech Group Major Business

9.18.3 Newtech Group High-strength Carbon Fiber Product and Services

9.18.4 Newtech Group High-strength Carbon Fiber Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.18.5 Newtech Group Recent Developments/Updates

9.18.6 Newtech Group Competitive Strengths & Weaknesses

## 10 INDUSTRY CHAIN ANALYSIS

### 10.1 High-strength Carbon Fiber Industry Chain

### 10.2 High-strength Carbon Fiber Upstream Analysis

10.2.1 High-strength Carbon Fiber Core Raw Materials

10.2.2 Main Manufacturers of High-strength Carbon Fiber Core Raw Materials

### 10.3 Midstream Analysis

### 10.4 Downstream Analysis

### 10.5 High-strength Carbon Fiber Production Mode

10.6 High-strength Carbon Fiber Procurement Model

10.7 High-strength Carbon Fiber Industry Sales Model and Sales Channels

10.7.1 High-strength Carbon Fiber Sales Model

10.7.2 High-strength Carbon Fiber Typical Distributors

## **11 RESEARCH FINDINGS AND CONCLUSION**

## **12 APPENDIX**

12.1 Methodology

12.2 Research Process and Data Source

12.3 Disclaimer

## List Of Tables

### LIST OF TABLES

Table 1. World High-strength Carbon Fiber Production Value by Region (2021, 2025 and 2032) & (USD Million)

Table 2. World High-strength Carbon Fiber Production Value by Region (2021-2026) & (USD Million)

Table 3. World High-strength Carbon Fiber Production Value by Region (2027-2032) & (USD Million)

Table 4. World High-strength Carbon Fiber Production Value Market Share by Region (2021-2026)

Table 5. World High-strength Carbon Fiber Production Value Market Share by Region (2027-2032)

Table 6. World High-strength Carbon Fiber Production by Region (2021-2026) & (Tons)

Table 7. World High-strength Carbon Fiber Production by Region (2027-2032) & (Tons)

Table 8. World High-strength Carbon Fiber Production Market Share by Region (2021-2026)

Table 9. World High-strength Carbon Fiber Production Market Share by Region (2027-2032)

Table 10. World High-strength Carbon Fiber Average Price by Region (2021-2026) & (US\$/kg)

Table 11. World High-strength Carbon Fiber Average Price by Region (2027-2032) & (US\$/kg)

Table 12. High-strength Carbon Fiber Major Market Trends

Table 13. World High-strength Carbon Fiber Consumption Growth Rate Forecast by Region (2021 & 2025 & 2032) & (Tons)

Table 14. World High-strength Carbon Fiber Consumption by Region (2021-2026) & (Tons)

Table 15. World High-strength Carbon Fiber Consumption Forecast by Region (2027-2032) & (Tons)

Table 16. World High-strength Carbon Fiber Production Value by Manufacturer (2021-2026) & (USD Million)

Table 17. Production Value Market Share of Key High-strength Carbon Fiber Producers in 2025

Table 18. World High-strength Carbon Fiber Production by Manufacturer (2021-2026) & (Tons)

Table 19. Production Market Share of Key High-strength Carbon Fiber Producers in 2025

|                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------|
| Table 20. World High-strength Carbon Fiber Average Price by Manufacturer (2021-2026) & (US\$/kg)                              |
| Table 21. Global High-strength Carbon Fiber Company Evaluation Quadrant                                                       |
| Table 22. World High-strength Carbon Fiber Industry Rank of Major Manufacturers, Based on Production Value in 2025            |
| Table 23. Head Office and High-strength Carbon Fiber Production Site of Key Manufacturer                                      |
| Table 24. High-strength Carbon Fiber Market: Company Product Type Footprint                                                   |
| Table 25. High-strength Carbon Fiber Market: Company Product Application Footprint                                            |
| Table 26. High-strength Carbon Fiber Competitive Factors                                                                      |
| Table 27. High-strength Carbon Fiber New Entrant and Capacity Expansion Plans                                                 |
| Table 28. High-strength Carbon Fiber Mergers & Acquisitions Activity                                                          |
| Table 29. United States VS China High-strength Carbon Fiber Production Value Comparison, (2021 & 2025 & 2032) & (USD Million) |
| Table 30. United States VS China High-strength Carbon Fiber Production Comparison, (2021 & 2025 & 2032) & (Tons)              |
| Table 31. United States VS China High-strength Carbon Fiber Consumption Comparison, (2021 & 2025 & 2032) & (Tons)             |
| Table 32. United States Based High-strength Carbon Fiber Manufacturers, Headquarters and Production Site (States, Country)    |
| Table 33. United States Based Manufacturers High-strength Carbon Fiber Production Value, (2021-2026) & (USD Million)          |
| Table 34. United States Based Manufacturers High-strength Carbon Fiber Production Value Market Share (2021-2026)              |
| Table 35. United States Based Manufacturers High-strength Carbon Fiber Production (2021-2026) & (Tons)                        |
| Table 36. United States Based Manufacturers High-strength Carbon Fiber Production Market Share (2021-2026)                    |
| Table 37. China Based High-strength Carbon Fiber Manufacturers, Headquarters and Production Site (Province, Country)          |
| Table 38. China Based Manufacturers High-strength Carbon Fiber Production Value, (2021-2026) & (USD Million)                  |
| Table 39. China Based Manufacturers High-strength Carbon Fiber Production Value Market Share (2021-2026)                      |
| Table 40. China Based Manufacturers High-strength Carbon Fiber Production, (2021-2026) & (Tons)                               |
| Table 41. China Based Manufacturers High-strength Carbon Fiber Production Market Share (2021-2026)                            |
| Table 42. Rest of World Based High-strength Carbon Fiber Manufacturers,                                                       |

Headquarters and Production Site (State, Country)

Table 43. Rest of World Based Manufacturers High-strength Carbon Fiber Production Value, (2021-2026) & (USD Million)

Table 44. Rest of World Based Manufacturers High-strength Carbon Fiber Production Value Market Share (2021-2026)

Table 45. Rest of World Based Manufacturers High-strength Carbon Fiber Production, (2021-2026) & (Tons)

Table 46. Rest of World Based Manufacturers High-strength Carbon Fiber Production Market Share (2021-2026)

Table 47. World High-strength Carbon Fiber Production Value by Type, (USD Million), 2021 & 2025 & 2032

Table 48. World High-strength Carbon Fiber Production by Type (2021-2026) & (Tons)

Table 49. World High-strength Carbon Fiber Production by Type (2027-2032) & (Tons)

Table 50. World High-strength Carbon Fiber Production Value by Type (2021-2026) & (USD Million)

Table 51. World High-strength Carbon Fiber Production Value by Type (2027-2032) & (USD Million)

Table 52. World High-strength Carbon Fiber Average Price by Type (2021-2026) & (US\$/kg)

Table 53. World High-strength Carbon Fiber Average Price by Type (2027-2032) & (US\$/kg)

Table 54. World High-strength Carbon Fiber Production Value by Precursor, (USD Million), 2021 & 2025 & 2032

Table 55. World High-strength Carbon Fiber Production by Precursor (2021-2026) & (Tons)

Table 56. World High-strength Carbon Fiber Production by Precursor (2027-2032) & (Tons)

Table 57. World High-strength Carbon Fiber Production Value by Precursor (2021-2026) & (USD Million)

Table 58. World High-strength Carbon Fiber Production Value by Precursor (2027-2032) & (USD Million)

Table 59. World High-strength Carbon Fiber Average Price by Precursor (2021-2026) & (US\$/kg)

Table 60. World High-strength Carbon Fiber Average Price by Precursor (2027-2032) & (US\$/kg)

Table 61. World High-strength Carbon Fiber Production Value by Tow, (USD Million), 2021 & 2025 & 2032

Table 62. World High-strength Carbon Fiber Production by Tow (2021-2026) & (Tons)

Table 63. World High-strength Carbon Fiber Production by Tow (2027-2032) & (Tons)

Table 64. World High-strength Carbon Fiber Production Value by Tow (2021-2026) & (USD Million)

Table 65. World High-strength Carbon Fiber Production Value by Tow (2027-2032) & (USD Million)

Table 66. World High-strength Carbon Fiber Average Price by Tow (2021-2026) & (US\$/kg)

Table 67. World High-strength Carbon Fiber Average Price by Tow (2027-2032) & (US\$/kg)

Table 68. World High-strength Carbon Fiber Production Value by Application, (USD Million), 2021 & 2025 & 2032

Table 69. World High-strength Carbon Fiber Production by Application (2021-2026) & (Tons)

Table 70. World High-strength Carbon Fiber Production by Application (2027-2032) & (Tons)

Table 71. World High-strength Carbon Fiber Production Value by Application (2021-2026) & (USD Million)

Table 72. World High-strength Carbon Fiber Production Value by Application (2027-2032) & (USD Million)

Table 73. World High-strength Carbon Fiber Average Price by Application (2021-2026) & (US\$/kg)

Table 74. World High-strength Carbon Fiber Average Price by Application (2027-2032) & (US\$/kg)

Table 75. Toray Basic Information, Manufacturing Base and Competitors

Table 76. Toray Major Business

Table 77. Toray High-strength Carbon Fiber Product and Services

Table 78. Toray High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 79. Toray Recent Developments/Updates

Table 80. Toray Competitive Strengths & Weaknesses

Table 81. Mitsubishi Chemical Basic Information, Manufacturing Base and Competitors

Table 82. Mitsubishi Chemical Major Business

Table 83. Mitsubishi Chemical High-strength Carbon Fiber Product and Services

Table 84. Mitsubishi Chemical High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 85. Mitsubishi Chemical Recent Developments/Updates

Table 86. Mitsubishi Chemical Competitive Strengths & Weaknesses

Table 87. Teijin Basic Information, Manufacturing Base and Competitors

Table 88. Teijin Major Business

Table 89. Teijin High-strength Carbon Fiber Product and Services

|                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Table 90. Teijin High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)                      |
| Table 91. Teijin Recent Developments/Updates                                                                                                                                   |
| Table 92. Teijin Competitive Strengths & Weaknesses                                                                                                                            |
| Table 93. Hexcel Basic Information, Manufacturing Base and Competitors                                                                                                         |
| Table 94. Hexcel Major Business                                                                                                                                                |
| Table 95. Hexcel High-strength Carbon Fiber Product and Services                                                                                                               |
| Table 96. Hexcel High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)                      |
| Table 97. Hexcel Recent Developments/Updates                                                                                                                                   |
| Table 98. Hexcel Competitive Strengths & Weaknesses                                                                                                                            |
| Table 99. Hyosung Advanced Materials Basic Information, Manufacturing Base and Competitors                                                                                     |
| Table 100. Hyosung Advanced Materials Major Business                                                                                                                           |
| Table 101. Hyosung Advanced Materials High-strength Carbon Fiber Product and Services                                                                                          |
| Table 102. Hyosung Advanced Materials High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026) |
| Table 103. Hyosung Advanced Materials Recent Developments/Updates                                                                                                              |
| Table 104. Hyosung Advanced Materials Competitive Strengths & Weaknesses                                                                                                       |
| Table 105. SGL Carbon Basic Information, Manufacturing Base and Competitors                                                                                                    |
| Table 106. SGL Carbon Major Business                                                                                                                                           |
| Table 107. SGL Carbon High-strength Carbon Fiber Product and Services                                                                                                          |
| Table 108. SGL Carbon High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)                 |
| Table 109. SGL Carbon Recent Developments/Updates                                                                                                                              |
| Table 110. SGL Carbon Competitive Strengths & Weaknesses                                                                                                                       |
| Table 111. Formosa Plastics Basic Information, Manufacturing Base and Competitors                                                                                              |
| Table 112. Formosa Plastics Major Business                                                                                                                                     |
| Table 113. Formosa Plastics High-strength Carbon Fiber Product and Services                                                                                                    |
| Table 114. Formosa Plastics High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)           |
| Table 115. Formosa Plastics Recent Developments/Updates                                                                                                                        |
| Table 116. Formosa Plastics Competitive Strengths & Weaknesses                                                                                                                 |
| Table 117. Aksa Carbon Basic Information, Manufacturing Base and Competitors                                                                                                   |
| Table 118. Aksa Carbon Major Business                                                                                                                                          |
| Table 119. Aksa Carbon High-strength Carbon Fiber Product and Services                                                                                                         |
| Table 120. Aksa Carbon High-strength Carbon Fiber Production (Tons), Price (US\$/kg),                                                                                          |

Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 121. Aksa Carbon Recent Developments/Updates

Table 122. Aksa Carbon Competitive Strengths & Weaknesses

Table 123. Syensqo Basic Information, Manufacturing Base and Competitors

Table 124. Syensqo Major Business

Table 125. Syensqo High-strength Carbon Fiber Product and Services

Table 126. Syensqo High-strength Carbon Fiber Production (Tons), Price (US\$/kg),  
Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 127. Syensqo Recent Developments/Updates

Table 128. Syensqo Competitive Strengths & Weaknesses

Table 129. UMATEx Basic Information, Manufacturing Base and Competitors

Table 130. UMATEx Major Business

Table 131. UMATEx High-strength Carbon Fiber Product and Services

Table 132. UMATEx High-strength Carbon Fiber Production (Tons), Price (US\$/kg),  
Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 133. UMATEx Recent Developments/Updates

Table 134. UMATEx Competitive Strengths & Weaknesses

Table 135. Taekwang Industrial Basic Information, Manufacturing Base and  
Competitors

Table 136. Taekwang Industrial Major Business

Table 137. Taekwang Industrial High-strength Carbon Fiber Product and Services

Table 138. Taekwang Industrial High-strength Carbon Fiber Production (Tons), Price  
(US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 139. Taekwang Industrial Recent Developments/Updates

Table 140. Taekwang Industrial Competitive Strengths & Weaknesses

Table 141. Zhongfu Shenying Basic Information, Manufacturing Base and Competitors

Table 142. Zhongfu Shenying Major Business

Table 143. Zhongfu Shenying High-strength Carbon Fiber Product and Services

Table 144. Zhongfu Shenying High-strength Carbon Fiber Production (Tons), Price  
(US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 145. Zhongfu Shenying Recent Developments/Updates

Table 146. Zhongfu Shenying Competitive Strengths & Weaknesses

Table 147. Jilin Chemical Fiber Basic Information, Manufacturing Base and Competitors

Table 148. Jilin Chemical Fiber Major Business

Table 149. Jilin Chemical Fiber High-strength Carbon Fiber Product and Services

Table 150. Jilin Chemical Fiber High-strength Carbon Fiber Production (Tons), Price  
(US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 151. Jilin Chemical Fiber Recent Developments/Updates

Table 152. Jilin Chemical Fiber Competitive Strengths & Weaknesses

|                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Table 153. Baowu Carbon Basic Information, Manufacturing Base and Competitors                                                                                                  |
| Table 154. Baowu Carbon Major Business                                                                                                                                         |
| Table 155. Baowu Carbon High-strength Carbon Fiber Product and Services                                                                                                        |
| Table 156. Baowu Carbon High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)               |
| Table 157. Baowu Carbon Recent Developments/Updates                                                                                                                            |
| Table 158. Baowu Carbon Competitive Strengths & Weaknesses                                                                                                                     |
| Table 159. Weihai Guangwei Composites Basic Information, Manufacturing Base and Competitors                                                                                    |
| Table 160. Weihai Guangwei Composites Major Business                                                                                                                           |
| Table 161. Weihai Guangwei Composites High-strength Carbon Fiber Product and Services                                                                                          |
| Table 162. Weihai Guangwei Composites High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026) |
| Table 163. Weihai Guangwei Composites Recent Developments/Updates                                                                                                              |
| Table 164. Weihai Guangwei Composites Competitive Strengths & Weaknesses                                                                                                       |
| Table 165. Sinofibers Technology Basic Information, Manufacturing Base and Competitors                                                                                         |
| Table 166. Sinofibers Technology Major Business                                                                                                                                |
| Table 167. Sinofibers Technology High-strength Carbon Fiber Product and Services                                                                                               |
| Table 168. Sinofibers Technology High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)      |
| Table 169. Sinofibers Technology Recent Developments/Updates                                                                                                                   |
| Table 170. Sinofibers Technology Competitive Strengths & Weaknesses                                                                                                            |
| Table 171. Jiangsu Hengshen Basic Information, Manufacturing Base and Competitors                                                                                              |
| Table 172. Jiangsu Hengshen Major Business                                                                                                                                     |
| Table 173. Jiangsu Hengshen High-strength Carbon Fiber Product and Services                                                                                                    |
| Table 174. Jiangsu Hengshen High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)           |
| Table 175. Jiangsu Hengshen Recent Developments/Updates                                                                                                                        |
| Table 176. Jiangsu Hengshen Competitive Strengths & Weaknesses                                                                                                                 |
| Table 177. Newtech Group Basic Information, Manufacturing Base and Competitors                                                                                                 |
| Table 178. Newtech Group Major Business                                                                                                                                        |
| Table 179. Newtech Group High-strength Carbon Fiber Product and Services                                                                                                       |
| Table 180. Newtech Group High-strength Carbon Fiber Production (Tons), Price (US\$/kg), Production Value (USD Million), Gross Margin and Market Share (2021-2026)              |
| Table 181. Newtech Group Recent Developments/Updates                                                                                                                           |
| Table 182. Newtech Group Competitive Strengths & Weaknesses                                                                                                                    |

Table 183. Global Key Players of High-strength Carbon Fiber Upstream (Raw Materials)

Table 184. Global High-strength Carbon Fiber Typical Customers

Table 185. High-strength Carbon Fiber Typical Distributors

## List Of Figures

### LIST OF FIGURES

Figure 1. High-strength Carbon Fiber Picture

Figure 2. World High-strength Carbon Fiber Production Value: 2021 & 2025 & 2032, (USD Million)

Figure 3. World High-strength Carbon Fiber Production Value and Forecast (2021-2032) & (USD Million)

Figure 4. World High-strength Carbon Fiber Production (2021-2032) & (Tons)

Figure 5. World High-strength Carbon Fiber Average Price (2021-2032) & (US\$/kg)

Figure 6. World High-strength Carbon Fiber Production Value Market Share by Region (2021-2032)

Figure 7. World High-strength Carbon Fiber Production Market Share by Region (2021-2032)

Figure 8. North America High-strength Carbon Fiber Production (2021-2032) & (Tons)

Figure 9. Europe High-strength Carbon Fiber Production (2021-2032) & (Tons)

Figure 10. China High-strength Carbon Fiber Production (2021-2032) & (Tons)

Figure 11. Japan High-strength Carbon Fiber Production (2021-2032) & (Tons)

Figure 12. South Korea High-strength Carbon Fiber Production (2021-2032) & (Tons)

Figure 13. High-strength Carbon Fiber Market Drivers

Figure 14. Factors Affecting Demand

Figure 15. World High-strength Carbon Fiber Consumption (2021-2032) & (Tons)

Figure 16. World High-strength Carbon Fiber Consumption Market Share by Region (2021-2032)

Figure 17. United States High-strength Carbon Fiber Consumption (2021-2032) & (Tons)

Figure 18. China High-strength Carbon Fiber Consumption (2021-2032) & (Tons)

Figure 19. Europe High-strength Carbon Fiber Consumption (2021-2032) & (Tons)

Figure 20. Japan High-strength Carbon Fiber Consumption (2021-2032) & (Tons)

Figure 21. South Korea High-strength Carbon Fiber Consumption (2021-2032) & (Tons)

Figure 22. ASEAN High-strength Carbon Fiber Consumption (2021-2032) & (Tons)

Figure 23. India High-strength Carbon Fiber Consumption (2021-2032) & (Tons)

Figure 24. Producer Shipments of High-strength Carbon Fiber by Manufacturer Revenue (\$MM) and Market Share (%): 2025

Figure 25. Global Four-firm Concentration Ratios (CR4) for High-strength Carbon Fiber Markets in 2025

Figure 26. Global Four-firm Concentration Ratios (CR8) for High-strength Carbon Fiber Markets in 2025

Figure 27. United States VS China: High-strength Carbon Fiber Production Value Market Share Comparison (2021 & 2025 & 2032)

Figure 28. United States VS China: High-strength Carbon Fiber Production Market Share Comparison (2021 & 2025 & 2032)

Figure 29. United States VS China: High-strength Carbon Fiber Consumption Market Share Comparison (2021 & 2025 & 2032)

Figure 30. United States Based Manufacturers High-strength Carbon Fiber Production Market Share 2025

Figure 31. China Based Manufacturers High-strength Carbon Fiber Production Market Share 2025

Figure 32. Rest of World Based Manufacturers High-strength Carbon Fiber Production Market Share 2025

Figure 33. World High-strength Carbon Fiber Production Value by Type, (USD Million), 2021 & 2025 & 2032

Figure 34. World High-strength Carbon Fiber Production Value Market Share by Type in 2025

Figure 35. Regular Tow

Figure 36. Large Tow

Figure 37. World High-strength Carbon Fiber Production Market Share by Type (2021-2032)

Figure 38. World High-strength Carbon Fiber Production Value Market Share by Type (2021-2032)

Figure 39. World High-strength Carbon Fiber Average Price by Type (2021-2032) & (US\$/kg)

Figure 40. World High-strength Carbon Fiber Production Value by Precursor, (USD Million), 2021 & 2025 & 2032

Figure 41. World High-strength Carbon Fiber Production Value Market Share by Precursor in 2025

Figure 42. PAN-based

Figure 43. Pitch-based

Figure 44. Rayon-based

Figure 45. World High-strength Carbon Fiber Production Market Share by Precursor (2021-2032)

Figure 46. World High-strength Carbon Fiber Production Value Market Share by Precursor (2021-2032)

Figure 47. World High-strength Carbon Fiber Average Price by Precursor (2021-2032) & (US\$/kg)

Figure 48. World High-strength Carbon Fiber Production Value by Tow, (USD Million), 2021 & 2025 & 2032

Figure 49. World High-strength Carbon Fiber Production Value Market Share by Tow in 2025

Figure 50. 3K

Figure 51. 6K

Figure 52. 12K

Figure 53. 24K

Figure 54. 48K

Figure 55. Other

Figure 56. World High-strength Carbon Fiber Production Market Share by Tow (2021-2032)

Figure 57. World High-strength Carbon Fiber Production Value Market Share by Tow (2021-2032)

Figure 58. World High-strength Carbon Fiber Average Price by Tow (2021-2032) & (US\$/kg)

Figure 59. World High-strength Carbon Fiber Production Value by Application, (USD Million), 2021 & 2025 & 2032

Figure 60. World High-strength Carbon Fiber Production Value Market Share by Application in 2025

Figure 61. Aerospace and Defense

Figure 62. Sports/Leisure

Figure 63. Wind Energy

Figure 64. Pressure Vessel

Figure 65. Automotive

Figure 66. Other

Figure 67. World High-strength Carbon Fiber Production Market Share by Application (2021-2032)

Figure 68. World High-strength Carbon Fiber Production Value Market Share by Application (2021-2032)

Figure 69. World High-strength Carbon Fiber Average Price by Application (2021-2032) & (US\$/kg)

Figure 70. High-strength Carbon Fiber Industry Chain

Figure 71. High-strength Carbon Fiber Procurement Model

Figure 72. High-strength Carbon Fiber Sales Model

Figure 73. High-strength Carbon Fiber Sales Channels, Direct Sales, and Distribution

Figure 74. Methodology

Figure 75. Research Process and Data Source

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