Germany Automotive Carbon Fiber Composites Market Report and Forecast 2024-2032

Market Report | 2024-07-18 | 185 pages | EMR Inc.

AVAILABLE LICENSES:

- Single User License $2999.00
- Five User License $3999.00
- Corporate License $4999.00

Report description:

Germany Automotive Carbon Fiber Composites Market Report and Forecast 2024-2032
Market Outlook
According to the report by Expert Market Research (EMR), the Germany automotive carbon fiber composites market size, aided by the significant push towards vehicle lightweighting, is projected to grow at a CAGR of 10.2% between 2024 and 2032.
Carbon fiber composites are advanced materials composed of carbon fibres embedded in a polymer matrix, typically epoxy, to create a material that is both extremely strong and lightweight. These composites offer a high strength-to-weight ratio, excellent stiffness, and superior corrosion resistance, making them ideal for various automotive applications, including body panels, structural components, and interior parts.
The Germany automotive carbon fiber composites market is experiencing robust growth, driven by the increasing demand for lightweight materials, advancements in manufacturing technologies, and the stringent regulatory environment aimed at reducing vehicle emissions.
One of the key trends aiding the Germany automotive carbon fiber composites market growth is the significant push towards vehicle lightweighting. As automakers strive to meet stringent fuel efficiency and emissions standards, the adoption of lightweight materials like carbon fiber composites has become critical. These materials help reduce the overall weight of vehicles, leading to improved fuel efficiency and lower CO2 emissions. German automakers, renowned for their engineering excellence and innovation, are increasingly incorporating carbon fiber composites into their vehicle designs. This trend is particularly evident in high-performance and luxury vehicles, where the benefits of weight reduction and enhanced performance are highly valued.
The growing emphasis on electric vehicles (EVs) is another major factor increasing the Germany automotive carbon fiber composites market value. The shift towards electrification requires materials that can offset the additional weight of batteries and improve the overall efficiency of EVs. Carbon fiber composites, with their lightweight and high-strength properties, are well-suited for this purpose. They are used in various EV components, including battery enclosures, chassis, and body structures, to enhance vehicle range and performance. As Germany continues to lead the charge in EV production and adoption, the demand for carbon fiber composites is expected to rise substantially.

Technological advancements in carbon fiber manufacturing processes are also driving the Germany automotive carbon fiber composites market growth. Traditional carbon fiber production methods are time-consuming and expensive, limiting their widespread use in the automotive industry. However, recent developments in manufacturing technologies, such as automated fiber placement (AFP) and resin transfer molding (RTM), are reducing production costs and cycle times. These advancements are making carbon fiber composites more accessible and cost-effective for mass-market vehicle production. German manufacturers are investing heavily in research and development to optimise these processes, ensuring they can meet the growing demand for carbon fiber components.

The trend towards sustainability and environmental responsibility is another significant driver aiding the Germany automotive carbon fiber composites market development. Carbon fiber composites are not only lightweight but also highly durable, contributing to the longevity and recyclability of automotive components. Additionally, the use of these materials supports the circular economy by enabling the development of recyclable composite structures. German automakers and suppliers are increasingly focusing on sustainable manufacturing practices and the development of eco-friendly composites to align with global sustainability goals and consumer preferences for environmentally responsible products.

The competitive landscape of the Germany automotive carbon fiber composites market is characterised by the presence of several key players, including both global corporations and specialised local firms. These companies are engaging in strategic partnerships, mergers, and acquisitions to enhance their market position and expand their product offerings. Collaboration with automotive OEMs is a common strategy to ensure the seamless integration of carbon fiber composites into vehicle designs. For instance, BMW's partnership with SGL Carbon has been instrumental in the development and production of carbon fiber components for the BMW i series, showcasing the successful collaboration between material suppliers and automakers.

The Germany automotive carbon fiber composites market expansion is being fuelled by increased investment in the development of hybrid composites, which combine carbon fibers with other materials such as glass fibers or thermoplastics. These hybrid composites offer a balance of cost, performance, and weight, making them attractive for various automotive applications. The development of new resin systems and fiber reinforcements is further expanding the possibilities for carbon fiber composites, enabling the production of components with tailored properties to meet specific performance requirements.

Consumer preferences are also influencing the Germany automotive carbon fiber composites market dynamics. There is a growing awareness and appreciation for the benefits of carbon fiber composites among automotive consumers, particularly in the luxury and performance segments. The aesthetic appeal of carbon fiber, with its distinctive weave pattern and sleek finish, adds to the desirability of vehicles featuring these materials. Additionally, the association of carbon fiber with advanced technology and high performance enhances the brand image of automakers using these composites, contributing to increased consumer demand.

Regulatory factors play a crucial role in shaping the Germany automotive carbon fiber composites market development. The European Union's stringent regulations on vehicle emissions and fuel efficiency standards are compelling automakers to adopt innovative materials and technologies to comply with these requirements. Carbon fiber composites, with their potential to significantly reduce vehicle weight and emissions, are becoming an integral part of automakers' strategies to meet regulatory targets. The German government's support for research and innovation in advanced materials is further bolstering the market, providing funding and incentives for the development of next-generation carbon fiber composites.

Market Segmentation

The Germany automotive carbon fiber composites market can be divided based on production type and application.

Market Breakup by Production Type

- Hand Layup
- Resin Transfer Moulding
- Vacuum Infusion Processing
- Injection Moulding
- Compression Moulding

Market Breakup by Application

- Structural Assembly
- Powertrain Component
- Interior

-Exterior
-Others

Competitive Landscape

The EMR report looks into the market shares, plant turnarounds, capacities, investments, and mergers and acquisitions, among other major developments, of the leading companies operating in the Germany automotive carbon fiber composites market. Some of the major players explored in the report by Expert Market Research are as follows:

-BASF SE
-SGL Carbon SE
-Solvay Group
-Toray Industries, Inc.
-BMW AG
-Hexcel Corporation
-Teijin Limited
-Voith GmbH & Co. KGaA
-Muhr und Bender KG
-Cotesa GmbH
-Others

About Us

Acquire unparalleled access to critical industry insights with our comprehensive market research reports, meticulously prepared by a team of seasoned experts. These reports are designed to equip decision-makers with an in-depth understanding of prevailing market trends, competitive landscapes, and growth opportunities.

Our high-quality, data-driven analysis provides the essential framework for organisations seeking to make informed and strategic decisions in an increasingly complex and rapidly evolving business environment. By investing in our market research reports, you can ensure your organisation remains agile, proactive, and poised for success in today's competitive market.

Don't miss the opportunity to elevate your business intelligence and strengthen your strategic planning. Secure your organisation's future success by acquiring one of our Expert Market Research reports today.

*We at Expert Market Research always strive to provide you with the latest information. The numbers in the article are only indicative and may be different from the actual report.

Table of Contents:

1 Preface
2 Report Coverage - Key Segmentation and Scope
3 Report Description
  3.1 Market Definition and Outlook
  3.2 Properties and Applications
  3.3 Market Analysis
  3.4 Key Players
4 Key Assumptions
5 Executive Summary
  5.1 Overview
  5.2 Key Drivers
  5.3 Key Developments
  5.4 Competitive Structure
  5.5 Key Industrial Trends
6 Market Snapshot
7 Opportunities and Challenges in the Market
8 Global Automotive Carbon Fiber Composites Market Overview

8.1 Key Industry Highlights
8.2 Global Automotive Carbon Fiber Composites Historical Market (2018-2023)
8.3 Global Automotive Carbon Fiber Composites Market Forecast (2024-2032)
8.4 Global Automotive Carbon Fiber Composites Market Share by Region
8.4.1 North America
8.4.2 Europe
8.4.3 Asia Pacific
8.4.4 Latin America
8.4.5 Middle East and Africa
9 Germany Automotive Carbon Fiber Composites Market Overview
9.1 Key Industry Highlights
9.2 Germany Automotive Carbon Fiber Composites Historical Market (2018-2023)
9.3 Germany Automotive Carbon Fiber Composites Market Forecast (2024-2032)
10 Germany Automotive Carbon Fiber Composites Market by Production Type
10.1 Hand Layup
10.1.1 Historical Trend (2018-2023)
10.1.2 Forecast Trend (2024-2032)
10.2 Resin Transfer Moulding
10.2.1 Historical Trend (2018-2023)
10.2.2 Forecast Trend (2024-2032)
10.3 Vacuum Infusion Processing
10.3.1 Historical Trend (2018-2023)
10.3.2 Forecast Trend (2024-2032)
10.4 Injection Moulding
10.4.1 Historical Trend (2018-2023)
10.4.2 Forecast Trend (2024-2032)
10.5 Compression Moulding
10.5.1 Historical Trend (2018-2023)
10.5.2 Forecast Trend (2024-2032)
11 Germany Automotive Carbon Fiber Composites Market by Application
11.1 Structural Assembly
11.1.1 Historical Trend (2018-2023)
11.1.2 Forecast Trend (2024-2032)
11.2 Powertrain Component
11.2.1 Historical Trend (2018-2023)
11.2.2 Forecast Trend (2024-2032)
11.3 Interior
11.3.1 Historical Trend (2018-2023)
11.3.2 Forecast Trend (2024-2032)
11.4 Exterior
11.4.1 Historical Trend (2018-2023)
11.4.2 Forecast Trend (2024-2032)
11.5 Others
12 Market Dynamics
12.1 SWOT Analysis
12.1.1 Strengths
12.1.2 Weaknesses

12.1.3 Opportunities
12.1.4 Threats
12.2 Porter's Five Forces Analysis
12.2.1 Supplier's Power
12.2.2 Buyer's Power
12.2.3 Threat of New Entrants
12.2.4 Degree of Rivalry
12.2.5 Threat of Substitutes
12.3 Key Indicators for Demand
12.4 Key Indicators for Price
13 Competitive Landscape
13.1 Market Structure
13.2 Company Profiles
13.2.1 BASF SE
13.2.1.1 Company Overview
13.2.1.2 Product Portfolio
13.2.1.3 Demographic Reach and Achievements
13.2.1.4 Certifications
13.2.2 SGL Carbon SE
13.2.2.1 Company Overview
13.2.2.2 Product Portfolio
13.2.2.3 Demographic Reach and Achievements
13.2.2.4 Certifications
13.2.3 Solvay Group
13.2.3.1 Company Overview
13.2.3.2 Product Portfolio
13.2.3.3 Demographic Reach and Achievements
13.2.3.4 Certifications
13.2.4 Toray Industries, Inc.
13.2.4.1 Company Overview
13.2.4.2 Product Portfolio
13.2.4.3 Demographic Reach and Achievements
13.2.4.4 Certifications
13.2.5 BMW AG
13.2.5.1 Company Overview
13.2.5.2 Product Portfolio
13.2.5.3 Demographic Reach and Achievements
13.2.5.4 Certifications
13.2.6 Hexcel Corporation
13.2.6.1 Company Overview
13.2.6.2 Product Portfolio
13.2.6.3 Demographic Reach and Achievements
13.2.6.4 Certifications
13.2.7 Teijin Limited
13.2.7.1 Company Overview
13.2.7.2 Product Portfolio
13.2.7.3 Demographic Reach and Achievements

13.2.7.4 Certifications
13.2.8 Voith GmbH & Co. KGaA
13.2.8.1 Company Overview
13.2.8.2 Product Portfolio
13.2.8.3 Demographic Reach and Achievements
13.2.8.4 Certifications
13.2.9 Muhr und Bender KG
13.2.9.1 Company Overview
13.2.9.2 Product Portfolio
13.2.9.3 Demographic Reach and Achievements
13.2.9.4 Certifications
13.2.10 Cotesa GmbH
13.2.10.1 Company Overview
13.2.10.2 Product Portfolio
13.2.10.3 Demographic Reach and Achievements
13.2.10.4 Certifications
13.2.11 Others
14 Key Trends and Developments in the Market

List of Key Figures and Tables

1. Global Automotive Carbon Fiber Composites Market: Key Industry Highlights, 2018 and 2032
2. Germany Automotive Carbon Fiber Composites Market: Key Industry Highlights, 2018 and 2032
3. Germany Automotive Carbon Fiber Composites Historical Market: Breakup by Production Type (USD Million), 2018-2023
4. Germany Automotive Carbon Fiber Composites Market Forecast: Breakup by Production Type (USD Million), 2024-2032
5. Germany Automotive Carbon Fiber Composites Historical Market: Breakup by Application (USD Million), 2018-2023
6. Germany Automotive Carbon Fiber Composites Market Forecast: Breakup by Application (USD Million), 2024-2032
7. Germany Automotive Carbon Fiber Composites Market Structure

Germany Automotive Carbon Fiber Composites Market Report and Forecast 2024-2032

Market Report | 2024-07-18 | 185 pages | EMR Inc.

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$2999.00
	Five User License	$3999.00
	Corporate License	$4999.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2025-05-05
		Signature