

Global Composite Bearings Market Size Study & Forecast, by Material Type, Shape, Application, End-Use Industry, Size, and Regional Forecasts 2025–2035

<https://marketpublishers.com/r/G3773C61EC37EN.html>

Date: July 2025

Pages: 285

Price: US\$ 3,750.00 (Single User License)

ID: G3773C61EC37EN

Abstracts

The Global Composite Bearings Market is valued at approximately USD 2.66 billion in 2024 and is poised to register a steady compound annual growth rate (CAGR) of 5.21% over the forecast period 2025–2035. Composite bearings—comprising advanced fiber-reinforced polymeric or resin-based materials—have redefined performance standards in demanding applications where traditional metal bearings fall short. Their appeal lies in their lightweight nature, self-lubricating properties, corrosion resistance, and exceptional durability across extreme operating conditions. As the global economy pivots toward sustainability and energy efficiency, the use of composite bearings has witnessed a tangible uptick across sectors such as automotive, aerospace, renewable energy, and industrial machinery. These bearings play a critical role in elevating operational efficiency by minimizing maintenance needs, reducing noise and vibration, and withstanding higher dynamic loads.

Surging demand for high-performance, maintenance-free solutions in precision-based industries is driving the momentum behind composite bearings. Particularly in aerospace and automotive sectors, the shift towards weight reduction and fuel efficiency is leading OEMs to adopt composite bearing systems that not only enhance structural integrity but also ensure long lifecycle costs. Furthermore, the medical device sector's requirement for non-corrosive, biocompatible components has accelerated the integration of composite bearings in surgical tools, imaging systems, and robotic-assisted platforms. Meanwhile, advancements in polymer science and molding technologies have allowed manufacturers to tailor composite materials to unique application-specific requirements, unlocking further innovation in geometries and configurations.

Regionally, North America currently leads the composite bearings market, thanks to its mature aerospace and automotive manufacturing base, robust research and development infrastructure, and early adoption of material innovations. Europe follows closely, driven by stringent environmental mandates and a strong focus on lightweight engineering in automotive and wind energy sectors. Asia Pacific, however, is poised to emerge as the fastest-growing region throughout the forecast timeline, primarily fueled by increasing investments in infrastructure, industrial machinery upgrades, and electric mobility—especially in China, India, and South Korea. The region's strong emphasis on cost-efficiency and material sustainability is expected to further elevate demand for composite bearings across end-use industries.

Major market player included in this report are:

BASF SE

Croda International Plc.

Halliburton Company

Chevron Phillips Chemical Company

Impact Fluid Solutions

Trican Well Service Ltd.

M&D Industries of Louisiana, Inc.

Schlumberger Limited

Aubin Group

Baker Hughes Company

GGB Bearing Technology

Trelleborg AB

NSK Ltd.

Saint-Gobain Performance Plastics

Rexnord Corporation

Global Composite Bearings Market Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period – 2025-2035

Report Coverage – Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Regional Scope – North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope – Free report customization (equivalent up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within the countries involved in the study. The report also provides detailed information about crucial aspects, such as driving factors and challenges, which will define the future growth of the market. Additionally, it incorporates potential opportunities in micro-markets for stakeholders to invest, along with a detailed analysis of the competitive landscape and product offerings of key players. The detailed segments and sub-segments of the market are explained below:

By Material Type:

Carbon Fiber

Glass Fiber

Ceramic Fiber

Aramid Fiber

Polyetheretherketone

By Shape:

Round

Cylindrical

Spherical

Needle

Thrust

By Application:

Aerospace

Automotive

Industrial Machinery

Medical Devices

Renewable Energy

By End-Use Industry:

Mining

Oil and Gas

Power Generation

Electronics

Medical Industry

By Size:

Small (Diameter \leq 5 mm)

Medium (Diameter 5–15 mm)

Large (Diameter $>$ 15 mm)

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

Rest of Europe

Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa

Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

Contents

CHAPTER 1. GLOBAL COMPOSITE BEARINGS MARKET REPORT SCOPE & METHODOLOGY

- 1.1. Research Objective
- 1.2. Research Methodology
 - 1.2.1. Forecast Model
 - 1.2.2. Desk Research
 - 1.2.3. Top Down and Bottom-Up Approach
- 1.3. Research Attributes
- 1.4. Scope of the Study
 - 1.4.1. Market Definition
 - 1.4.2. Market Segmentation
- 1.5. Research Assumption
 - 1.5.1. Inclusion & Exclusion
 - 1.5.2. Limitations
 - 1.5.3. Years Considered for the Study

CHAPTER 2. EXECUTIVE SUMMARY

- 2.1. CEO/CXO Standpoint
- 2.2. Strategic Insights
- 2.3. ESG Analysis
- 2.4. Key Findings

CHAPTER 3. GLOBAL COMPOSITE BEARINGS MARKET FORCES ANALYSIS

- 3.1. Market Forces Shaping The Global Composite Bearings Market (2024-2035)
- 3.2. Drivers
 - 3.2.1. Rising demand for lightweight and maintenance-free bearing solutions
 - 3.2.2. Increasing applications in aerospace, automotive, and renewable sectors
- 3.3. Restraints
 - 3.3.1. High initial material and design costs
 - 3.3.2. Limited performance under extremely high-load environments
- 3.4. Opportunities
 - 3.4.1. Technological advancements in polymer science and composite molding
 - 3.4.2. Emerging markets in Asia-Pacific with growing infrastructure investments

CHAPTER 4. GLOBAL COMPOSITE BEARINGS INDUSTRY ANALYSIS

- 4.1. Porter's 5 Forces Model
 - 4.1.1. Bargaining Power of Buyers
 - 4.1.2. Bargaining Power of Suppliers
 - 4.1.3. Threat of New Entrants
 - 4.1.4. Threat of Substitutes
 - 4.1.5. Competitive Rivalry
- 4.2. Porter's 5 Forces Forecast Model (2024–2035)
- 4.3. PESTEL Analysis
 - 4.3.1. Political
 - 4.3.2. Economic
 - 4.3.3. Social
 - 4.3.4. Technological
 - 4.3.5. Environmental
 - 4.3.6. Legal
- 4.4. Top Investment Opportunities
- 4.5. Top Winning Strategies (2025)
- 4.6. Market Share Analysis (2024–2025)
- 4.7. Global Pricing Analysis and Trends 2025
- 4.8. Analyst Recommendation & Conclusion

CHAPTER 5. GLOBAL COMPOSITE BEARINGS MARKET SIZE & FORECASTS BY MATERIAL TYPE 2025–2035

- 5.1. Market Overview
- 5.2. Carbon Fiber
 - 5.2.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
 - 5.2.2. Market Size Analysis, by Region, 2025–2035
- 5.3. Glass Fiber
- 5.4. Ceramic Fiber
- 5.5. Aramid Fiber
- 5.6. Polyetheretherketone

CHAPTER 6. GLOBAL COMPOSITE BEARINGS MARKET SIZE & FORECASTS BY SHAPE 2025–2035

- 6.1. Market Overview
- 6.2. Round

- 6.3. Cylindrical
- 6.4. Spherical
- 6.5. Needle
- 6.6. Thrust

CHAPTER 7. GLOBAL COMPOSITE BEARINGS MARKET SIZE & FORECASTS BY APPLICATION 2025–2035

- 7.1. Market Overview
- 7.2. Aerospace
- 7.3. Automotive
- 7.4. Industrial Machinery
- 7.5. Medical Devices
- 7.6. Renewable Energy

CHAPTER 8. GLOBAL COMPOSITE BEARINGS MARKET SIZE & FORECASTS BY END-USE INDUSTRY 2025–2035

- 8.1. Market Overview
- 8.2. Mining
- 8.3. Oil and Gas
- 8.4. Power Generation
- 8.5. Electronics
- 8.6. Medical Industry

CHAPTER 9. GLOBAL COMPOSITE BEARINGS MARKET SIZE & FORECASTS BY SIZE 2025–2035

- 9.1. Market Overview
- 9.2. Small (Diameter < 5 mm)
- 9.3. Medium (Diameter 5–15 mm)
- 9.4. Large (Diameter > 15 mm)

CHAPTER 10. GLOBAL COMPOSITE BEARINGS MARKET SIZE & FORECASTS BY REGION 2025–2035

- 10.1. Regional Market Snapshot
- 10.2. Top Leading & Emerging Countries
- 10.3. North America Composite Bearings Market

- 10.3.1. U.S.
 - 10.3.1.1. Material Type Breakdown Size & Forecasts, 2025–2035
 - 10.3.1.2. Application Breakdown Size & Forecasts, 2025–2035
- 10.3.2. Canada
 - 10.3.2.1. Material Type Breakdown Size & Forecasts, 2025–2035
 - 10.3.2.2. Application Breakdown Size & Forecasts, 2025–2035
- 10.4. Europe Composite Bearings Market
 - 10.4.1. UK
 - 10.4.2. Germany
 - 10.4.3. France
 - 10.4.4. Spain
 - 10.4.5. Italy
 - 10.4.6. Rest of Europe
- 10.5. Asia Pacific Composite Bearings Market
 - 10.5.1. China
 - 10.5.2. India
 - 10.5.3. Japan
 - 10.5.4. Australia
 - 10.5.5. South Korea
 - 10.5.6. Rest of Asia Pacific
- 10.6. Latin America Composite Bearings Market
 - 10.6.1. Brazil
 - 10.6.2. Mexico
- 10.7. Middle East and Africa Composite Bearings Market
 - 10.7.1. UAE
 - 10.7.2. Saudi Arabia
 - 10.7.3. South Africa
 - 10.7.4. Rest of Middle East & Africa

CHAPTER 11. COMPETITIVE INTELLIGENCE

- 11.1. Top Market Strategies
- 11.2. BASF SE
 - 11.2.1. Company Overview
 - 11.2.2. Key Executives
 - 11.2.3. Company Snapshot
 - 11.2.4. Financial Performance (Subject to Data Availability)
 - 11.2.5. Product/Services Port
 - 11.2.6. Recent Development

- 11.2.7. Market Strategies
- 11.2.8. SWOT Analysis
- 11.3. Croda International Plc.
- 11.4. Halliburton Company
- 11.5. Chevron Phillips Chemical Company
- 11.6. Impact Fluid Solutions
- 11.7. Trican Well Service Ltd.
- 11.8. M&D Industries of Louisiana, Inc.
- 11.9. Schlumberger Limited
- 11.10. Aubin Group
- 11.11. Baker Hughes Company
- 11.12. GGB Bearing Technology
- 11.13. Trelleborg AB
- 11.14. NSK Ltd.
- 11.15. Saint-Gobain Performance Plastics
- 11.16. Rexnord Corporation

List Of Tables

LIST OF TABLES

Table 1. Global Composite Bearings Market, Report Scope

Table 2. Global Composite Bearings Market Estimates & Forecasts by Region
2024–2035

Table 3. Global Composite Bearings Market Estimates & Forecasts by Material Type
2024–2035

Table 4. Global Composite Bearings Market Estimates & Forecasts by Shape
2024–2035

Table 5. Global Composite Bearings Market Estimates & Forecasts by Application
2024–2035

Table 6. Global Composite Bearings Market Estimates & Forecasts by End-Use
Industry 2024–2035

Table 7. Global Composite Bearings Market Estimates & Forecasts by Size 2024–2035

Table 8. U.S. Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 9. Canada Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 10. UK Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 11. Germany Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 12. France Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 13. Spain Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 14. Italy Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 15. Rest of Europe Composite Bearings Market Estimates & Forecasts,
2024–2035

Table 16. China Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 17. India Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 18. Japan Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 19. Australia Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 20. South Korea Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 21. Brazil Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 22. Mexico Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 23. UAE Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 24. Saudi Arabia Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 25. South Africa Composite Bearings Market Estimates & Forecasts, 2024–2035

Table 26. Rest of MEA Composite Bearings Market Estimates & Forecasts, 2024–2035

List Of Figures

LIST OF FIGURES

- Figure 1. Global Composite Bearings Market, Research Methodology
- Figure 2. Global Composite Bearings Market, Market Estimation Techniques
- Figure 3. Global Market Size Estimates & Forecast Methods
- Figure 4. Global Composite Bearings Market, Key Trends 2025
- Figure 5. Global Composite Bearings Market, Growth Prospects 2024–2035
- Figure 6. Global Composite Bearings Market, Porter’s Five Forces Model
- Figure 7. Global Composite Bearings Market, PESTEL Analysis
- Figure 8. Global Composite Bearings Market, Value Chain Analysis
- Figure 9. Composite Bearings Market by Material Type, 2025 & 2035
- Figure 10. Composite Bearings Market by Shape, 2025 & 2035
- Figure 11. Composite Bearings Market by Application, 2025 & 2035
- Figure 12. Composite Bearings Market by End-Use Industry, 2025 & 2035
- Figure 13. Composite Bearings Market by Size, 2025 & 2035
- Figure 14. North America Composite Bearings Market, 2025 & 2035
- Figure 15. Europe Composite Bearings Market, 2025 & 2035
- Figure 16. Asia Pacific Composite Bearings Market, 2025 & 2035
- Figure 17. Latin America Composite Bearings Market, 2025 & 2035
- Figure 18. Middle East & Africa Composite Bearings Market, 2025 & 2035
- Figure 19. Global Composite Bearings Market, Company Market Share Analysis (2025)

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