

Ballistic Composites Market Report by Fiber Type (Aramids, Ultra-High Molecular Weight Polyethylene (UHMWPE), S-Glass, and Others), Matrix Type (Polymer Matrix Composite (PMC), Ceramic Matrix Composite (CMC), Metal Matrix Composite (MMC)), Application (Armor, Helmets and Face Protection, and Others), and Region 2024-2032

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Report description:

The global ballistic composites market size reached US\$ 1.6 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 2.6 Billion by 2032, exhibiting a growth rate (CAGR) of 5% during 2024-2032.

Ballistic composites are high-performance fibers capable of absorbing shock and impact energy caused by explosions. They consist of layered structural composites with polymer matrix reinforced with glass, carbon and para-aramid fibers to provide enhanced strength and stiffness. These composites are commonly used as raw materials to manufacture vests, helmets, shields and body and vehicle armors. They exhibit various advantageous properties, such as resistance to heat and corrosion, high thermal conductivity and durability. As a result, they find extensive applications across various industries, such as defense, automotive, aviation and aerospace.

Ballistic Composites Market Trends:

The market is primarily being driven by an alarming increase in the instances of armed conflicts, violence and terrorism across the globe. Moreover, the escalating need for military modernization to enhance national security is providing a thrust to the market growth. With the development of next-generation weaponry systems, governments and defense organizations, especially of developing nations, are rapidly adopting novel ballistic composites to support and improve the survivability of the fight troops. Ballistic composites are also widely used for ground, marine and air vessels to improve combat efficiencies against overhead and

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external artillery and machine gunfire. Additionally, various product innovations, such as the development of Improved Outer Tactical Vest (IOTV), Deltoid and Auxiliary Protector System (DAPS), Enhanced Small Arms Protective Insert (ESAPI) and Enhanced Side Ballistic Inserts (ESBI), are acting as other growth-inducing factors. These novel composites are lightweight, comfortable and user-friendly and provide enhanced protection against ballistic threats, such as bullets, flying debris and shrapnel.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global ballistic composites market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on fiber type, matrix type and application.

Breakup by Fiber Type:

- Aramids
- Ultra-High Molecular Weight Polyethylene (UHMWPE)
- S-Glass
- Others

Breakup by Matrix Type:

- Polymer Matrix Composite (PMC)
- Ceramic Matrix Composite (CMC)
- Metal Matrix Composite (MMC)

Breakup by Application:

- Armor
- Helmets and Face Protection
- Others

Breakup by Region:

- North America
 - o□United States
 - o□Canada
- Asia-Pacific
 - o□China
 - o□Japan
 - o□India
 - o□South Korea
 - o□Australia
 - o□Indonesia
 - o□Others
- Europe
 - o□Germany
 - o□France
 - o□United Kingdom
 - o□Italy
 - o□Spain
 - o□Russia
 - o□Others

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- Latin America
 - o□ Brazil
 - o□ Mexico
 - o□ Others
- Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being BAE Systems plc, Barrday Inc., Gaffco Ballistics Inc., Gurit Holding AG, Honeywell International Inc., II-VI Incorporated, Koninklijke DSM N.V., Koninklijke Ten Cate B.V., MKU Limited, Morgan Advanced Materials, PRF Composite Materials, Southern States LLC and Teijin Limited.

Key Questions Answered in This Report:

- How has the global ballistic composites market performed so far and how will it perform in the coming years?
- What has been the impact of COVID-19 on the global ballistic composites market?
- What are the key regional markets?
- What is the breakup of the market based on the fiber type?
- What is the breakup of the market based on the matrix type?
- What is the breakup of the market based on the application?
- What are the various stages in the value chain of the industry?
- What are the key driving factors and challenges in the industry?
- What is the structure of the global ballistic composites market and who are the key players?
- What is the degree of competition in the industry?

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