

Armor Materials - Market and Technology Forecast to 2029

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Abstracts

Armor Materials are used to enhance the ballistic protection of both military and civilian systems. They are used across all platforms including land, naval and airborne systems.

The Global Armor Materials Market 2020 market is estimated at around US\$8.30 bn and is expected to reach US\$15.50 bn by 2029. In this report the market is segmented by Region, by Material, and by Armor Type.

Armor materials are used to develop varied layouts that add to the survivability for ground combat vehicles. Essentially, armors are segmented by type into two major categories, i.e. Reactive Armor and Passive Armor. A reactive armor makes use of an explosive which is sandwiched between two metal plates. The explosive detonates on impact thus destroying the incoming projectile. A passive armor as the name suggests make use of sheet materials with a high strength to weight ratio. Earlier heavy metals were used to fabricate these armors. Although, the growth in munition technology has brought about a change in market trends.

OEMs are shifting towards lighter, non-metallic elements with strong tactical capabilities to partake in the armored materials market.

By Material type, metals and alloys account for the largest segment associated with this sector owing to the increased use of materials like titanium. With the growth in material science engineering, materials like ceramics and fiberglass are gaining momentum within this sector. Ceramics is expected to be the fastest growing sector with a CAGR of 10.32%.

The Global Landscape for this vertical is segmented by region into North America,

Europe, Asia Pacific, the Middle East and RoW. North America accounts for 37% of the global revenue generated by this market, followed by APAC. Europe accounts for 19% of the revenue generated by this sector, followed by the Middle East. Factors like the growing insurgency and geo-political tensions within the Middle East serve as a key factor that boosts the growth for this market. The deployment of armored vehicles within this region to combat the uprising is expected to promote market growth.

The Protection Systems Market is predominantly governed by the development of non-armor solutions which is anticipated to add to the tactical ability for a vehicle. The development of Active Protection Systems is expected to be one of the key challenges to be faced by this sector. The use of this technology reduces the vehicle weight and increases its protection, thus enhancing its combat abilities against incoming projectiles.

Consecutively, the introduction of government regulations is poised to boost the market demand for the sector. The introduction of NATO STANAG 4649 enhances the industrial capacity and interoperability among users. The agreement includes a detailed report on the various levels of protection to be provided by armored vehicles. Qualifications tests are designed by NATO and its allies to make sure that the combat vehicle attains the expected standards prior to deployment.

This report is aimed at:

Key market trends and their impacts on the changing market dynamics have been discussed.

A comprehensive study based on the drivers, restraints, and challenges of this market has been covered.

The impact of growing technological advancement on the market as well as its demand has been studied.

The high growth segments have been studied comprehensively.

The new opportunities provided by this market have been listed.

The industrial shortcomings and the performance of the key players for this market have been analyzed.

The market has been segmented by Region, Application, Armor Type, Material, Type, and End-User:

Region

North America

Europe

APAC

Middle East

RoW

Application

Soldier Protection

Civil Armor

Armored Vehicle

Others

Armor Type

Reactive

Passive

Material Type

Metals and Alloys

Ceramics

Para-aramid Fiber

UHMPWE

Composites

Fiberglass

Others

Type

Vehicle Armor

Others

End-User

Civil

Defense

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Global Aerospace & Defense Composites Market and Technology Forecast to 2026

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