

## Ceramic Armor Market Size, Share & Trends Analysis Report By Material (Ceramic-metal Composite, Silicon Carbide), By Application (Body, Aircraft, Defense, Marine), By Platform, And Segment Forecasts, 2018 -2025

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### **Abstracts**

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The global ceramic armor market size is estimated to reach USD 3.04 billion by 2025, according to a new report by Grand View Research, Inc., presenting a 7.2% CAGR during the forecast period. The market is driven by increasing unrest among countries, cross-border disputes, and terrorist activities, which creates the need for advanced protection systems for soldiers as well as combat vehicles. Advancements in material technologies and manufacturing techniques are driving adoption of ceramic as armor materials.

The use of ceramic armor is governed by various acts and regulations, led by organizations such as Underwriters Laboratories (UL), National Institute of Justice (NIJ), and United States Department of Defense (DoD). Design and testing standards are developed to investigate the level of intensity that a body armor can withstand against threats. Manufacturers and vendors selling ceramic body armor need to comply with these standards.

Based on material, the alumina material segment accounts for a relatively larger market share due to its inexpensive processing and higher density. By application, the homeland security segment is estimated to exhibit the highest growth rate over the forecast period. Demand for ceramic armor in defense is attributed to the emerging trend of upgrading military equipment. Surging need for safeguarding military personnel.



is encouraging large-scale procurement of body vests across the globe.

By way of platform, the market has been categorized into defense, homeland security, and civilians. While the civilian application segment has witnessed comparatively slower adoption of body armor, growing rate of terrorism across the globe has driven adoption in the homeland security segment.

North America acquired the largest market share in 2016, primarily owing to rising investments by defense agencies in performance products to increase and maintain its military strength. The prevailing insurgency in Middle Eastern countries is expected to increase the sale of armored vehicles in the region. Saudi Arabia and UAE are potential customers for armor vehicle manufacturers owing to their involvement in military operations in Yemen.

Some key participants operating in the industry are Ceradyne (U.S.); Saint Gobain Ceramics & Plastics (U.S.); ArmorWorks (U.S.); CeramTec (Germany); CoorsTek Inc. (U.S.); Koninklijke Ten Cate BV (Netherlands); M Cubed Technologies(U.S.); Olbo & Mehler (Germany); Safariland LLC (U.S.); and KDH Defense Systems, Inc.(U.S.).

The development of ceramic armors is backed by government support to protect sovereign capabilities. For instance, the Defense & Science Technology Laboratory (DSTL) of the UK Ministry of Defense is working in collaboration with Kennametal Manufacturing UK to increase the ceramic armor capabilities of its defense unit.

Further key findings from the report suggest:

Silicon carbide is widely used in body and defense armor owing to its properties such as high strength and hardness to withstand advanced threats

Armored vehicles are the primary application for ceramic metal composites as they provide enhanced strength and ballistic properties to the vehicle

Increasing trend of providing body armor to first responders across U.S. and European countries is expected to support market growth over the forecast period

Growth of the homeland security segment is driven by lack of government body armor supplies to police personnel in emerging economies such as India and Pakistan



North America dominated the global ceramic armor market, accounting for more than one-third of the total market in terms of revenue in 2016.



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