

Pressure Vessel Composite Materials Market Report by Material (Epoxy Resin, Glass Fiber, Carbon Fiber), Application (CNG Vehicle, Hydrogen Vehicle, Gas Storage), End User (Automotive, Aircraft and Military, Aerospace, Marine, and Others), and Region 2025-2033

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Report description:

The global pressure vessel composite materials market size reached USD 500.0 Million in 2024. Looking forward, IMARC Group expects the market to reach USD 745.0 Million by 2033, exhibiting a growth rate (CAGR) of 4.3% during 2025-2033.

Pressure vessels are containers made of composite materials, such as carbon fiber and epoxy resin, which are used to store liquid propane gas (LPG), compressed natural gas (CNG), renewable natural gas (RNG), and hydrogen gas (H₂). They are lightweight and cost-effective while having a long shelf life compared to their steel-based counterparts. They offer a high strength-to-weight ratio, corrosion resistance, and can be customized to meet specific design requirements. They also provide high strength and durability to withstand harsh environmental conditions. As there is a rise in the utilization of hydrogen and compressed natural gas (CNG) vehicles, the demand for pressure vessel composite materials is rising worldwide.

Pressure Vessel Composite Materials Market Trends:

The growing awareness among the masses about environment-friendly and fuel-efficient transportation solutions around the world represents one of the key factors driving the market. Besides this, there is an increase in the demand for lightweight and high-performance pressure vessels in the aerospace industry. This, along with the growing demand for boilers in various energy generation procedures, is offering a positive market outlook. Moreover, the rising utilization of pressure vessels in the oil and gas industry to conduct physical and chemical processes under high temperatures and pressure is contributing to the growth of the market. In addition, the increasing employment of pressure vessels in the chemical industry to store and transport various chemicals is offering lucrative growth opportunities to industry investors. Apart from this, key market players are extensively

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investing in research and development (R&D) activities to introduce customized pressure vessels, which is positively influencing the market. Additionally, there is a rise in the adoption of supercritical power generation technologies across the globe. This, coupled with the burgeoning petrochemical industry, is bolstering the growth of the market.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global pressure vessel composite materials market report, along with forecasts at the global, regional and country level from 2025-2033. Our report has categorized the market based on material, application and end user.

Breakup by Material:

- Epoxy Resin
- Glass Fiber
- Carbon Fiber

Breakup by Application:

- CNG Vehicle
- Hydrogen Vehicle
- Gas Storage

Breakup by End User:

- Automotive
- Aircraft and Military
- Aerospace
- Marine
- Others

Breakup by Region:

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

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- Spain
- Russia
- Others
- Latin America
- Brazil
- Mexico
- 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 Huntsman Corporation, IHI Corporation (Dai-ichi Life Insurance Company Limited), Larsen & Toubro Ltd, Nippon Steel Corporation, Olin Corporation, Pentair plc, Solvay S.A., Steelhead Composites Inc. and ZOLTEK Corporation (Toray Industries Inc.).

Key Questions Answered in This Report

- 1.What was the size of the global pressure vessel composite materials market in 2024?
- 2.What is the expected growth rate of the global pressure vessel composite materials market during 2025-2033?
- 3.What are the key factors driving the global pressure vessel composite materials market?
- 4.What has been the impact of COVID-19 on the global pressure vessel composite materials market?
- 5.What is the breakup of the global pressure vessel composite materials market based on the material?
- 6.What is the breakup of the global pressure vessel composite materials market based on the application?
- 7.What is the breakup of the global pressure vessel composite materials market based on end user?
- 8.What are the key regions in the global pressure vessel composite materials market?
- 9.Who are the key players/companies in the global pressure vessel composite materials market?

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