

Composites Market Update for February 2025

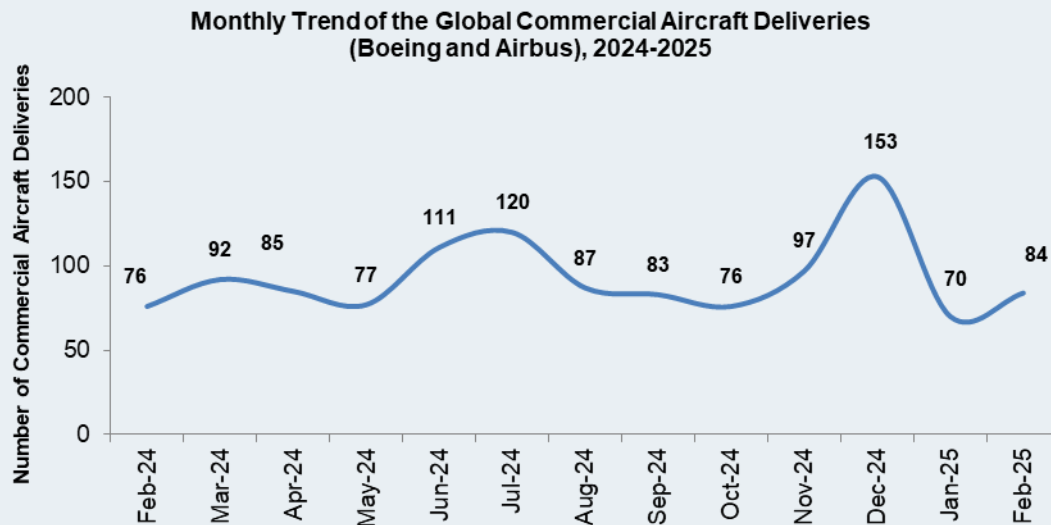
The composites and resin markets experienced continued softness in February, mirroring the sluggish performance seen in January. Market demand remained weak, weighed down by uncertainty and reduced output from key sectors, particularly in infrastructure and residential construction. The bathroom segment saw a notable decline, and the marine sector performed even worse than the previous year, which was already considered a low point. Although most recreational sectors remained flat as compared to January, the RV/van segment was a bright spot, showing a modest year-over-year increase of 3%. In contrast, transportation was down 5% YoY, marine dropped by 20%, and pool and spa applications fell by 10%.

Month-over-month trends largely held steady across recreational applications, with no significant movement in February. However, bathroom-related applications declined noticeably during the same period. The limited number of working days in February further exacerbated the downward momentum, offering little opportunity for recovery. Meanwhile, raw material prices introduced additional pressure on margins. Styrene prices increased through March, and fluctuations were observed in glycols and maleic anhydride. While suppliers initially pushed for firmer pricing, softened demand led to adjustments mid-month, although costs trended upward again toward the end of the period.

Anticipated tariffs and disruptions in cross-border supply chains—particularly from Canada—have raised additional concerns. A significant portion of the U.S. heavy crude supply, approximately 75%, originates from Canada, and rerouted or idled operations have already begun impacting availability. With benzene prices climbing since January, and only partial cost pass-through to styrene so far, further cost increases seem inevitable. As demand begins to recover, these cost pressures are likely to become more pronounced, and end-users will ultimately bear the brunt. Some companies with operations spanning North America are particularly concerned, while others may find competitive advantages if tariffs alter regional supply dynamics.

Aerospace

Commercial aircraft (Boeing and Airbus) deliveries increased from 70 aircraft deliveries in January 2025 to 84 aircraft deliveries in February 2025.



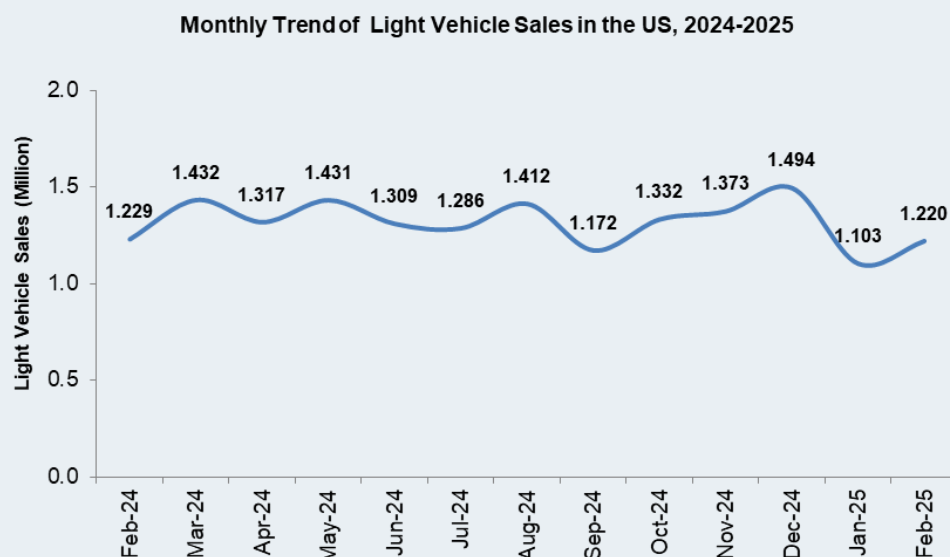
Some of the highlights of February 2025 are as follows:

- **Contract between Exel Composites and FLYING WHALES.** Exel Composites has signed a significant contract with French-Canadian airship manufacturer and operator, FLYING WHALES. Exel will supply around 75 kilometers of pull-wound carbon fiber tubes for the first full structure of an LCA60T airship, the world's largest airship designed to revolutionize cargo transport. The tubes will be made with aeronautical carbon fiber and epoxy resin, manufactured with advanced pull-winding technology at Exel's Joensuu factory in Finland. This continuous process enables the demanding mechanical specifications while ensuring timely high-quality serial production. The LCA60T, a 200-meter-long vertical take-off and landing (VTOL) airship, utilizes helium lifting technology to transport up to sixty tons of cargo.
- **Uavos unveils carbon fiber main landing gear spring.** Unmanned aircraft vehicle (UAV) engineering and manufacturing company Uavos announced the development of its latest main landing gear spring, designed to improve durability, performance and safety for unmanned aircraft. The component is made of carbon fiber prepreg using the inflatable bladder molding method a technique that involves impregnating sheets of fibers with a specialized resin, then placing them inside a mold for the desired part and sealing them. The landing gear spring is built to withstand high-impact landings and harsh operational conditions. It features improved shock absorption, reduced weight, and increased longevity compared to traditional steel components. This newest design aims to enhance aircraft stability during landing and taxiing while reducing an operator's maintenance costs.

- Fraunhofer IGCV develops helicopter door shell using SMV composite.** Fraunhofer Institute for Casting, Composite and Processing Technology IGCV's initiative to innovate lightweight, high-performance inner door shells for next-gen helicopters has resulted in the successful development of a thin-walled, complex-shaped composite door shell with a thickness of just 1.2 millimeters. This development is subsequent to a joint research project between Fraunhofer IGCV and the German Aerospace Center called LIGHT that was funded by the Bavarian Ministry of Economic Affairs, Regional Development and Energy. LIGHT involved the helicopter door design and the developed press mold, provided by Airbus Helicopters.

Automotive

The U.S. light vehicle sales of 1,219,841 units in February 2025 represented a decrease of 0.7% as compared to 1,228,996 units in February 2024.

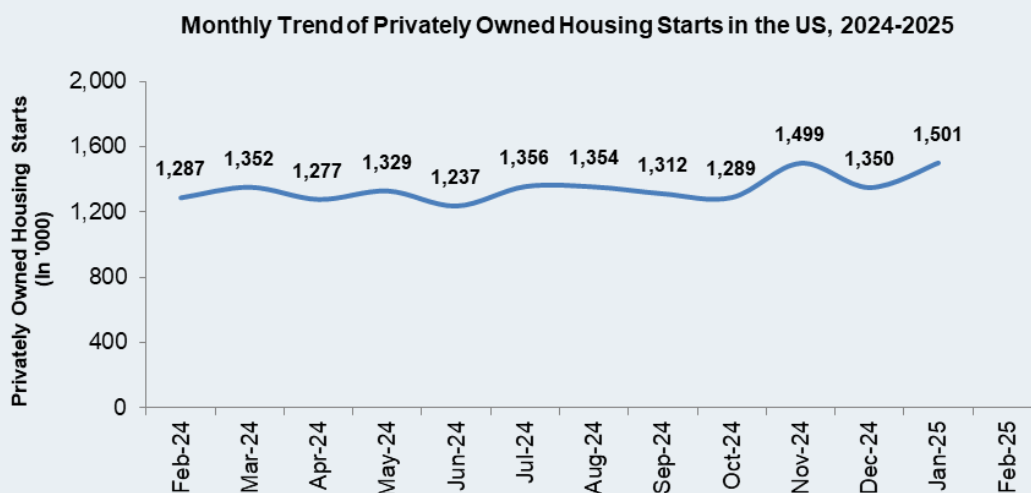


One of the highlights of February 2025 is as follows:

- Rochling and partners iterate thermoplastic composite convertible roof beam.** Rochling Automotive, along with Germany-based consortium partners Mercedes-Benz, Bond Laminates by Envalior and Valmet, have developed a thermoplastic composite rooftop beam for the Mercedes-Benz CLE Cabrio convertible that is less weight than traditional designs and enhances the vehicle's interior aesthetics. Rooftop beams ensure a secure connection where the convertible roof meets the vehicle. Whereas the traditional technical solution is usually made of magnesium, this novel roof beam relies on a glass fiber-reinforced polyamide 6 (PA6) and organosheet fabricated using Rochling's hybrid molding process thermoforming and injection molding in a single step.

Construction

Privately-owned housing starts in February were at a seasonally adjusted annual rate of 1,501,000. This is 11.2% above the revised January estimate of 1,350,000 but is 2.9% below the February 2024 rate of 1,546,000. Single-family housing starts in February were at a rate of 1,108,000; this is 11.4% above the revised January figure of 995,000. The February rate for units in buildings with five units or more was 370,000.



Some of the highlights of February 2025 are as follows:

- Building Composites, Asynt Solutions partner on highway construction improvements.** Building Composites LLC, which manufactures the HyperWall building skin system fiber-reinforced polymer (FRP) panels that are capable of reducing exterior construction times by as much as 33%, announces an exclusive strategic partnership with Asynt Solutions for the manufacture of composite road barriers, a novel traffic safety solution ideal for highway and construction zones. The Ape Barrier, which Asynt says is the only composite barrier system with a pending patent, is a longitudinal traffic barrier that meets MASH TL-3 standards.
- Patrick Industries, Inc. Completes Acquisition of Elkhart Composites, Inc.** Patrick Industries, Inc. has completed the acquisition of Elkhart, Indiana-based Elkhart Composites, Inc., a Thor Industries owned company. Marketing its products under the "Elkboard" brand name, Elkhart Composites manufactures composite products for sidewalls and ceilings, which are durable, lightweight, sustainable alternatives to wood products, for sale to Thor branded companies and other external customers.

Wind Energy

As per the most recent "Energy Infrastructure Update" released by the Office of Energy Projects within the Federal Energy Regulatory Commission, wind energy with the combined installed capacity of 5 units in January 2025 amounted to 1,301 MW. Wind energy, with an aggregated generating capacity of 155.59 GW that contributes 11.77% to the total energy sources, amounted to 1,321.97 GW.

One of the highlights of February 2025 is as follows:

- **TPI Composites celebrates 100,000th wind blade milestone.** Composite wind blade manufacturer TPI Composites Inc. announced on Feb. 24 that it has reached the production of its 100,000th wind blade. Over the last two decades, the company has focused on continuous innovation to meet the evolving needs of its customers and the industry. TPI's advanced manufacturing processes and global footprint have enabled it to play a key role in the expansion of wind energy across the globe. The company's blades are used in wind turbines that generate clean electricity.

Consumer Goods

New orders for manufactured durable goods in February, up two consecutive months, increased \$2.7 billion or 0.9% to \$289.3 billion. This followed a 3.3% January increase. Excluding transportation, new orders increased 0.7%. Excluding defense, new orders increased 0.8%. Transportation equipment, also up two consecutive months, led the increase, \$1.4 billion or 1.5% to \$98.3 billion.

One of the highlights of February 2025 is as follows:

- **Injection molding expertise achieves composites mobility innovation.** Through involvement in three products selected as JEC Innovation Award finalists, Engel GmbH demonstrates the capabilities of its injection molding technologies made for lightweight part construction. Among those on display is the live production of a bicycle handlebar for Canyon Bicycles. The bicycle handlebar is manufactured via a tie-bar-less Engel Victory 180 injection molding machine, which combines fluidmelt and organomelt technologies with continuous fiber-reinforced semi-finished materials. The fluidmelt process enables the production of hollow structures through the injection of water or nitrogen.

Recent Development in Material

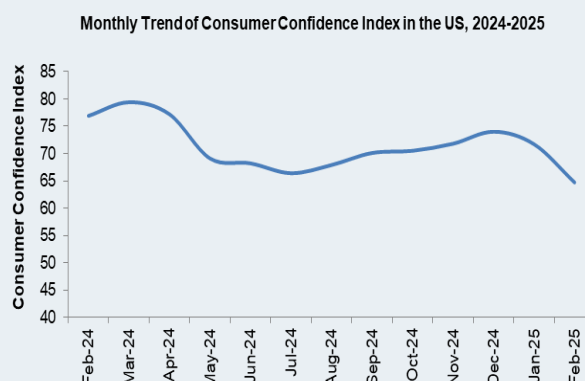
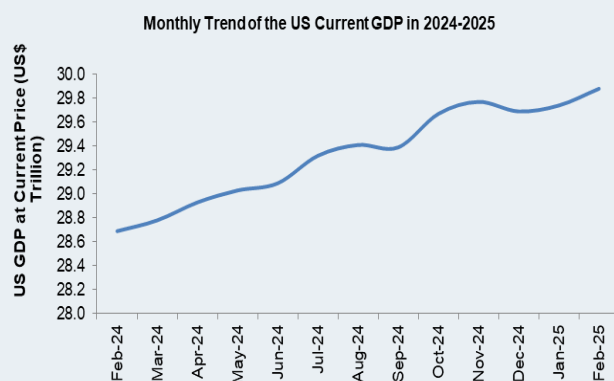
- Polyplastics Launches New Eco-Friendly PLASTRON LFT.** Polyplastics released PLASTRON LFT (Long Fiber Reinforced Thermoplastics) RA627P long cellulose fiber reinforced polypropylene (PP) resin. PLASTRON LFT RA627P is a new grade that is a composite of PP resin and cellulose fiber which is a biomass material. Its main properties are low density and high specific rigidity, though it is also notable for having excellent damping properties due to its large loss coefficient. These properties make it well suited for use in audio components such as speaker diaphragms and for uses such as housings of industrial components that require strong damping. Using of PLASTRON LFT RA627P results in products that are lighter in weight and at the same time eco-friendly, and also makes it possible to design products with excellent damping properties.

The US Economic Overview – February 2025

The US Consumer Confidence Index decreased to 64.7 in February 2025 as compared to 71.7 in January 2025. The GDP at current price of the US increased from US \$29.74 trillion in January 2024 to US \$29.88 trillion in February 2025.

Real gross domestic product (GDP) increased at an annual rate of 2.4% in the fourth quarter of 2024, according to the third estimate. In the third quarter of 2024, real GDP increased 3.1%. The increase in real GDP in the fourth quarter primarily reflected increases in consumer spending and government spending that were partly offset by a decrease in investment. Imports, which are a subtraction in the calculation of GDP, decreased.

The price index for gross domestic purchases increased 2.2% in the fourth quarter of 2024, revised down 0.1% from the previous estimate. The personal consumption expenditures (PCE) price index increased 2.4%, the same as previously estimated. Excluding food and energy prices, the PCE price index increased 2.6%, revised down 0.1% from the previous estimate.



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