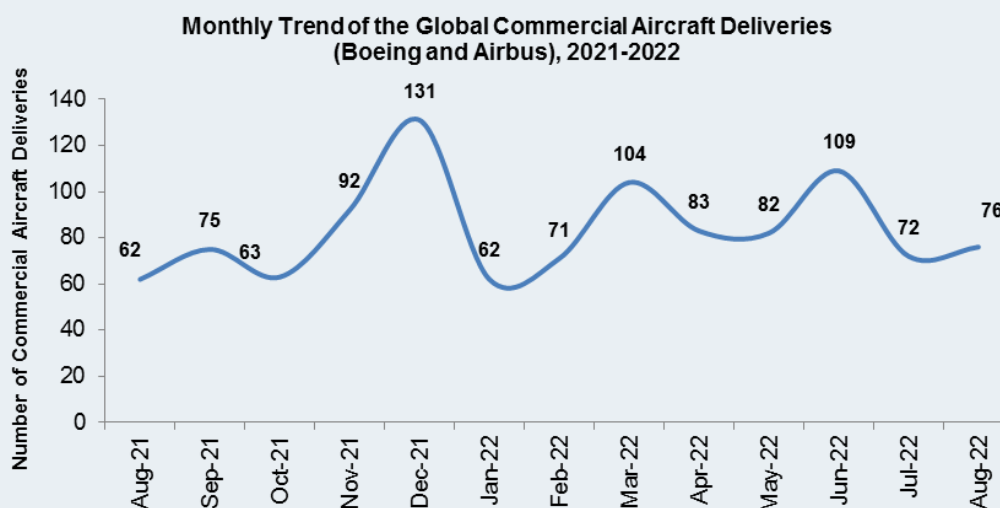


### Composites Market Update for August, 2022

The composites market in August was roughly flat to slightly down (-2%) from a YoY perspective, with daily sales fairly consistent with July. The RV market is slowing, but Marine remains healthy. Infrastructure remains robust, but housing starts have declined slightly due to increasing interest rates. Transportation remained steady, but distribution is down over the past 1-2 months based on inventory rebalancing as a result of aggressive summer buying when access to supplies was a greater challenge. Raw material prices continue to stabilize with certain materials, like styrene, coming down from their highs to a more modest level. We expect this stabilizing trend to continue, which may impact short term sales as consumers may wait to see if prices continue to drop before purchasing. The economic trends and conditions remain the most important short-term external factor impacting the industry. Consumer confidence and the economic outlook will determine whether we have a short dip in the economy or a sustained recession as we look to 2023.

### Aerospace

Commercial aircraft (Boeing and Airbus) deliveries increased from 72 aircraft deliveries in July, 2022, to 76 aircraft deliveries in August, 2022.



One of the highlights of August, 2022, is as follows:

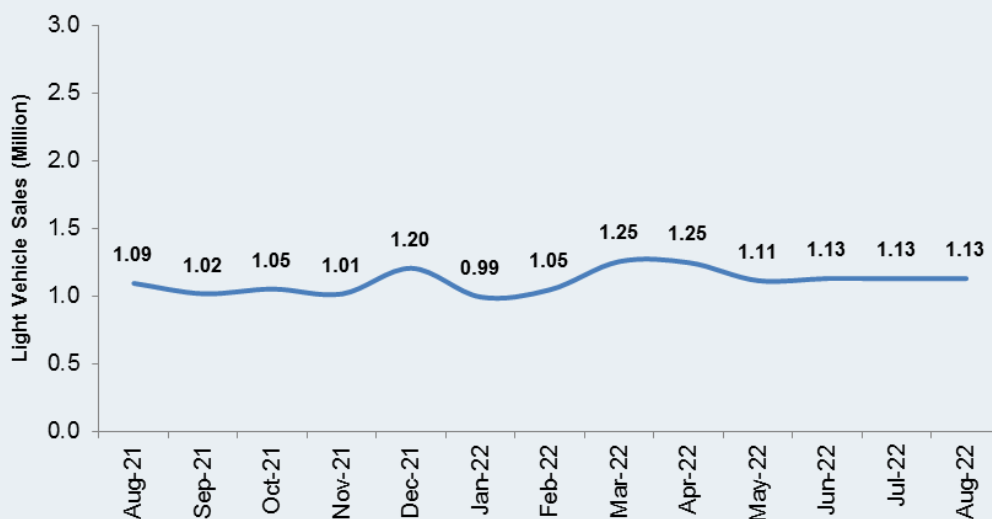
- **Boeing's New Research and Technology Center to Strengthen Partnerships with Japan.** Boeing will strengthen its partnership with Japan by opening a new Boeing Research and Technology (BR&T) center. The facility will focus on sustainability and support a newly expanded cooperation agreement with Japan's Ministry of Economy, Trade and Industry

(METI). Boeing and METI have focus on sustainable aviation fuels (SAF), electric and hydrogen powertrain technologies, and future flight concepts that will promote zero climate impact aviation. That is in addition to exploring electric and hybrid-electric propulsion, batteries, and composite manufacturing that will enable new forms of urban mobility.

### Automotive

The U.S. new vehicle sales of 1,128,154 units in August, 2022, represented an increase of 3% as compared to 1,092,661 units in August, 2021.

Monthly Trend of Light Vehicle Sales in the US, 2021-2022



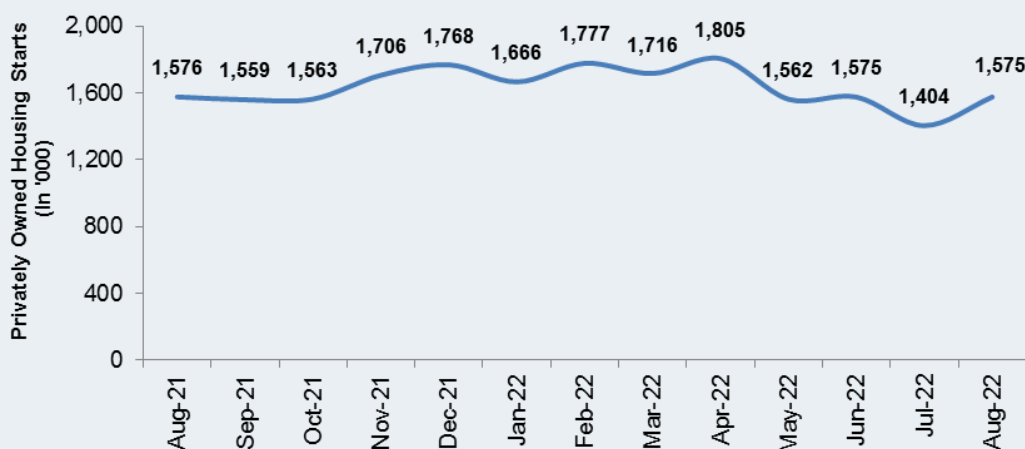
One of the highlights of August, 2022, is as follows:

- Lanxess Composite Advances Electric Vehicle Charging Infrastructure.** According to Lanxess, halogen-free glass fiber-reinforced Durethan BKV20FN01 was used in the manufacture of charging cable connectors, demonstrates high tracking resistance and flame retardance. The key arguments for using our material in this application were its high tracking resistance and high flame retardance based on the halogen-free flame retardant package. It is also easy to process and produces components with a high surface quality. The compound, which is reinforced with 18% short glass fibers by weight, also has good strength, stiffness and toughness. The charging cable connector systems are therefore, not susceptible to mechanical loads, particularly during assembly. Polyamide can also be economically processed in a stable injection molding process.

### Construction

Privately-owned housing starts in August were at a seasonally adjusted annual rate of 1,575,000. This is 12.2% above the revised July estimate of 1,404,000, but is 0.1% below the August 2021 rate of 1,576,000. Single-family housing starts in August were at a rate of 935,000; this is 3.4% above the revised July figure of 904,000. The August rate for units in buildings with five units or more was 621,000.

Monthly Trend of Privately Owned Housing Starts in the US, 2021-2022



One of the highlights of August, 2022, is as follows:

- V2 Composites Introduces a Solution for Shear Connection Failures in Parking Structures.** V2 Composites introduces the new and improved carbon fiber T-Biscuit, a go-to solution that is reported to be more simple and economical for the repair of failed flange-to-flange shear connections of pre-cast double tee beams in concrete parking structures. T-Biscuit sports a new geometry that enables installation in all currently produced double tee beam thicknesses, and accommodates a deeper depression for the backer rod and joint sealant.

### Wind Energy

According to the latest "Energy Infrastructure Update" report from the Federal Energy Regulatory Commission's Office of Energy Projects, the cumulative installed capacity of 30 units during January – July, 2022 was 6,314 MW as compared to 7,726 MW of 46 units during January – July, 2021. With a total installed generating capacity of 141.10 (GW), wind constituted 11.24% of the total installed generating capacity of 1,255.61 (GW) among all energy sources.

### Marine

The US marine industry is anticipated to experience good growth in 2022.

Some highlights of August, 2022, are as follows:

- **Carbon Fiber Composite Hydrofoils to Enable “World’s Fastest” Electric Ferry.** Marine technology company Candela claims that the ferry Candela P-12 Shuttle is world’s fastest, longest-range and most energy-efficient electric ship yet. Candela says the key to the boat’s high speed and long range will be the ferry’s three carbon fiber/epoxy composite wings that extend from under the hull. These active hydrofoils enable the ship to lift itself above the water, decreasing drag.
- **Dura Composites GRP Grating Installed at Shepperton Marina.** Dura Composites anti-slip, mini-mesh glass-reinforced polymer grating has been successfully installed at the Shepperton Marina. The composite grating is strong, durable and the anti-slip surface is tested to withstand even the wettest, oiliest and iciest conditions, Dura Composites contends, thus ensuring a safe and highly durable walkway that enables marina access throughout the year.

### Consumer Goods

New orders for manufactured durable goods in August, down two consecutive months, decreased \$0.6 billion or 0.2% to \$272.7 billion, the U.S. Census Bureau announced today. This decrease followed a 0.1% July decrease. Excluding transportation, new orders increased 0.2%. Excluding defense, new orders decreased 0.9%. Transportation equipment, also down two consecutive months, drove the decrease, \$1.0 billion or 1.1% to \$92.0 billion.

One of the highlights of August, 2022, is as follows:

- **Deckers Innovation Lab Combines Fast, Casual Comfort with Composite Footwear.** The innovation department of Deckers Outdoor Group announced its newest experiment merging comfort with elements of race performance the “fast-casual” KO-Z Sport Low Wool Carbon shoe. To achieve maximum comfort, the innovation team wrapped a carbon fiber plate in wide, upcycled soft EVA foam layers, and then coupled it with Meta-Rocker geometry a Hoka One One proprietary technology that combines a low heel-toe drop and a traditional rounded sole rocker in the midsole, with a refined squaretail heel. This design is said to automatically engage the foot in a “flow” experience, or heel-to-toe motion.

### Recent Development in Materials

- **Ventec Introduces Next-Generation No & Low Flow FR 4.0 Prepreg Material.** Ventec has added to its flex-rigid No Flow / Low Flow prepreg range with the introduction of tec-speed 4.0 (VT-462(L) PP NF/LF), a next-generation no & low flow FR 4.0 prepreg material, that offers high-Tg, low Dk, low loss, and excellent thermal reliability. The IPC-4101E compliant material is designed for the world's most critical industries such as high-reliability military,

aerospace/space, and other ultra-high reliability applications. As such it is particularly suited for harsh environments and all flex-rigid applications with high BPS data rates, high-speed flex-rigid connectors, high-frequency & high-speed applications, satellite communications, navigation systems, and GPS.

### Recent Product Launches in the Composites Market

The following table represents new product launched in the composites market in August, 2022.

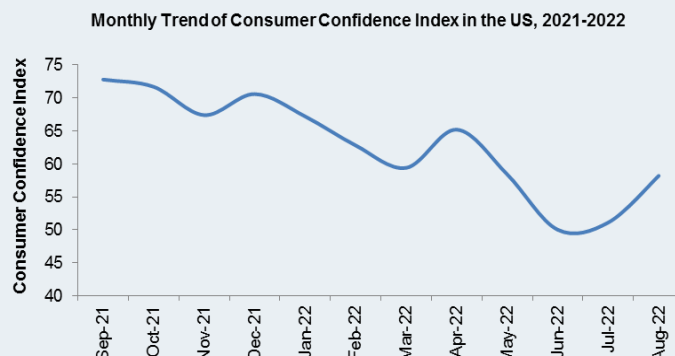
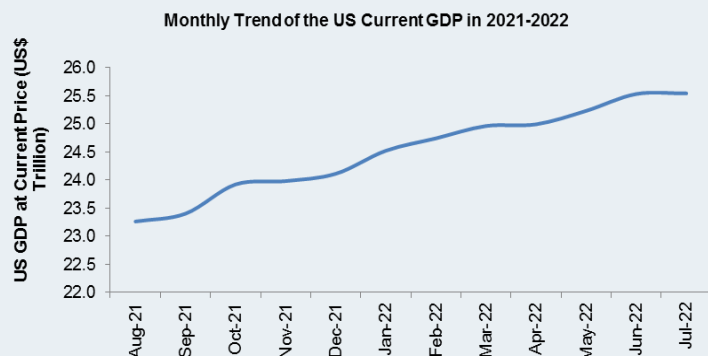
Product	Company Name	Description
NX12	Modmo Technologies	The NX12 is Produced from carbon fiber composite pellets (thermoplastic composite). The NX12 frame is not only lightweight and highly durable but thoroughly recyclable with a mere 90 second frame production cycle. It contains a powerful, long-range, and removable 756WH battery, discreetly housed within its frame. The technologically advanced smart Android handlebar features maps, and monitors key performance data such as speed, battery life, trip distance, total distance travelled, full data access to the Drive System and more, while staying fully connected with GPS tracking, 4G and Bluetooth.

### The US Economic Overview – August, 2022

The US Consumer Confidence Index increased to 58.2 in August, 2022, as compared to 51.1 in July, 2022. The GDP at current price of the US increased from US \$25.53 trillion in June, 2022, to US \$25.54 trillion in July, 2022.

**Real gross domestic product (GDP)** decreased at an annual rate of 0.6% in the second quarter of 2022, according to the "third" estimate. The decrease in real GDP reflected decreases in private inventory investment, residential fixed investment, federal government spending, and state and local government spending that were partly offset by increases in exports and consumer spending. Imports, which are a subtraction in the calculation of GDP, increased.

The price index for gross domestic purchases increased 8.5% in the second quarter, an upward revision of 0.1% point from the previous estimate. The personal consumption expenditures (PCE) price index increased 7.3%, an upward revision of 0.2% point. Excluding food and energy, the PCE price index increased 4.7%, an upward revision of 0.3% point.



**About Lucintel:** Lucintel has been in the business for 15 years and has served thousands of clients, ranging from small, emerging organizations to multinational Fortune 500 companies such as 3M, Ashland, Audi, Dow, GE, General Motors, and Momentive. Lucintel is a growth accelerator firm that helps companies with market entry strategies, growth financing, M&A, market research, and strategic consulting. Let us create a growth roadmap that meets your goals and budget. Visit [www.lucintel.com](http://www.lucintel.com) and contact us today (email: [helpdesk@lucintel.com](mailto:helpdesk@lucintel.com) or call us at 972-636-5056) for a free consultation and we will explain how Lucintel can assist your business.