WASHINGTON (November 11, 2015) – A new report finds that the 14 million light vehicles assembled in the U.S. and Canada in 2014 incorporated finished automotive plastic products valued at over $18.1 billion. Today’s typical lightweight vehicle may contain more than 1,000 plastic parts.

The report, “Plastics and Polymer Composites in Light Vehicles,” also finds companies that make plastic automotive parts in the U.S. directly employ 55,000 people, which in turn helps create an additional 50,000 jobs elsewhere in the economy. Automotive plastic products were produced at nearly 16,000 plants located in 45 states last year.

According to the report by the American Chemistry Council, use of plastics and polymer composites has grown from an average of 20 pounds per car in 1960 to 329 pounds in today’s cars, minivans, pickups, and SUVs. Polymer composites are a combination of plastics and fibers (glass, carbon, aramid, and others) that create an advanced composite matrix with attributes superior to plastics or fibers alone.

Due to their favorable strength-to-weight ratio, it’s estimated that these plastic materials comprise approximately 50 percent of a lightweight vehicle’s volume, but only about 8 percent of the vehicle’s weight.

Many analysts expect the use of lightweight plastics and polymer composites—such as carbon fiber-reinforced plastics—to increase dramatically as automakers seek to reduce vehicle weight to help meet federally mandated fuel efficiency (CAFE) standards. In addition to helping improve fuel efficiency, the use of advanced, lighter materials is helping enhance other vehicle functions, including acceleration, handling, braking, and safety. Furthermore, automakers are pursuing the use of recycled plastics in vehicle designs and increasing recycling rates for all automotive plastics.

“Advances in plastics are making significant contributions to the fuel efficiency, safety, and design of our cars and trucks,” said Steve Russell, vice president of plastics for the American Chemistry Council. “And tough, lightweight plastics will help automakers further reduce energy use and greenhouse gas emissions to meet 2025 CAFE requirements.”
The report describes the growing use of plastics and polymer composites throughout vehicles’ interior and exterior, electrical system, chassis, powertrain, fuel system, and engine.

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