



Plastics in the Automotive Industry: Which Materials Will Be the Winners and Losers?

Background

It is clear that plastics have gained share from traditional materials used in vehicle production such as glass and metals, but what further penetration is possible? How will the penetration of competing plastics, polymer compounds and polymer composites evolve? Which materials will be the winners or the losers?

Objective

The automotive industry is the third most important consuming sector of polymers after packaging and building & construction. Therefore, changes in material usage can have major implications on polymer demand and the financial performance of polymer producers.

This detailed study examines the main plastics used in automotive production and how material usage trends are likely to evolve. This includes:

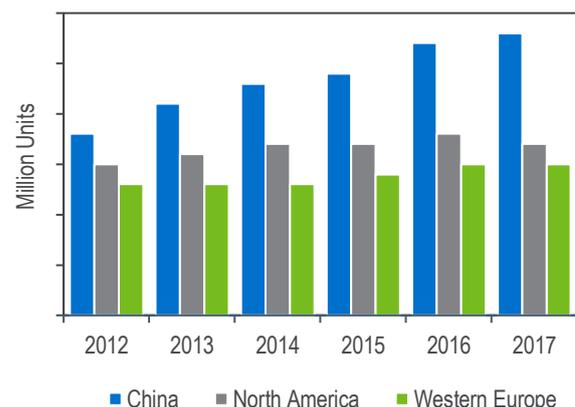
- Vehicle manufacturers' changing strategic priorities, including light-weighting and reducing manufacturing costs
- The emergence of high performance polymer composites, blends, alloys and compounds
- The growing penetration of emerging vehicle technologies (electric, hybrid, flexible fuel and autonomous vehicles etc.)
- Demand from consumers for better aesthetics and the more creative freedom that reinforced carbon fiber and other plastics provide to designers

This report incorporates expertise Nexant has gained over many years examining polymer market trends in the automotive industry as well as the results from a global interview program with automotive suppliers, manufacturers, regulators, and other innovators who will influence material usage in vehicles over the next decade.

What is Included in the Report?

- Identification of the materials used in specific vehicle components and the future trends to manufacture these parts from alternative materials
- A review of the use and market prospects of emerging and existing plastics in vehicle production including:
 - High performance polymer composites
 - New polymer compounds
 - Bio-based engineering plastics
 - Existing polymers for new applications
 - Recycled Plastics in automotives
- Impact of emerging trends on the consumption of different plastics used for automotive applications. Forecasts of plastics consumption through 2025 are provided for the major global regions.
- Explanation of the penetration and implication of alternative power train vehicles, (e.g., electric, hybrid, plug-in hybrid, LPG and autonomous vehicles etc.) on chemicals consumption in the automotive industry. These vehicles use fuels with different chemical compositions and combustion temperatures and therefore impact which materials are most suitable. Electric cars for instance will also contain different components to traditional vehicles and require polymers for battery casings and the greater wire and cable content.

Plastics Demand in Automotive, 2012-2017



Special Reports

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