

# **New Long Fiber Thermoplastic Composite Products for the Automotive Industry**

*Thomas Ebeling, Brian Good, Sandy Vos*

*AZDEL Inc.*

## **Abstract**

Automobile manufacturers and designers are in constant search for material solutions for both interior and exterior parts that improve design freedom, reduce weight, and/or reduce cost while maintaining or improving the part aesthetics. Additional trends such as efforts to reduce environmental impact, new styling, and new comfort features also have significant impact on the material selection as well. Due to the value in the aforementioned areas, the utilization of composite materials continues to expand across a number of these applications. Within the growing trend of composite utilization, thermoplastic fiber reinforced composites represent an important segment, consequently, there have been a number of new technologies deployed in the arena of long-fiber thermoplastic composites; namely long fiber pellets, roll stock “tapes”, and composite sheets.

Specifically to meet the demands of composite sheet applications, a new generation of long-fiber thermoplastic composite products has been developed based on new proprietary formulation technology. These innovative products are characterized by improved processability and improved mechanical performance enabling greater freedom in part design and reduced per-part cost. Also included are new products with reduced environmental impact.