



QPC003E

## **LIGHTER, STRONGER COMPOSITE FROM QUADRANT PLASTIC COMPOSITES FINDS ALL-ROUND USE IN CAR INTERIORS**

### **SymaLITE now used for load-floor / seat back combinations as well as headliners**

LENZBURG, Switzerland – October 2007 – Car makers around the world are looking for new ways to make vehicle interiors more flexible and to reduce overall vehicle weight. Ford's new Galaxy and S-Max MPV (multi-purpose vehicle) are prime examples of this trend. On the one hand, these models can provide very large storage volumes, on the other there is the possibility, when required, to fold out a third row of seats from the load floor. A row of seats is revealed by folding up the floor panel, with the panel itself forming the back. This seating concept, called the FoldFlatSystem (FFS), must fulfill the following requirements:

1. The system must be of such a flat construction, that the load floor is as level as possible when not in use.
2. The load floor with integrated backrest module must be light enough to facilitate operation.
3. The load floor module must be of a sufficient inherent stiffness to withstand forces of up to 1000 N, as part of Ford's static load testing.

In order to meet these high structural requirements, the Tier-1 supplier Centrotec Composites uses SymaLITE from Quadrant Plastic Composites AG for the seat back module's supports. The SymaLITE product range is based on a glass-fibre reinforced, thermoplastic fleece, that can also be supplied as a consolidated composite upon request.

In order to produce moulded parts, the material is first warmed, thereby expanding to many times its original wall thickness and yielding densities as low as 0.2 g/cm<sup>3</sup>. During the subsequent processing stage (by compression moulding), the material can then be either partially or entirely compacted in line with the final component's geometry.

Components made from SymaLite combine low weight with simultaneously high mechanical and acoustic properties.

The grade of SymaLITE used for this application is made from polypropylene containing 55% glass fibres, with an overall area weight of 1800 g/m<sup>2</sup>. Quadrant Plastic Composites supplies Centrotec with the sheet already cut to size and coated with hot melt adhesive. Centrotec forms the panels and applies a fabric covering on both sides in a two-step low-pressure process. A maximum clamping pressure of 5 bar means that low-cost tooling can be used.

“Quadrant Plastic Composites is one of the leaders in this type of high-performance, low-weight composite material,” says Quadrant Plastic Composites automotive interior product manager, Thomas Hofmann. “This new development opens new business opportunities in third-row seat backs for similar vehicle types.”

Elsewhere in auto interiors, SymaLITE is also an ideal material for headliners. It was recently chosen for Chryslers latest Jeep Commander SUV. Quadrant Plastic Composites supplies the material to U.S. moulder JCI. Hofmann says that in this case, Chrysler needed a material that had very good sag properties, as well as mechanicals and acoustics and of course attractive production costs. Quadrant Plastic Composites developed a grade containing 50% glass for the application. It also provided design support and carried out prototype testing.

Further headliner applications include the GM Corvette and the Chrysler Dodge Viper and Hofmann says applications at European car makers are currently in development.

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#### **About Quadrant Plastic Composites**

*Quadrant Plastic Composites is the world's leading manufacturer of glass mat thermoplastic (GMT) composites. The semi-finished sheet form is processed into sophisticated components, primarily for the automotive industry, using large-volume pressing processes; these components satisfy the highest safety standards, as well as featuring low weight compared to materials such as metal.*

*Learn more about Quadrant Plastic Composites at [www.quadrantcomposites.com](http://www.quadrantcomposites.com)*

### **About the Quadrant group**

Quadrant, a global leader in high-performance polymer materials in the form of semi-finished and finished products with locations in 18 countries, generates annual sales of over CHF 800 million. The specialty engineering thermoplastics and composites manufactured and marketed by more than 2'400 employees worldwide are superior in performance to metals and other materials and are used in a growing number of applications, primarily in the capital goods industry. Together with leaders in a wide range of customer markets, Quadrant is continuously developing new areas of application. Thanks to its clear strategic orientation and focus, Quadrant has generated substantial added value for customers and shareholders since it was established in 1996 and is well prepared to continue expanding its market leadership in future.

Learn more about Quadrant at <http://www.quadrantplastics.com>

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**Picture caption:**

Ford Galaxy seat back

(Picture: Quadrant, QPCPR003)



**Picture caption:**

Ford Galaxy seat back

(Picture: Quadrant, QPCPR003)



**Picture caption:**

Headliner, Jeep Commander

(Picture: Quadrant, QPCPR003)



**Picture caption:**

Jeep Commander

(Picture: Quadrant, QPCPR003)