

Solvay launches new rapid cure resin system MTR™ 760 for the manufacture of new BMW M4 GTS hoods

Brussels, March 8, 2016 - Solvay is proud to launch its new rapid cure thermoset resin system MTR™ 760 which BMW selected to manufacture the CFRP hood of its new M4 GTS.

This new resin system was specifically developed to manufacture resin impregnated carbon fiber blanks through processes such as filament winding. It offers very good processing properties with rapid cure, a DMA onset TG of 135°C, superior toughness and it has excellent dynamic loading characteristics. The outstanding surface finish of the resin allows a Class-A paint finish.

In search of an effective CFRP lightweighting solution, MTR™ 760 filament wound prepregs have been selected for this application.

“Solvay developed a new thermoset resin to meet BMW’s technical and commercial requirements for performance and cycle time enabling them to introduce a CFRP hood structure on their new M4 program” said Manfred Duri, Automotive Business Development Manager Germany, of Solvay’s Composite Materials Global Business Unit.

Solvay’s commercial and application engineering team worked very closely with the supply chain C-Con (development, tooling and system supplier) and Läßple (pressing and bonding), from the start of the vehicle program, to ensure that the material and manufacturing process were optimized, from design for manufacture, product development, to automated serial production. This gave the opportunity for short-term adjustments of the resin system while still meeting the project timeline.

“We are proud of our team and our close partnership with Solvay, which enabled the development of this new resin system and the corresponding manufacturing process within only 9 months. All development goals of this CFRP Hood, e.g. dynamic load conditions or Class-A surface have been achieved through a close coordination between C-Con and Solvay’s Technology and Process Engineering teams” said Michael Neuner, General Manager of C-Con GmbH.

“To meet customers’ needs in lightweight material solutions, CFRP has become a major R&D field at Läßple Automotive. With Solvay and C-CON we have two strong partners, with great expertise in their field of serial production processes” said Oliver Wackenhut, Managing Director, Läßple Automotive GmbH.

The press molded hoods are manufactured using a Double Diaphragm Forming process with tailored composite blanks. Diaphragm forming offers multiple advantages; including blank support during the pressing process, which eliminates the need for preforming as well as more cost effective, simplified tooling which is a clear investment benefit. The Double Diaphragm Forming process gave Läßple the opportunity to capitalize on their sheet metal know-how and to apply it to forming CFRP parts.

The films used for this process are proprietary to Solvay and are matched to the resin system to offer the right level of conformability to the tool geometry.

Through this project, Solvay demonstrated its ability to partner with its customers to develop optimum material solutions to continue to increase the affordability of continuous fiber composites for high volume production.

A hood will be on display on Solvay's booth at the upcoming JEC World 8-10 March 2016 in Paris and at the VDI conference and exhibition Plastics in Automotive 9-10 March 2016 in Mannheim.

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Solvay Composite Materials - Solvay's new Global Business Unit Composite Materials is a global provider of technologically advanced lightweighting material solutions that enable our customers in the aerospace, automotive and other demanding industries to design, develop and efficiently manufacture high-quality, high-performance and complex composite structures. Composite Materials has the most extensive product portfolio, including prepregs, resin systems, adhesives and surfacing films, carbon fiber, textiles, tooling and vacuum bagging consumables, thanks to its leadership in advanced materials science, chemistry and application engineering. Solvay Composite Materials combines the former Cytec Aerospace Materials and Industrial Materials businesses

An international chemical and advanced materials company, Solvay assists its customers in innovating, developing and delivering high-value, sustainable products and solutions which consume less energy and reduce CO2 emissions, optimize the use of resources and improve the quality of life. Solvay serves diversified global end markets, including automotive and aerospace, consumer goods and healthcare, energy and environment, electricity and electronics, building and construction as well as industrial applications. Solvay is headquartered in Brussels with about 30,000 employees spread across 53 countries. It generated pro forma net sales of € 12.4 bn in 2015, with 90% made from activities where it ranks among the world's top 3 players. Solvay SA ([SOLB.BE](https://www.solb.be)) is listed on Euronext in Brussels and Paris (Bloomberg: [SOLB.BB](https://www.solb.bb) - Reuters: [SOLB.BR](https://www.solb.br)).

Press Contacts

Claire Michel

Communications Manager
Solvay Composite Materials
claire.michel@solvay.com

Alan Flower

Industrial Media Relations
+32 474 117 091
alan.flower@indmr.com