

HIGH-PERFORMANCE GMTex™ FROM QUADRANT PLASTIC COMPOSITES PROTECTS MERCEDES M- CLASS OFF-ROAD PACKAGE

Under-body shields for M-Class SUVs are a result of transatlantic cooperation

LENZBURG, SWITZERLAND – June, 2007 – As is only fitting for a luxury space utility vehicle, the latest version of the Mercedes-Benz M-Class comes with an optional high-performance under-body shield that not only protects it from stones thrown up during travel over the roughest of terrains, but also helps the vehicle achieve the lowest wind resistance of any off-roader. Further adding to fuel efficiency, the assembly weighs just 7.7 kg; a steel version would weigh around 25 kg. The three-part shield, extending from the engine compartment to the rear axle, also helps reduce interior noise levels and improve corrosion resistance.

Swiss Tier One systems supplier Rieter Automotive Heatshields chose Quadrant Plastic Composites fabric-reinforced GMTex™ glass mat reinforced thermoplastic for the application. The two companies cooperated in the development of the product, with Quadrant Plastic Composites also providing various support services, including prototype testing (bending, falling dart impact, and others). It produces GMTex™ in Lenzburg, Switzerland. Mercedes-Benz makes the M-Class in Tuscaloosa, Alabama. Since Rieter has no GMT processing capability in the USA, moulding of the under-body shield components is done for it by U.S. company Continental Structural Plastics, a specialist in structural plastic components. Rieter produces the final assembly at one of its U.S. operations.

GMTex™ has mechanical properties considerably superior to standard GMTs. This is because in addition to random glass fiber reinforcement, it also contains high-strength GMTex™ fabric, made from commingled glass and polypropylene fibers. The impact strength of GMTex™ is over twice as high as standard GMT, while its specific rigidity is around 75% higher.

The parts are made using flow moulding, a form of compression moulding that uses a tool with shear edges. Holes are cut out afterwards using water jets. Total cycle time is around 40 seconds.

“This development opens up new business opportunities for us in the range of under-body protection systems for SUVs,” says Quadrant Plastic Composites Automotive Product Manager Karl-Heinz Kalmbach. “At the moment a lot of these systems are manufactured in steel. GMTex™ is a much more cost-effective solution.” Kalmbach also notes that the standard under-body shield on the M-Class is made in long fiber reinforced thermoplastics, LFTs, which have poorer mechanical properties than GMTex™. He says around 80% of M-Class customers opt for the high performance version, as part of the vehicle’s Off-Road Pro engineering package.

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

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>

Press contacts:

Quadrant Plastic Composites AG

Karl-Heinz Kalmbach

Tel. + 41 62 885 8322

Email: karlheinz.kalmbach@qplas.com

EMG

Nathalie Chaimbault

Tel. +31 (0)164 317 021

Email: nchaimbault@emg.nl

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Alternatively for very high resolution pictures please contact Nathalie Chaimbault

(nchaimbault@emg.nl, +31 164 317 021)



Photo caption:

Under-body shields made in High-Performance GMTex™ from Quadrant Plastic Composites protects Mercedes off-road special editions.

(Picture Quadrant, QPCPR002)