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Henkel and KraussMaffei develop fast-curing composite matrix resin for the automotive industry

Henkel's know-how in the field of polyurethane-based composite matrix resins and the expertise of KraussMaffei, one of the world's leading makers of manufacturing and processing machinery for plastics, have proven to be a perfect match. The outcome: The curing time of matrix resin Loctite MAX 2 has now been reduced to just one minute. The significant improvement on the original goal of five minutes relates to a performance result achieved for the first time on a high-pressure dosing unit.

The result of the collaboration between **Henkel** and **KraussMaffei Technologies:** A lightweight component in the form of a cover for the central console, made from carbon fibers supplied by **Zoltek** impregnated by **Loctite MAX 2** from Henkel. This cut-back in the curing time is a further breakthrough in the development of composite matrix resins for the manufacture of lightweight components in the automotive industry.

Loctite MAX 2 is a recent Henkel development – a polyurethane-based composite matrix resin that cures significantly faster than the epoxy products usually employed for the resin transfer molding process (RTM). Moreover, due to its low viscosity, Loctite MAX 2 penetrates and impregnates the fiber material significantly more easily and less harshly than competitor solutions, enabling very short injection times to be applied.

Offering low weight combined with high strength, carbon or glass fiber-reinforced composite materials continue to gain in significance for the manufacture of motor vehicle components. Particularly for mass-produced automobiles, resin injection processes such as RTM predominate in the manufacture of these automotive composites. "And now, with Henkel's matrix resin technology competence combined with the high-pressure technology of KraussMaffei, the production of these composites is destined to become even more cost-efficient and reliable," says **Frank Deutschländer,** Global Market Manager Automotive at Henkel AG & Co. KGaA. With its otherwise extensive adhesives portfolio, Henkel is thus able to offer a complete and coherent system for the manufacture and integration of composite components in the automobile.

The primary goal of Henkel's collaboration with KraussMaffei going forward is to achieve further reductions in the manufacturing cycle times of as wide a range of components as possible. "We are confident that, in the near future, we will be able to significantly further develop the high-pressure RTM process through our cooperation with Henkel," says **Erich Fries,** Head of the Composites/Surfaces business unit at KraussMaffei.

Adresse:
http://www.gupta-verlag.com/polyurethanes/news/technology/12160/henkel-and-kraussmaffei-develop-fast-curing-composite-matrix-