BASF scores big at SPE® Automotive Innovation Awards Gala
Two category wins, two finalist placements

WYANDOTTE, MI, November 13, 2009 – Last night, the Society of Plastics Engineers® International (SPE) held its 39th-annual Automotive Innovation Awards Gala at Burton Manor in Livonia, Michigan. More than 50 parts were entered in the competition and BASF was awarded wins in two of the 10 judging categories: Materials and Powertrain.

BASF’s Acrodur® thermosetting acrylic copolymer was a winner in the Materials category. Acrodur, a new class of resin, was used to form a highly loaded, natural-fiber prepreg material that was compression molded into a lower door panel inner by Dräxlmaier Group for BMW’s 7 Series luxury sedan.

The resin matrix is a unique acrylic polymer that is initially thermoplastic, allowing for production of prepreg/semi-finished rollstock or blanks, and then cross-links at temperatures above 120°C to produce a very durable thermoset. The resin’s high wetout of natural fibers and ability to form chemical as well as mechanical bonds to the reinforcement allows for production of composites with very high fiber loadings – 70 percent in this application – yielding lightweight parts with high stiffness in thin walls.

This high-performance, lightweight, cost-effective and green composite saves costs and significantly reduces volatile organic compound (VOC) emissions, and its rapidly renewable natural fiber mat reduces the vehicle’s carbon footprint without sacrificing performance.
Winning the Powertrain category was an oil pan made with BASF’s Ultramid® B43ZG7 OSI “Optimized for Stone Impact” thermoplastic material, which combines a glass-filled polyamide 6 (nylon) with a proprietary impact formulation designed to achieve superior long-term impact performance and limit attack from road salt.

The pan also incorporates a highly engineered rib pattern designed to survive multiple impacts by absorbing and dissipating the energy throughout the pan structure. Benefits compared to conventional metal designs include weight and cost reduction, dent and corrosion resistance, as well as consolidation of parts (including oil sensors and baffles, which are not possible using stamped steel). In addition, it enables a simplified installation and assembly process. Consumers will also benefit from a quieter drive through noise reduction and increased sump capacity that can lead to longer service intervals.

Also unique to the oil pan is the use of an easy-access, patent-pending plastic drain plug – the first of its kind – which features a cam lock-fastening system that can be opened and resealed by hand or with a standard 3/8-inch socket. The drain plug was designed to prevent damage to the pan resulting from excessive torque.

Dana Holding Corporation and BASF developed this state-of-the-art thermoplastic oil pan for the all-new Ford® F-Series® Super Duty pickup truck’s 6.7-liter Powerstroke® diesel engine.

BASF was also named a finalist in both the Safety category for its submission of Gill Industries’ Genus® platform folding headrest restraint and in the Chassis/Hardware category for its innovative Elastollan® TPU load management striker cap (LMSC).

In response to continually changing automotive industry requirements for safety, Gill Industries, together with molder, Sturgis Molded Products, and material supplier
BASF, collaborated on a head restraint designed to meet specific requirements including multi-platform design, flexible installation, light weight, and cost-effectiveness, setting new benchmark standards in performance. Development of the Genus folding headrest restraint was achieved well in advance of the September 2010 mandatory automotive safety standards for rear seats.

The load management striker cap made from Elastollan TPU was developed to enable General Motors to move from an 18-inch wheel-tire package to a 19-inch package on the 2009 Cadillac CTS V-series without added reinforcement to the suspension. The addition of the LMSC results in a 74 percent increase in energy absorption capability versus the jounce bumper alone and ultimately leads to a dramatic decrease in peak shock tower loads.

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BASF Corporation, headquartered in Florham Park, New Jersey, is the North American affiliate of BASF SE, Ludwigshafen, Germany. BASF has more than 15,000 employees in North America, and had sales of approximately $17.5 billion in 2008. For more information about BASF’s North American operations, or to sign up to receive news releases by e-mail, visit www.basf.com/usa.

BASF is the world’s leading chemical company: The Chemical Company. Its portfolio ranges from chemicals, plastics and performance products to agricultural products, fine chemicals and oil and gas. As a reliable partner, BASF helps its customers in virtually all industries to be more successful. With its high-value products and intelligent solutions, BASF plays an important role in finding answers to global challenges such as climate protection, energy efficiency, nutrition and mobility. BASF posted sales of more than €62 billion in 2008 and had approximately 97,000 employees as of the end of the year. Further information on BASF is available on the Internet at www.basf.com.
News Release

Suggested Caption: BASF’s Ultramid® OSI thermoplastic material achieves superior long-term impact performance.

Suggested Caption: Lower inner door panel developed by Dräxlmaier Group for BMW's 7 Series luxury sedans includes BASF's Acrodur® thermosetting acrylic copolymer.

Suggested Caption: Genus® folding headrest restraint sets new benchmark standards in performance.
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Elastollan® is a registered trademark of BASF SE
Acrodur® is a registered trademark of BASF SE
Genus® is a registered trademark of Gill Industries
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Suggested Caption: Elastollan® TPU load management striker cap (LMSC)