

FOR IMMEDIATE RELEASE: (11/21/08)

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SPE® ANNOUNCES WINNERS FOR 38th-ANNUAL AUTOMOTIVE INNOVATION AWARDS COMPETITION

TROY, (DETROIT) MICH. – The 38th-annual **SPE® Automotive Innovation Awards Competition** – the oldest and largest recognition event in the automotive and plastics industries – saw one of the most competitive fields of part nominations in the nearly four decades of the program's history. An unusually large number of finalists was sent forward from the pre-qualification and subsequent two-day first-round judging, making the job of selecting category and Grand Award winners all that much more difficult for the second-round Blue Ribbon Judging Panel. Fortunately, consensus was eventually reached and the winners were announced at SPE's annual **Automotive Innovation Awards Gala** on Nov. 20, a night dedicated to celebrating innovation in automotive plastics and the hardworking teams of automakers and suppliers who make such innovation possible. This year's winners include the following nominations:

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CATEGORY: Body Exterior

● **INTEGRATED ROCKER MOLDING / RUNNING BOARD SYSTEM**

- **OEM:** Ford Motor Co.
- **Model:** Ford Escape® SUV
- **Tier Supplier:** ABC Group
- **Material Suppliers:** Salflex Polymers Ltd.
- **Material:** 30% glass-reinforced PP
- **Process:** Blow molding
- **Description:** For the first time, rocker moldings, end features, and running board/step area are combined in a single blow-molded component that is foam-sealed to the body side for improved craftsmanship, fit, and finish. The component also reduces weight (8.6 lb/3.9 kg), lowers piece-price and assembly costs (\$5 USD/vehicle), provides improved stone-chip resistance, and reduces assembly time.



CATEGORY: Body Interior

● **INTEGRATED FLOOR SHIFTER / FRONT CONSOLE**

- **OEM:** Ford Motor Co.
- **Model:** Ford® Flex® CUV
- **Tier Supplier:** Automotive Component Holdings
- **Material Supplier:** Nova Chemical
- **Material:** Recycled styrene maleic anhydride (SMA) & long-glass PP
- **Process:** Injection Molding
- **Description:** This modular floor console and shifter assembly uses an all plastic (recycled injection molded SMA) structure to support a floor-based shifter and eliminate use of metal bracketry previously used to secure the shifter to the vehicle floor pan. The integrated system simplifies online assembly and improves package space, thus improving stowage and craftsmanship. It also reduces cost (\$7 USD plus assembly labor) and weight (5 lb/2.3 kg) vs. earlier designs.



CATEGORY: Chassis / Hardware / Powertrain

● **OIL PAN MODULE**

- **OEM:** Daimler AG
- **Model:** C Class
- **Tier Supplier:** G. Bruss GmbH
- **Material Supplier:** DuPont Automotive
- **Material:** Glass-Reinforced Nylon 6/6
- **Process:** Injection Molding, Vibration Welding
- **Description:** This is the first modular plastic oil pan module adopted for passenger cars. It integrates an uppershell of diecast aluminum and a multifunctional lower shell injection molded from glass-reinforced nylon 6/6. The oil pan with windage tray and oil deflector, reducing oil vapor around the crankshaft (improving horsepower 5%), lowering air entrapment in the oil, and decreasing friction for longer bearing life. The component is 2.4 lb/1.1 kg lighter and 20-25% less costly than an entirely aluminium design and use of integrated oil baffles improves flow and reduces sloshing of oil.



CATEGORY: Environmental

● **SOY FOAM AUTOMOTIVE SEAT CUSHIONS**

- **OEM:** Ford Motor Co.
- **Model:** Ford Mustang® Sports Car
- **Tier Supplier:** Lear Corp.
- **Material Supplier:** Lear Corp.
- **Material:** Urethane Foam from Soy Polyol
- **Process:** Not Stated
- **Description:** This is the first use of soy-based polyol to formulate flexible polyurethane foam for commercial automotive seat backs and cushions. By replacing up to 25% of the petroleum-derived polyol in typical urethane foam, a more sustainable material is created, CO₂ emissions are reduced, no tooling changes are required, and cost is neutral.



CATEGORY: Materials

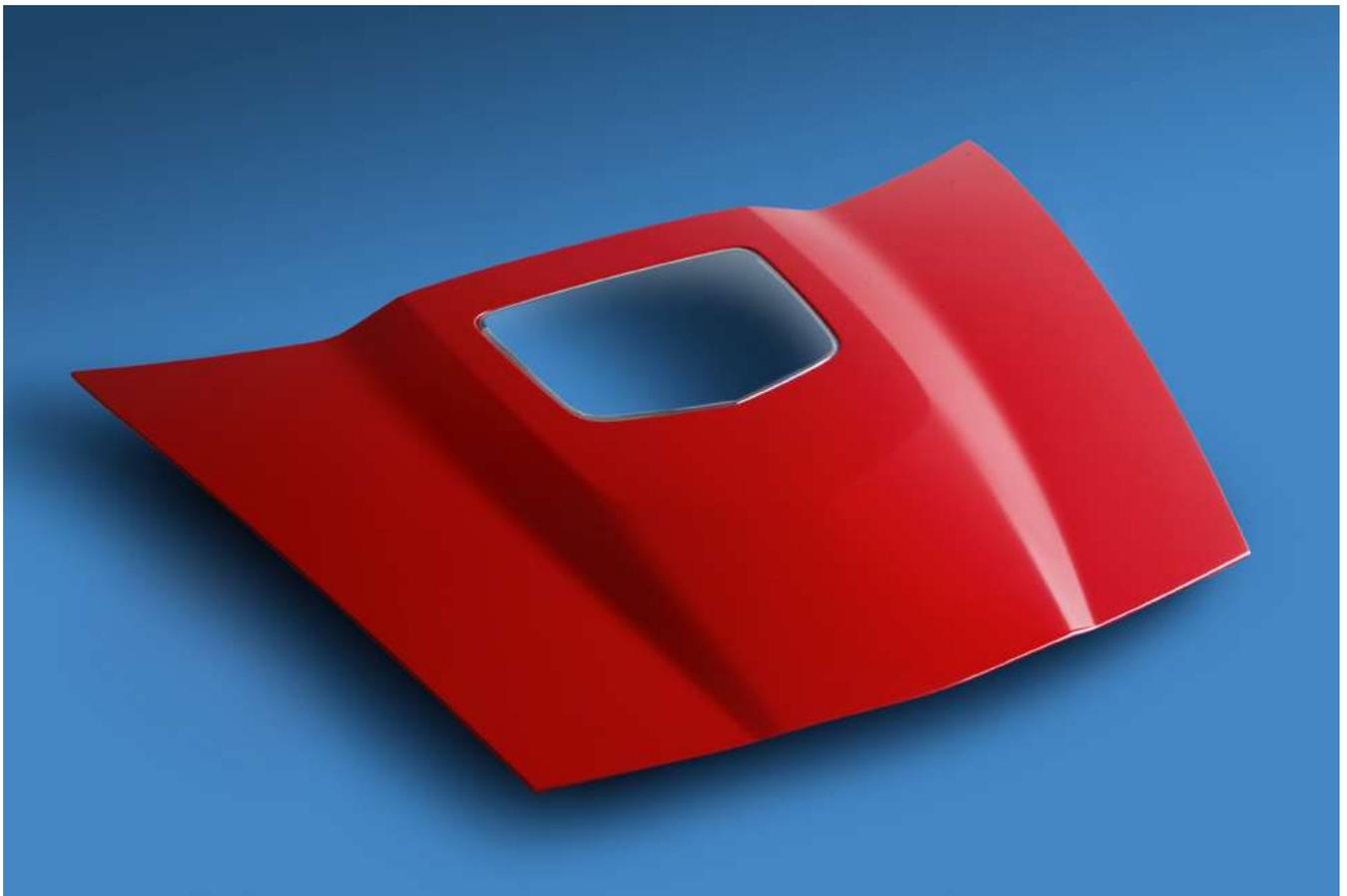
● **TPE FOR SLUSH MOLDING OF IP SKINS**

- **OEM:** General Motors Corp.
- **Model:** Saab® 9-7X SUV
- **Tier Supplier:** Inteva Products
- **Material Supplier:** Inteva Products
- **Material:** TPO/TPE
- **Process:** Slush Molding
- **Description:** This patented application represents the first use of a TPO/TPE slush-molded IP manufactured in North America. The low-cost polyolefin-blend material for thin skins is produced on the same equipment as the vinyl and urethane it replaces while providing equivalent or better performance at 20% lower weight and without VOC emissions or fogging. A unique additive imparts high powder-packing density and superior powder flow.



CATEGORY: Performance & Customization

- **HOOD ASSEMBLY WITH DUAL-WEAVE CARBON FIBER COMPOSITE**
 - **OEM:** General Motors Corp.
 - **Model:** Chevrolet® Corvette® ZR1 Sports Car
 - **Tier Supplier:** Plasan Carbon Composites
 - **Material Suppliers:** ETS & ACG
 - **Material:** Epoxy/Carbon Fiber Advanced Composite
 - **Process:** Autoclave/Vacuum Bagged/Hand-Layup Prepreg
 - **Description:** This unique signature hood for was designed for high visual impact by using the auto industry's first see-through, bonded polycarbonate "window" and special stabilized, fully exposed, visible carbon fiber weave (meeting Class A-underside requirements) on the underside of the hood. The assembly also offers significant mass reduction vs. SMC or metal, and meets FMVSS frontal crash requirements.



CATEGORY: Process / Assembly / Enabling Technologies

● **TWIN-SHEET BLOW-MOLDED FUEL SYSTEM**

- **OEM:** BMW AG
- **Model:** BMW® 7 Series Sedans
- **Tier Supplier:** Inergy Automotive Systems & Continental
- **Material Supplier:** LyondellBasell, Kurrary, Mitsui, & Ticona
- **Material:** High-Density Polyethylene (HDPE)
- **Process:** Twin-Sheet Blow Molding
- **Description:** Twin-sheet blow molding offers the advantages of an extrusion blow-molded fuel system with the design flexibility of a half-shell process. Sheets extrude between a central core and the mold. Core actions attach the components during initial sheet forming. The empty core is withdrawn and the mold is closed to join the formed sheets. Fuel tanks formed via this process meet the strictest PZEV emissions requirements, while also providing higher tank capacity, lower emissions, weight and cost reductions, and elimination of post-mold operations.



CATEGORY: Safety

● **POLYSTYRENE FOAM FOR HEAD-IMPACT PROTECTION**

- **OEM:** Ford Motor Co.
- **Model:** Ford Focus® Compact Car
- **Tier Supplier:** Grupo Antolin North America
- **Material Supplier:** Dow Automotive
- **Material:** Polystyrene Foam Sheet
- **Process:** Wire-Cut Foam Blocks
- **Description:** This was the best-in-class, low-cost energy-absorption (EA) countermeasure based on zero tooling, piece price, and time to market. Foamed styrene is extruded into blocks and then wire cut into complex shapes, providing significant weight (25% lighter), cost, and timing benefits vs. competitive products.



SPE Announces 2008 Innovation Awards Winners
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The **Grand Award** – SPE’s highest honor at this event and the nomination considered to be the *most innovative plastics application of the year* by the Blue Ribbon Judges – was the Twin-Sheet Blow-Molded Fuel System by BMW AG, which also won the Process / Assembly / Enabling Technologies Category.

Commenting on the nominations pool for this year’s competition, **Automotive Innovation Awards** program chair, Maria Ciliberti of Ticona said, “The unique parts we saw in this year’s competition were bright spots in a year of uncertainty. The 2008 nominees provide us with confidence that innovation and creativity are as much alive today as they were in the past. What you see are numerous innovations that are truly the “*First-Time Ever Implemented*” applications, many of which resulted in trademarked vehicle options; process, design and material patents; and licensed rights of practice. The **Automotive Innovation Award Gala**, in keeping with this year’s program theme, *Plastics: Vision 20/20*, is packed with ideas on how OEMs can meet the new, corporate-average fuel economy (CAFE) standard of 35 mpg / 15 km/liter by the year 2020 without sacrificing safety, aesthetics, cost-competitiveness, or manufacturing efficiencies. It has become an SPE Automotive Division annual tradition to honor the people, parts, and innovation that make plastics the *material of choice* in automotive and ground transportation applications. The **Automotive Innovation Awards Program** also makes it possible for SPE to support and encourage current and future engineers, designers, materials specialists, and scientists as they seek to advance transportation technologies in the 21st Century.”

The mission of SPE International is to promote scientific and engineering knowledge relating to plastics worldwide and to educate industry, academia, and the public about these advances. SPE’s Automotive Division is active in educating, promoting, recognizing, and communicating technical accomplishments for all phases of plastics and plastic based-composite developments in the global transportation industry. Topic areas include applications, materials, processing, equipment, tooling, design, and development.

For more information about the **Automotive Innovation Awards Competition and Gala** or to download nomination forms and rules, visit the SPE Automotive Division’s website at www.speautomotive.com/inno.htm , or contact the group at +1.248.244.8993, or write SPE Automotive Division, 1800 Crooks Road, Suite A, Troy, MI 48084, USA.

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