



Momentive Specialty Chemicals Carbon Fiber Epoxy Door Structure Wins “People’s Choice” Award at ACCE

October 6, 2014

COLUMBUS, Ohio - (October 6, 2014) - Momentive Specialty Chemicals Inc. (“MSC”) won the “People’s Choice” Award for the “Most Innovative Composite Part” at the annual Society of Plastics Engineers Automotive Composites Conference & Exhibition (ACCE) last month in Novi, Michigan. The lightweight carbon fiber epoxy door structure submitted by MSC was singled out by vote of conference attendees.

Judging for the competition was based on the impact and trendsetting features of each application, including construction materials, processing methods, assembly methods, and other technologies that made the application possible. Design benefits, weight and cost reduction, parts consolidation, functional integration, and improved performance were also taken into consideration.

The winning component was a light-weight, carbon fiber epoxy door and window frame profile produced by Benteler-SGL for 2013 and later Porsche 911 GT3 Cup coupes. The composite was manufactured by high pressure resin transfer molding (HP-RTM) using MSC’s EPIKOTETM 04695-1/EPIKURETM 05357 epoxy resin system, carbon fiber (Sigrafil® type C40 supplied by SGL Group) and polyester fiber. The component’s Class A surface was finished in the body color.

Innovative features of this part include a simplified, integrated 2-piece design with a single structural inner piece incorporating the header, and a Class A outer panel. The door is a light-weight, trimmed body structure weighting 5.5 kg, compared to 15.0 kg for the standard series door. The raw body of the door weights 4.0 kg and the polycarbonate window and paint weight 1.5 kg. The inner and outer shells are manufactured via HP-RTM, and the outer shell is designed as a “micro-sandwich” to achieve the requisite buckling strength and performance at the minimum weight.

Design benefits of this MSC epoxy resin composite part are: a greater than 60% weight reduction, compared with metal; lower vehicle center of gravity; Class A appearance; and short cycle-time production. The HP-RTM process is set up in automated steps, accommodating build rates from low volume (500 pieces/year) to high volume (up to 100,000 pieces/year) with a fully automated process line.

About Momentive Specialty Chemicals Inc.

Based in Columbus, Ohio, Momentive Specialty Chemicals Inc. is the global leader in thermoset resins. Momentive Specialty Chemicals Inc. serves the global wood and industrial markets through a broad range of thermoset technologies, specialty products and technical support for customers in a diverse range of applications and industries. Momentive Specialty Chemicals is controlled by investment funds affiliated with Apollo Global Management, LLC. Additional information about Momentive Specialty Chemicals and its products is available at www.momentive.com.

Contact:
Cedric Ball
Momentive Specialty Chemicals
cedric.ball@momentive.com
(614-225-2076)



Assembled door body of carbon fiber composite made with Momentive Specialty Chemicals epoxy resin system