

FOR IMMEDIATE RELEASE

## 3M Introduces New Generation of Filament Winding Resin Systems

*Building off 3M™ Matrix Resin platform, new product offers wide range of application possibilities*

**ST. PAUL, Minn.** – March 10, 2011 – 3M announces the introduction of **3M™ Matrix Resins for Filament Winding of Carbon Fiber Composites**, a new generation of filament winding resin systems for stronger, lighter, more durable composites.

“These new matrix resins will help industries redefine how long pressure vessels last, how light they are, and how they are designed,” said Vic Genco, General Manager, 3M Engineered Products and Solutions. “The technology has applications for companies in a multitude of industries, including aerospace, manufacturing, transportation, fleet, and more. 3M’s new system can help reduce material usage, improve strength and allow a longer life for products.”

As the resin in a fiber-reinforced pressure vessel, the new product has demonstrated groundbreaking improvements. In third-party testing performed by HyPerComp Engineering (HEI), pressure vessels made with 3M Matrix Resin were compared with pressure vessels made with traditional Bis-A epoxy. The 3M vessels provided more than a six percent increase in fiber delivered strength, a 30 percent increase in burst pressure after impact, and a 55 percent average increase in fatigue life.

“We are extremely excited by the results of the 3M resin in pressure vessel testing, as it is seldom that we see performance enhancements to the extent that have been demonstrated by this product,” said James Patterson, President, HyPerComp Engineering, Inc. “Equally remarkable is the fact that no matter the parameter explored – ultimate burst performance, cycle performance or robustness – the resin resulted in significant increased performance over baseline materials.”

In addition to lighter weights, and improved strength and longevity, 3M Matrix Resin for Filament Winding also has improved scuff resistance and up to a 36 percent reduced exotherm, enabling the possibility of curing thicker parts. With seemingly limitless applications, the new product could deliver benefits for manufacturing rollers, drive shafts, rocket motor casings, launch tubes, deep water oil & gas umbilicals, boat masts, aircraft structural tubes and struts, and more. The resin offers particularly strong promise in the area of transportation, where pressure vessels for natural gas and hydrogen vehicles can benefit from extended life and improved fuel efficiency through lower weights that the resin allows.

“I’ve been in this business for 30 years and I’ve never seen a step change in the resin technology,” continued Patterson. “3M’s resin changes that and could very well revolutionize the industry.”

The product is based on the existing 3M™ Matrix Resin platform, a proprietary resin technology that enables the production of stronger, lighter, and more durable composites. With this technology, manufacturers can avoid the traditional tradeoff between toughness/flexibility and stiffness / hardness. The resin helps improve performance properties on both ends of the scale.

For more information about new 3M Matrix Resins for Filament Winding, call 800-362-3550 or visit [www.3M.com/matrixresin](http://www.3M.com/matrixresin). This product is offered by 3M Engineered Products and Solutions, a department within the 3M Industrial Adhesives and Tapes Division.

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***About 3M***

*3M captures the spark of new ideas and transforms them into thousands of ingenious products. Our culture of creative collaboration inspires a never-ending stream of powerful technologies that make life better. 3M is the innovation company that never stops inventing. With \$27 billion in sales, 3M employs about 80,000 people worldwide and has operations in more than 65 countries. For more information, visit [www.3M.com](http://www.3M.com) or follow @3MNews on Twitter.*

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