



PPG receives DOE funding to develop AGILON silica for non-tread tire components

To present background and research parameters at Tire Technology Expo 2017

PITTSBURGH, Feb. 7, 2017 – PPG (NYSE:PPG) announced that the U.S. Department of Energy (DOE) will provide funding to support a \$1.14 million project to develop new silica-based performance fillers for non-tread components that improve the fuel efficiency and performance of tires. Research and development work for the project will be completed at PPG’s Monroeville, Pennsylvania, facility.

Using proprietary AGILON® performance silica technology, PPG will develop reinforcing fillers for non-tread tire compounds, which can account for up to 50 percent of the fuel-efficiency impact of a tire. The objective of the DOE project is to enable a 2 percent increase in the fuel efficiency of tires, with an initial focus on one non-tread component: the sidewall. The goal is to reduce energy loss through the sidewall while maintaining or improving resistance to forces such as cracking, tearing and abrasion that degrade the tire. Another key objective will be to understand, maintain and potentially improve the aging performance of tires as measured by crack growth resistance in an ozone environment.

“Our customers have made considerable progress in recent years using *Agilon* silica to improve the rolling resistance of tires, which helps increase vehicle fuel efficiency,” explained Jim Faller, PPG commercial director, silica products. “This new project has the support of multiple major tire manufacturers. Based on their experiences with *Agilon* silica, they understand the potential this technology platform has for optimizing the performance of sidewalls and other non-tread components.”

Tim Okel, PPG senior research associate, silica products, will review the test results that enabled PPG to obtain the DOE funding at Tire Technology Expo 2017 in Hannover, Germany. The presentation, which is titled “Silica Morphology and Functionality: Enabling Environmentally-Friendly Sidewall Performance,” also will outline the project’s objectives, test protocols and potential impact. It is scheduled for Feb. 15 at 11:50 a.m. Central European Time.

DOE funding for the PPG project is provided through the Office of Energy Efficiency and Renewable Energy’s Vehicle Technologies Office. This project is one of 35 that will collectively receive \$57 million for the development and deployment of cutting-edge vehicle technologies, including several initiatives to reduce carbon emissions and petroleum consumption in passenger cars and light trucks.

Agilon performance silica is a high-value technology platform of chemically-modified precipitated silica that can improve product performance. When used in tire treads, it improves vehicle fuel efficiency, traction and treadwear by as much as 5 to 10 percent. *Agilon* performance silica also provides environmental and manufacturing benefits by improving throughput and reducing capital expenditures, energy usage and volatile organic compound (VOC) emissions.

PPG pioneered synthetic precipitated silica products, becoming one of the first manufacturers to bring them to the marketplace in the 1930s. Today, PPG’s silica products group is a global technology leader in the manufacture of precipitated silica products for use as reinforcing fillers in tire, industrial, footwear and silicone rubber applications; as microporous fillers in battery-separator applications; as flattening and thickening agents in coatings, adhesives and sealants; and as anti-caking, free-flow and carrier agents in food, feed and industrial applications.

As part of PPG's specialty coatings and materials business, the silica products group serves customers through a global network of manufacturing, research and technical-support facilities. For more information about PPG silica products, visit www.ppgsilica.com.

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At PPG (NYSE:PPG), we work every day to develop and deliver the paints, coatings and materials that our customers have trusted for more than 130 years. Through dedication and creativity, we solve our customers' biggest challenges, collaborating closely to find the right path forward. With headquarters in Pittsburgh, we operate and innovate in more than 70 countries and reported net sales of \$14.8 billion in 2016. We serve customers in construction, consumer products, industrial and transportation markets and aftermarkets. To learn more, visit www.ppg.com.

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