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Evonik partners with Greene, Tweed to develop High-Temperature Material Platform

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Evonik Industries has partnered with Greene, Tweed to develop a new engineering polymer that surpasses the performance of existing PAEK materials in high temperatures and extreme environments. Through joint collaboration, Evonik combined its expertise in materials development with Greene, Tweed's proficiency in manufacturing custom polymeric components for demanding applications. The outcome is a material platform with significantly improved mechanical properties above 350°F (175°C) and 15,000 psi, with chemical resistance comparable to PEEK.

Built on the Evonik VESTAKEEP® platform, this new material enhances creep and extrusion resistance over existing thermoplastics. In Dynamic Mechanical Analysis, it exhibited superior mechanical property retention at temperatures from 175°C (350°F) – 315°C (600° F). In extrusion testing at 35,000 psi and 290°C (555°F), it outperformed filled and un-filled PAEK polymers. The result is greater reliability of essential components in extreme, high-temperature applications.

“Greene, Tweed has excellent insights into the future needs and challenges faced by their customers and ingenious ideas on how to tackle them. ”, says Sanjeev Taneja, Vice President High Temperature Polymers of Evonik. And Mike Brewer, Vice President Business Development Greene, Tweed, adds: “Evonik has the innovative strength to push new ideas, and the competency to realize them. Thus, we complement each other very well.”

Evonik and Greene, Tweed share a critical focus on innovative, differentiated products. By forming a strategic partnership, they

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have entered into collaborative development projects that enable innovation at every step of the supply chain.

Image Caption:

Comparison of Standard PAEK (left) vs. new material platform based on VESTAKEEP® PEEK (right):

Single-pin connectors tested up to a temperature of 220°C (428 F) and a pressure of 207 MPa (30 ksi).



Corporate information Greene, Tweed

Greene, Tweed leverages expertise in a variety of markets and products to give customers the most innovative solutions to meet performance challenges and reduce total cost of operation. With fully qualified engineering, sales and support personnel located throughout the Americas, Europe and Asia, Greene, Tweed delivers solutions to individual customer applications on a global scope. Greene, Tweed products are sold and distributed worldwide. For additional information, contact Greene, Tweed at +1.215.256.9521 or visit our website at www.gtweed.com

Company information Evonik

Evonik, the creative industrial group from Germany, is one of the world leaders in specialty chemicals. Profitable growth and a sustained increase in the value of the company form the heart of Evonik's corporate strategy. Its activities focus on the key megatrends health, nutrition, resource efficiency and globalization. Evonik benefits specifically from its innovative prowess and integrated technology platforms.

Evonik is active in over 100 countries around the world. In fiscal 2012 more than 33,000 employees generated sales of around €13.4 billion and an operating profit (adjusted EBITDA) of about €2.4 billion (excluding Real Estate in both cases).

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