

Impulses for lightweight materials – Evonik to present Innovations for efficient composites at JEC World in Paris

- The specialty-chemicals group will showcase new material-system solutions and more efficient manufacturing processes at the world's leading composites show
- Strategic research for composites significantly intensified since 2013

Even though composites have become practically indispensable in lightweight design, there are still major challenges with respect to their large series production. That is why an interdisciplinary team at Evonik has spent three years working on, and coming up with, viable and compelling solutions. The specialty-chemicals company will now present the results of this development work alongside its portfolio of established products at the coming JEC World, the leading tradeshow for composites, in Paris from **March 8 to 10**.

Since the establishment of a project house in 2013 in which expertise from various operative units throughout the Group was converged under one roof, Evonik's strategic innovation unit, Creavis, has considerably intensified research and development activities on composites. "We have committed and also further expanded our existing expertise along the entire value chain to numerous projects in this field," says Dr. Sandra Reemers, head of the Composites Project House. Those projects have seen the company make good progress, most notably on the development of new material-system solutions and more efficient manufacturing processes. The results will now be presented at the JEC World in a premier showing to the trade public at large.

Addressing one of the biggest problems to date—namely the economic efficiency of the large-scale production of complex molded parts—the project-house team's display will include the presentation of its newly developed PulPress technique, which now enables the automated and consistent manufacture of sandwich-profile components measuring up to 1.2 meters in length, with practically no waste produced. The technique uses Evonik's ROHACELL® high-performance structural foam, a lightweight, solid material already used effectively in composites.

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Beyond that the project house has developed a new material class for the manufacture of prepregs (pre-impregnated fibre materials and fabrics). It is easier to work with than the conventionally used polymer components in fiber composites and it endows the finished component with excellent mechanical properties. This new class of material is called thermally switchable hybrid polymers and combines the beneficial properties of thermosetting polymers (excellent mechanical, thermal, and chemical stability) with those of thermoplastic polymers (quick and easy to use).

Aside from these two areas of development, the project house will also be displaying innovations it has come up with for flame-retardant composites, FRP metal hybrid materials, thermoplastic UD tapes, and composite surfaces. “Developments of this kind,” says Dr. Sandra Reemers, “are important for the automotive and aerospace industries, for the wind-energy sector, and for the oil and gas extraction sector. Evonik’s existing product portfolio and the fact that it works hand in hand with its customers, means we have very specific insight into the demands of the market, today and going forward. And our innovation activities are resolutely geared to meet those demands.”

Evonik experts look forward to meeting with you at JEC World in Paris from March 8 to 10, 2016.

You will find Evonik at

- Stand H44 in Hall 5A and
- at Auto Planet

Company information

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 of 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 year 2014, more than 33,000 employees generated sales of around €12.9 billion and an operating profit (adjusted EBITDA) of some €1.9 billion.

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