

## Evonik at CCE 2016: presents creative solutions for the composites industry

August 31, 2016

- CCE will be held at Shanghai World Expo Exhibition & Convention Centre Aug 31–Sep 2, 2016. The Evonik Booth is located at Booth 502, Hall 1.
- Composites Project House is dedicated to research and developing the the products and processes for tomorrow's world

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A growing number of challenges presented by renewable energy, efficient resource management and ecological aspects can only be mastered now and in the future by using lightweight construction. Fiber-reinforced composites will play a major role in this regard as one of the key technologies for the 21st century.

Evonik Industries manufactures a range of products that can be found in almost all components of fiber-reinforced composites. We supply core materials for sandwich construction, thermoplastic and thermosetting resin matrices, as well as the essential components for matrices such as crosslinkers, catalysts, impact strength modifiers or processing and process additives. Some of these products are used in sizings for glass or carbon fibers, and in adhesives for joining fiber-reinforced composites. Our experts in fiber-reinforced composites think “systems,” not “products.” According to the philosophy: when you work with us, you have the support of the entire team of specialists at Evonik. In short, you talk to one, you talk to all.

From August 31 to September 2, Evonik will present its innovative products and solutions developed in close collaboration with customers at China Composites Expo 2016.

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### Examples of innovative solutions at CCE 2016

**ROHACELL®:** For more than 40 years, Evonik's ROHACELL® structural foam has been offering the aerospace and automotive industries, medical technology, and other markets boundless possibilities for lightweight construction of parts or products made from high-performance composites. In such applications ROHACELL®, which is based on polymethacrylimide (PMI), is used as a sandwich core structure, for lightweight design but with excellent strength.

**VESTAMIN®:** Aliphatic diamines from the VESTAMIN® range are industry-standard crosslinkers for high-performance epoxy systems. Typical applications include industrial floorings, marine and anticorrosive paints. Also, high-performance composites are a major field of application. All major processing fields like Resin-Transfer-Molding (RTM), wet-pressing and also pultrusion are covered. Epoxy coatings are used as primers and intermediate layers because they offer outstanding mechanical and chemical resistance. They are extremely durable and have excellent adhesion to a variety of substrates.

**NANOPOX®:** Evonik is the leading manufacturer of surface modified silica nanoparticles in epoxy resins. Using NANOPOX® the performance of fiber-reinforced composites parts can be improved significantly: modulus, strength and compressive strength as well as toughness are increased. The fatigue performance is improved significantly. And due to the small particle size of 20 nm viscosity is not increased. Furthermore even close meshed fabrics are penetrated by the particles. This makes NANOPOX® suitable for all manufacturing processes like prepregging, filament winding, infusion or RTM.

### Committed to sustainability and research

The dedication of Evonik toward fiberreinforced composites is proven by the establishment of the Composites Project House, a

highly specialized research center. Inside this think tank, scientists are working close to the market on the products and processes for tomorrow's world where manufacturing fiber-reinforced composites will play a significant role. Interdisciplinary cooperation between chemists, engineers and technicians from different sectors and industries fosters a creative climate where highly efficient, energy-saving manufacturing processes are being developed to support the use of renewable raw materials in industry.

Recycling carbon fibers from components or semi-finished products is another process that Evonik researchers are working on as an important issue affecting the future. Their valuable work is prioritizing ecological as well as economic factors and addressing the needs of our global community today and tomorrow.

#### **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 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 2015 more than 33,500 employees generated sales of around €13.5 billion and an operating profit (adjusted EBITDA) of about €2.47 billion.

Evonik Industries has been producing specialty chemical products in the Greater China region (Mainland China, Hong Kong and Taiwan) since the late 1970's; with wide-ranging trading relations already in place prior to this in the region. Evonik regards Greater China as one of the driving forces of the global economy and we consequently endeavor to grow our business in the region. The company now has around 3,000 employees in the Greater China region, the regional sales reached over €1.3 billion in 2015.

#### **Disclaimer**

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Neither Evonik Industries AG nor its group companies assume an obligation to update the forecasts, expectations or statements contained in this release.