

**Media Release**

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## **Borealis and Borouge showcase Fibremod™ solutions for Jaguar F-Type at VDI Mannheim**

Borealis and Borouge, leading providers of innovative, value-creating plastics solutions, have developed important material solutions to address specific challenges faced by the global automotive industry. At the VDI International Congress "Plastics in Automotive Engineering" in Mannheim, Germany taking place on April 2-3, Borealis will highlight an innovative Fibremod™ solution developed for the Jaguar F-Type model in close cooperation with Dräxlmaier, the Tier One supplier. Other important product innovations in surface aesthetics will also be showcased, with focus on tiger stripe-free surfaces, moulded in colour and primerless two-layer paintability. Material solutions offered by Borealis and Borouge help automotive manufacturers achieve defect-free surfaces while at the same time capitalising on the benefits of lower production and system costs as well as reduced environmental impact, by way of overall vehicle weight reduction and optimised cycle times.

### **Fibremod: the ideal solution for Jaguar F-Type IP carrier and airbag chute**

The Fibremod family of engineered short (SGF) and long glass fibre (LGF) compounds was officially launched in September 2013. Fibremod stands for both the name of a material category as well as the ability of Borealis and Borouge to transform or modify a specific grade to fit and exceed the needs and requirements of its customers. Borealis' proprietary LGF process technology makes it possible to tailor highly engineered polypropylene (PP) grades in order to meet the unique challenges of individual customer projects. In developing the instrument panel (IP) carrier for its Jaguar F-Type, Jaguar and its Tier One supplier, Dräxlmaier, sought a material solution that would deliver very high stiffness and excellent impact performance, without compromising other key requirements such as dimensional stability. What is more, it was imperative that the materials selected contributed to overall vehicle weight reduction and competitive system costs.

Working closely with the Tier One supplier, Borealis developed a dilution system based on 50% Fibremod GB601HP and 50% BE677AI, yielding a PP-LGF 30% with a well-defined performance profile for the IP carrier. This LGF-reinforced PP solution delivers the highest processing and end-use performance, while at the same time it contributes to lower weight and overall system costs. The Jaguar F-Type airbag chute is made of ready-to-use Fibremod GB303HP, a 30% LGF-reinforced PP which features excellent impact, high stiffness and optimal processing properties. The extensive R&D and

technical support provided by Borealis made it possible to optimise the dilution fine-tuning process in order to fulfil specified property demands and the jointing technology of the IP carrier to the airbag chute. "We appreciate the close cooperation and open innovation in tailoring this solution to our specific requirements," comments Marc Sieber, Head of Process Development at Dräxlmaier. "We are enthusiastic to drive this success forward together."

"Fibremod innovations support our partners and customers along the entire automotive value chain in their efforts to make vehicles lighter, reduce processing temperatures and energy requirements, all while reducing system costs," explains Jost Eric Laumeyer, Borealis Global Marketing Manager Engineering Applications. "Our customised glass fibre reinforced PP solutions are at the cutting edge of innovation, bringing lightweight, extra strength and impact performance to a wide range of automotive and appliance applications."

## **VDI Mannheim 2014: showcasing surface aesthetics solutions**

Borealis and Borouge will highlight their superior surface aesthetics solutions for the automotive industry at the VDI, including updated grades for tiger stripe-free surfaces, moulded-in colour as well as primerless two-layer paintability solutions. "We welcome the opportunity of the VDI to showcase our cutting-edge material solutions, some of which have been developed in close cooperation with partners in the automotive industry," says Harald Hammer, Borealis Vice President Engineering Applications. "Our Fibremod and Daplen™ innovations are excellent examples of how Borealis and Borouge keep discovering ways to deliver new, high-performance and high-quality materials which help achieve enhanced aesthetic appeal."

One of the solutions to be highlighted at VDI Mannheim is the upgraded thermoplastic olefin (TPO) **Daplen EE250AI**, used for instrument panels and other automotive applications to help achieve **tiger stripe-free surfaces**. Tiger stripes are flow mark issues caused by converting processes which can lead to both exterior and interior surface defects. Through extensive laboratory research and joint testing with partners, Borealis has developed a new PP matrix used in compounds which will help avoid tiger stripes within a very broad processing window.

The **Daplen EF150HP** grade is the ideal successor to one of the first breakthrough **moulded in colour** solutions for body panels, ED230HP. Moulded in colour solutions make cost reductions possible by eliminating the number of painting cycles required.

Borealis will also feature its **primerless paintability systems** for automotive exterior plastic applications. The company has developed and brought to market grades that boast improved and longer-lasting paint adhesion performance, optimised off-line painting cycle times, and the subsequent lessening of costs and environmental impact.

**Borealis and Borouge will highlight their Fibremod solutions for the Jaguar F-Type as well as cutting-edge tiger stripe-free grades and other surface aesthetics innovations at the VDI Mannheim in Mannheim, Germany, Stand 54, from April 2-3, 2014.**



The Jaguar F-Type IP carrier and airbag chute are both made using Borealis Fibremod™ grades that deliver high processing and end-use performance, while contributing to lower weight and overall system costs.

Photo: © Borealis.

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### **About Borealis Engineering Applications**

For over 50 years, Borealis has been a leading supplier of advanced polyolefin plastics for engineering applications in the automotive industry and for household appliances. Thanks to its unique and proprietary Borstar® technology, Borealis provides a large portfolio of innovative products and services which create real value for customers and partners around the world. Innovative automotive solutions include materials for exterior, interior and under the bonnet applications, such as bumpers, body panels, trims, dashboard, door cladding, climate control units, air intake manifolds as well as battery cases. The appliance product range includes materials for small appliances and white goods, from coffeemakers to refrigerators and beyond. Borealis offers advanced polypropylene solutions which make engineering applications lighter, more energy efficient, robust and visually appealing.

### **About Borealis**

Borealis is a leading provider of innovative solutions in the fields of polyolefins, base chemicals and fertilizers. This year, Borealis already celebrates its 20<sup>th</sup> anniversary. With headquarters in Vienna, Austria, Borealis currently employs around 6,400 and operates in over 120 countries. It generated EUR 8.1 billion in sales revenue in 2013. The International Petroleum Investment Company (IPIC) of Abu Dhabi owns 64% of the company, with the remaining 36% owned by OMV, the leading energy group in the European growth belt. Borealis provides services and products to customers around the world in collaboration with Borouge, a joint venture with the Abu Dhabi National Oil Company (ADNOC).

Building on its proprietary Borstar® and Borlink™ technologies and 50 years of experience in polyolefins, Borealis and Borouge support key industries including infrastructure, automotive and advanced packaging.

The Borouge 3 plant expansion in Abu Dhabi will be fully operational in 2014. Borouge 3 will deliver an additional 2.5 million tonnes of capacity when fully ramped up, bringing the total Borouge capacity to 4.5 million tonnes. Borealis and Borouge will then have approximately 8 million tonnes of polyolefin capacity.

Borealis offers a wide range of base chemicals, including melamine, phenol, acetone, ethylene, propylene, butadiene and pygas, servicing a wide range of industries. Together with Borouge the two companies will produce approximately 6 million tonnes of Base Chemicals in 2014.

Borealis also creates real value for the agricultural industry with a large portfolio of fertilizers. The company distributes approximately 2.1 million tonnes per year. This volume will increase to more than 5 million tonnes by the end of 2014.

Borealis and Borouge aim to proactively benefit society by taking on real societal challenges and offering real solutions. Both companies are committed to the principles of Responsible Care®, an initiative to improve safety performance within the chemical industry, and contribute to solve the world's water and sanitation challenges through product innovation and their Water for the World™ programme.

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### **For more information visit:**

[www.borealisgroup.com](http://www.borealisgroup.com)

[www.borouge.com](http://www.borouge.com)

[www.waterfortheworld.net](http://www.waterfortheworld.net)

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