Media Release

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Engineering lightweight solutions for the global automotive industry

Borealis and Borouge, leading providers of innovative, value-creating plastics solutions, announce the introduction of several new and upgraded material solutions engineered to enable the automotive industry to achieve greater cost efficiency, higher performance and improved sustainability in vehicle components. The new lightweight grades Fibremod™ WE380HP and Daplen™ EE058AI are representative of Borealis and Borouge's commitment to offering new and multi-faceted solutions to automotive OEMS around the globe and will be showcased in October at the IZB 2014 in Wolfsburg, Germany, along with a Brazilian premiere grade.

Uncompromising lightweight solutions thanks to Fibremod™ and Daplen™

In so-called hybrid grades, reinforcing polypropylene (PP) with a combination of glass fibre and mineral filler yields a special performance grade. As one such grade, Fibremod WE380HP is a new hybrid PP compound comprised of 20% glass fibre reinforcement and 10% mineral filler. It is intended for use in both structural and visible automotive parts, such as under-the-bonnet (engine covers, gear housings) and high-end interior applications (window frames, arm rests). As a replacement for other materials, Fibremod WE380HP is a lightweight solution that contributes to lower fuel consumption and reduced CO2 emissions without compromising on visual aesthetics or performance. The grade can bear a high mechanical load, offers excellent processability, outstanding dimensional stability, low warpage, good heat resistance and allows for self-colouring. In addition to this multi-talented new material, other lightweight grades being highlighted at the IZB include the pioneering PP natural fibre grades NJ200AI and NJ201AI, both of which allow for 9% weight savings when compared to a PP-T20.

The recently-launched thermoplastic olefin (TPO) compound Daplen EE058AI is not only lightweight, but also offers tiger stripe-free technology, as does the upgraded Daplen™ EE189HP. Automotive OEMs continue to seek out materials that help reduce overall vehicle

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weight in order to improve fuel consumption and fulfil stringent CO2 emissions standards, while still meeting requirements in terms of efficient processing and surface aesthetics. The phenomenon of tiger stripes - the visually recognisable periodic change of surface gloss – is caused by converting processes and is a general problem of all thermoplastic materials, including polyolefins. The newly-developed, tiger stripe-free TPO compound Daplen EE058AI boasts an excellent property profile and is a fitting replacement for conventional T15 and T20 interior materials.

“Borealis and Borouge are attuned to the needs and demands of the automotive industry,” says Harald Hammer, Borealis Vice President of Engineering Applications. “We will continue to develop lightweight PP solutions for automotive compounds that not only help our customers and partners achieve broader, long-term sustainability objectives, but also enhance automotive surface aesthetics.”

Long-term cooperation with automotive manufacturer results in regional premiere

Borealis and Borouge’s portfolio of global automotive material grades also includes Daplen™ EE158AIB, a 13% mineral-filled thermoplastic olefin (TPO) compound. This grade had already been adopted by Volkswagen as the ideal material solution for the European production of door panels in its new Up! model, and has now been chosen for Up! production in Brazil as well. This is the first time Volkswagen has selected a PE/PP TD13 material for its South American production operations. The grade helps the manufacturer achieve its lightweighting targets whilst providing excellent mechanical performance, high UV and scratch resistance, low emission and fogging, and superior aesthetics. Borealis and Borouge material solutions are also being implemented in the Up! model’s dashboard, centre console, pillar and sill panels.

Focus on South America: Borealis increases asset footprint in Brazil

The South American operations of global automotive manufacturers and OEMs are being even better served thanks to increased Borealis activity in the region, principally through the expansion of the plant in Itatiba, near Sao Paulo, Brazil. This EUR 45 million project involves the construction of an additional production building, two state-of-the-art PP compounding extruders, blending and raw material silos, warehouse facilities and a bagging line. In addition, extensive upgrading of utility and water systems is being carried out. With nearly 80% of the construction project concluded, the commissioning and start-up plan has already commenced. The improved plant is scheduled to go 100% on stream during the fourth quarter of 2014 and its output will significantly augment current annual production in Brazil of high-performance,

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high-quality PP compounds. Consequently, Borealis will be able to better serve growing regional market demand and pursue new opportunities in pioneering applications in the automotive industry and beyond.

“Our Itatiba expansion is a clear indication of Borealis’ commitment to becoming the leading supplier to the South American automotive industry,” explains Jost Eric Laumeyer, Borealis Global Marketing Manager Engineering Applications. “As we grow our asset footprint in South America, our expansion efforts will help solidify our current partnerships whilst at the same time enabling us to seek out additional opportunities in cooperation with new global partners.”

Visit Borealis and Borouge from 14-16 October 2014 at the IZB in Wolfsburg, Germany in Hall 6, Stand 220.

Fibremod WE380HP is a new hybrid PP compound intended for use in both structural and visible automotive parts as well as high-end interior applications. 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 and Borouge

Borealis is a leading provider of innovative solutions in the fields of polyolefins, base chemicals and fertilizers. This year, Borealis already celebrates its 20th anniversary. With headquarters in Vienna, Austria, Borealis currently employs around 6,400 and operates in over 120 countries. It generated

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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.

For more information visit:
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