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Queo™ – the new multifaceted team player from Borealis Plastomers

Borealis, a leading provider of innovative solutions in the fields of polyolefins, base chemicals and fertilizers, announces the launch of the new brand Queo[™], one of two main product families within Borealis's new line of plastomers products. With this new addition to its polyolefins family, Borealis is consolidating its leading European market position and offering new opportunities to its customers and partners for developments in a wide variety of target applications.

The value of Queo plastomers in film and non-film applications will be highlighted at the K 2013 trade fair in Düsseldorf, Germany, Hall 6, Stand A43, from October 16-23.

Borealis is working together with its customers in a wide range of applications to develop attractive plastomer solutions for projects with demanding sealing, flexibility, compatibility and processability requirements. Best in class sealing performance in multilayer advanced flexible packaging and sound-deadening panels for the automotive industry are just two examples of Borealis' plastomer experts' impressive track record in value creation through innovation. Plastomers markets around the world are exhibiting robust growth, based on the need for better performing consumer products and packaging and Borealis is now set to capitalise on these future opportunities.

Who is Queo: personality and properties

The future potential of proprietary Borealis plastomers is now embodied by Queo. Derived from the Latin "I can", the name Queo symbolises the key strength of this brand as an enabler. Queo plastomers are a range of lowdensity alpha olefin ethylene copolymers made possible by combining metallocene catalyst technology with the Borealis Compact Solution polymerisation process. Queo plastomers bridge the gap between plastics and elastomers. Using octene as co-monomer, they exhibit many of the processing advantages of a thermoplastic material combined with the

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physical properties of a rubber. Through efficient and consistent incorporation of octene co-monomer into the ethylene backbone, an amorphous material is created. By increasing the co-monomer content, lower density products are made.

All Queo products exhibit a wide range of unique performance attributes, adding value to any number of film, extrusion and moulding applications. They are tough, flexible, compatible, and above all, competent when it comes to performance. Toughness, a proven property of metallocene polymers, is ensured thanks to a narrow molecular weight distribution and good co-monomer incorporation. As ethylene-based plastomers with uniform incorporation of the co-monomer, Queo plastomers have a highly amorphous structure. This translates into outstanding flexibility as well as good optical properties and low flex fatigue. In terms of compatibility, Queo plastomers are true team players when used as blend partners with other polyolefins and performance modifiers in blown moulded, injection and rotational moulded articles as well as industrial films. They offer seal improvement, puncture resistance, dart drop improvement, increased line throughputs and reduced cycle times. Finally, competence: Borealis' technology paired with the metallocene catalyst delivers best-in-class sealing performance and seal through contamination while maintaining excellent processability.

Queo plastomers: value and diversity in applications

A select list of **major Queo plastomers applications in film** would include

- **flexible packaging** (where they maximise sealing performance for clean as well as contaminated seal areas, even at reduced temperatures and thinner gauges)
- **display film** (add to toughness and shrink performance); blown stretch cling layers (contribute to cling and low unwinding noise)
- **protective film** (enhance adhesion and allow for stainless removal) and
- **polypropylene (PP) film** (improve low temperature impact resistance).

In automotive, applications include

• **sound deadening sheets** (afford high filler loading at required mechanical properties) and

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• **flexible thermoplastic olefins**, where they offer free-flowing pellets for continuous compounding with PP.

In wire and cable, they provide a

- carrier for halogen-free compounds for low voltage insulation and bedding and
- add flexibility in cross-linked compounds.

For more on additional types of applications, visit www.whoisqueo.com.

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Queo[™] plastomers bridge the gap between plastics and elastomers, offering the opportunity to tailor the performance-to-cost balance of finished articles. Photo: © Borealis.

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Borealis is a leading provider of innovative solutions in the fields of polyolefins, base chemicals and fertilizers. With headquarters in Vienna, Austria, Borealis currently employs around 6,200 and operates in over 120 countries. It generated EUR 7.5 billion in sales revenue in 2012. 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 the unique 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 plant expansion in Abu Dhabi will be fully operational by mid-2014 with a total annual capacity of 4.5 million tonnes. After this Borealis and Borouge will have approximately 8 million tonnes of polyolefin capacity.

Borealis offers a wide range of base chemicals, including melamine, phenol, acetone, ethylene and propylene 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 around 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 WorldTM programme.

For more information visit:

www.borealisgroup.com www.borouge.com www.whoisqueo.com www.k2013-openyourmind.com www.waterfortheworld.net

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