

### **LANXESS at Tire Technology Expo 2012 in Cologne, February 14 - 16**

## **Wide range for "green tires"**

**Leverkusen** – High-performance tires expected to earn high marks in energy efficiency and safety need to be made of high-performance special-purpose rubber products tailored closely to the demands of the tire industry. Synthetic rubber pioneer LANXESS returned in 2012 to Tire Technology Expo to introduce several of its key innovations and concepts for these products. The event, held in Cologne on February 14 to 16, is one of the most important worldwide for professionals in all areas of tire production. Experts from the specialty chemicals company participated in the conference program with a total of six presentations. LANXESS subsidiary Rhein Chemie, which helps to enhance the cost-efficiency of tire manufacturing with products such as polymer-bound chemicals, innovative processing promoters, activators, release agents and high-performance curing bladders, even had its own separate stand. The LANXESS presentations focused on advancements in the field of butyl and styrene-polybutadiene rubber, the development of new grades for winter treads using the nano-additive Nanoprene, functionalized styrene-butadiene rubber products for green tires and process improvements with modified Nd-polybutadiene rubber.

“With an annual growth rate of some 10 percent, energy-saving “green tires” are the fastest-growing segment in the global tire industry,” said Dr. Ron Commander, head of the Butyl Rubber business unit, in his presentation. “At the same time, pending tire labeling requirements pose a major challenge for the tire industry: As of November 2012, European consumers will be able to see at a glance whether tires save or waste energy, and whether a good rating possibly means a compromise on safety. This is a challenge we can master, by combining our partners' decades of experience in

#### **LANXESS AG**

Contact: Ilona Kawan  
Market Communications  
Trade and Technical Press  
51369 Leverkusen  
Germany

Phone: +49 214 30-61684  
Fax: +49 214 30-44865  
Ilona.kawan@lanxess.com

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the tire industry with existing LANXESS high-performance synthetic rubber grades, products we are constantly improving on.”

Dr. Heike Kloppenburg, head of Product and Process Development in the Performance Butadiene Rubbers business unit (BU PBR), spoke about “Modified NdBR for Easy Rubber Processing,” explaining how classical conflicts between processability and tire properties can be resolved using modified neodymium-polybutadiene rubber (NdBR). In her talk on “New LANXESS SSBR Grades for Improved Tire Tread Properties,” Fernanda Albino, lab manager, PBR business unit, described, among other things, how rolling resistance can be improved with both functionalized styrene-butadiene rubber and SSBR grades with a variable vinyl and styrene content.

Functionalized SSBR rubber products also were the main topic of a presentation entitled “Functionalized Carbon Black with Functionalized SSBR Matching Green Tire Properties” by David Hardy, Technical Marketing Manager, PBR Business Unit: These products have the potential to deliver the rolling resistance and wet grip properties typical of silica, without the expensive silane additives. This also would reduce the number of blending steps – when using innovative SSBR rubber grades with suitable functional groups across the entire polymer molecule.

Dr. Dietmar Hoff from Marketing and Sales of Release Agents and Bladders at Rhein Chemie, explained in his paper on “High Performance Curing Bladders” how the application of expertise in rubber and manufacturing technology combined with the targeted use of highly effective release agents can increase bladder service life, while at the same time reducing vulcanization time and increasing surface quality, which ultimately reduces reject rates.

LANXESS showed its true colors at Tire Expo 2012, emphasizing a corporate strategy tailored deliberately to the growing market of green tires: “Many users see LANXESS as a world market and technology leader for high-performance synthetic rubber products,” Ron Commander said. “And we want to live up to this reputation.”

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Germany

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Fax: +49 214 30-44865  
Ilona.kawan@lanxess.com

These intentions are reflected by, among other things, recent decisions in support of major investments: LANXESS has significantly expanded production capacities for neodymium-polybutadiene (Nd-PBR) high-performance rubber at three locations worldwide; another facility is in the planning for Singapore and scheduled to start production in 2015. With an investment volume of some EUR 200 million, it is the second-largest project of its kind since company inception. LANXESS made the largest single investment in company history, totaling EUR 400 million, in a butyl rubber plant at the same location, which is to begin operation in spring 2013. Work is underway at the Triunfo site in Brazil to convert production to solution styrene-butadiene rubber (SSBR) for use in green tires. The final decision on the investment, estimated at well over EUR 10 million, is to be made in mid-2012. At present, LANXESS already produces these rubber grades in Orange, Texas in the United States, Cabo in Brazil and Port Jérôme in France.

LANXESS subsidiary Rhein Chemie entered the booming curing bladder business back in 2011 by acquiring Argentinian release agent and bladder manufacturer Darmex. By additionally acquiring Wacker Chemie's release agent business, Rhein Chemie expanded its range of eco-friendly release agents, particularly in the segment for silicone-based products. Rhein Chemie today is the only global player capable of offering release agents and bladders for tire manufacturing from a single source. At its site in Lipezk, Russia, the LANXESS subsidiary will produce rubber additives and release agents for the automotive and tire industries in Russia and CIS, starting most likely in 2013. The plant is to be expanded by 2016 to include a bladder production facility. At its Jhagadia site in India, Rhein Chemie recently began producing the predispersed additive Rhenogran and the eco-friendly release agent Rhenodiv, both of which are also required for tire manufacturing. Furthermore, through another acquisition, Rhein Chemie now has access to specialty accelerators for solid rubber tires, which are also suited for use in N-nitrosamine-free crosslinking systems.

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Ilona.kawan@lanxess.com

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## News Release

LANXESS is a leading specialty chemicals company with sales of EUR 7.1 billion in 2010 and currently around 16,100 employees in 30 countries. The company is at present represented at 47 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of plastics, rubber, intermediates and specialty chemicals. LANXESS is a member of the leading sustainable indices Dow Jones Sustainability Index (DJSI) World and FTSE4Good.

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Market Communications  
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51369 Leverkusen  
Germany

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### **Information for editors:**

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You can find further information concerning LANXESS chemistry in our WebMagazine at <http://webmagazine.lanxess.com>.