

### **LANXESS at ACLE 2017 with sustainable solutions for the leather industry**

- **New retanning agents with optimized molecular weight distribution**
- **Innovative concept for recycling leather by-products**
- **New water based dyes for finishing**
- **High performance products for effective waste water treatment**
- **Trade show participation in Shanghai, August 30 through September 1, 2017, Hall 2, Stand E03**

**Cologne** – “We are committed to sustainability in terms of more efficient production, by-product material recycling and reduced emissions,” states Luis López-Remón, head of the Leather business unit (LEA) at LANXESS. The specialty chemicals company is highlighting this at ACLE (All Chinese Leather Exhibition) in Shanghai. From August 30 to September 1, 2017, the company’s exhibit at the trade show will focus on sustainable solutions.

The innovations include retanning agents from the Tanigan range that feature reduced residual monomer content, a new retanning agent from the Levotan X-Biomer range based on renewable raw materials, the innovative ReelL container concept for tanneries and water-based dyes from the new Levaderm WB range for leather finishing. “The new products are part of our ‘Sustainable Leather Management’ initiative, which we developed to expand and improve our product portfolio for sustainable leather production,” says López-Remón.

LANXESS’s Liquid Purification Technologies (LPT) business unit, which supplies the industry with high performance products for effective water treatment, will also be represented on the stand.

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Page 1 of 7

### **New retanning agents based on renewable raw materials**

One of the greatest challenges facing the leather industry over the next few years is to become less dependent on fossil raw materials by gradually replacing petroleum based chemicals. LANXESS is heavily involved in developing advanced leather chemicals and with Levotan X-Biomer has created a class of retanning agents based on renewable raw materials. LANXESS offers this range for all key stages of the retanning process, and has now added the new Levotan X-Biomer RX liquid. Due to its outstanding selective filling characteristics, this is particularly well suited for use as a resin retanning agent for automobile leather. All products in the Levotan X-Biomer range are free of formaldehyde, zero VOC and neutral smell.

### **Recycling of shavings in leather manufacture – a sustainable approach for reusing by-products on site**

Another sustainable approach in addition to “X-Biomer chemistry” is the “X-Biomer in situ” concept, in which leather by-products are not taken to large-scale industrial facilities far away from the tanneries to be processed into retanning agents. Instead, this is done, for the first time, in the actual tanneries where the by-products are generated.

In collaboration with Leverkusen based research institute INVITE, LANXESS has developed a pilot plant for manufacturing retanning agents from by-products of leather production that contain collagen and from organic biomass. The innovative plant for “Resource-efficient manufacturing of leather chemicals” (ReeL) has a modular structure and is designed to be used directly on site in tanneries. The practical tests are taking place with project partner HELLER-LEDER GmbH Co. KG from Hehlen, Lower Saxony, Germany.

With this kind of production facility, tanneries can meet their needs by manufacturing Levotan X-Biomer retanning agents on site. The by-products used are completely recycled without excess or residues.

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Page 2 of 7

This recycling concept significantly reduces tannery waste and emissions.

### **New tanning agents with optimized molecular weight distribution**

As one of the leading suppliers of poly-condensed sulfone based syntans, LANXESS is continuously working on further developing these products. Three new retanning agents – Tanigan LM EXP 4102, Tanigan LM LIQ EXP 4108, and Tanigan UL EXP 4103 – are being introduced at ACLE. These are the result of systematically implementing an optimized production process, leading to a lower amount of residual monomers in the end product. Chrome leather retanned with these agents has an exceptionally full, soft feel, and a fine grain. It is easy to dye, “fatliquor” and mill.

Tanigan UL EXP 4103 can be used for all types of leather, including retanning chrome tanned leather and in vegetable tanning. The product has an excellent dispersion effect for even dyeing of the leather and outstanding penetration of vegetable tanning agents. With its low astringency, the fine grain is retained and the leather has a softer, more pleasant touch. Leather retanned with these three new products exhibits superior levels of heat and light resistance compared to standard syntans, both of which are known benefits of sulfone-based syntans.

“We have developed an optimized production process for the new grades that integrates the monomers into each syntan more selectively than before. The new process leaves fewer residual monomers in the end product. This has the dual benefits of improving the product characteristics while also improving the wastewater, since fewer non-fixing substances are used overall,” explains Dr. Thomas Brackemeyer, head of the Organic Leather Chemicals business line at LEA.

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Page 3 of 7

### **New solvent-free water-based dyes for sustainable finishing**

At ACLE, LANXESS will be presenting the Levaderm WB range to the public for the first time. This range consists of water-based dyes in the color shades yellow, orange, red, bordeaux, blue, navy blue, green, light brown, medium brown, black brown, gray and black. These solvent-free products are perfect for spray- and throughfeed dyeing applications as well as for effect coats and top coats. They are characterized by high yield, brilliant colors, outstanding consistency in coloration and excellent fastness properties.

“These cutting-edge, sustainable and high-performance products augment our range and reinforce our technical application offering worldwide,” says Brackemeyer. “We see it as our duty to offer tanneries innovative products that they can use to produce leather of outstanding quality to meet the needs of the future – including with respect to profitability, environmental protection and fashion trends,” he states. “For example, one of our services involves providing tanneries with leather samples twice a year to give them a foretaste of future leather trends in terms of colors, structures, feel and overall appearance. Based on these recommendations, tanners can adapt to future trends and implement them in good time.”

More detailed information about the “Sustainable Leather Management” program and LANXESS’s products and service offerings for the leather industry can be found on the company’s website at [www.leather.lanxess.com](http://www.leather.lanxess.com).

### **Complementary toolbox for the visions of the leather industry**

“Minimal liquid discharge” (MLD) is gaining importance – first to reduce the costs of disposing of polluted wastewater, and second to meet the increasingly stringent requirements on the industry in terms of sustainability. This not only protects the environment and the supply of natural water, it also offers cost-cutting potential for the leather industry. LANXESS’s Liquid Purification Technologies (LPT)

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Page 4 of 7

business unit has developed a complementary toolbox so that the visions of the leather industry can become reality. The Lewatit ion exchange resins and the Lewabrane range of reverse osmosis membrane elements enable the selective removal of unwanted elements. This can help eliminate chrome elements from the wastewater of tanneries, for example, and thus contribute to sustainable leather production. "Our technology enables the discharge limit values for chromium (III) and chromium (VI) to be met in a cost-effective, reliable way. Water consumption can also be significantly reduced. Moreover, our products soften the water and reduce the TDS content. The TDS content indicates the level of total dissolved solids in the water," says Dr. Shintaro Tsuzuki, head of Technical Marketing for ion exchange resins at LPT. The Lewatit brand of ion exchange resins and the Lewabrane series of membrane filter elements complement each other perfectly. The exchange resins can selectively remove unwanted ions from water and other liquid media, while the reverse osmosis membrane technology removes salts from the water. The water treatment portfolio is rounded off by the Bayoxide range of iron oxide adsorbers that quickly, selectively and reliably bind the pollutants. More detailed information about LANXESS's water treatment products and services is available at [www.lanxess.com/en/corporate/products-solutions/business-units/liquid-purification-technologies/](http://www.lanxess.com/en/corporate/products-solutions/business-units/liquid-purification-technologies/).

LANXESS is a leading specialty chemicals company with sales of EUR 7.7 billion in 2016 and about 19,200 employees in 25 countries. The company is currently represented at 75 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. Through ARLANXEO, the joint venture with Saudi Aramco, LANXESS is also a leading supplier of synthetic rubber. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World) and FTSE4Good.

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Page 5 of 7

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

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Page 6 of 7

### Picture



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Page 7 of 7

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