

# LANXESS launches sustainable high-performance plastic

- Polyamide 6 compound made from 92% sustainable raw materials
- Another major step toward circular economy
- Independent certification using the mass balance method makes the content of sustainable raw materials transparent and traceable

Cologne, October 13, 2021 – In the manufacture of plastics, LANXESS is increasingly turning to "circular" and bio-based raw materials. The specialty chemicals company's latest product is Durethan BLUEBKV60H2.0EF. Ninetytwo percent of the raw materials used in this easy-flowing compound have been replaced with sustainable alternatives – that's more than in any other prime quality glass-fiber-reinforced plastic.

The new plastic grade is the first product from LANXESS in the new "Scopeblue" series. The brand label identifies products that either consist of at least 50 percent circular (recycled or biobased) raw materials, or whose carbon footprint is at least 50 percent lower than that of conventional products.

"A carbon-neutral future can become reality only if we start using more sustainable products," says Frederique van Baarle, who heads the High-Performance Materials (HPM) division at LANXESS. "Our first product marketed under the Scopeblue brand represents a real solution for the circular economy. The compound is a certified premium material that's based on sustainable raw materials."

## Mission to use 100% sustainable raw materials

One of the raw materials used in the production of this polyamide-6-based high-performance plastic is cyclohexane from sustainable sources – meaning cyclohexane that is either bio-based, recycled bio-based or produced by means of chemical recycling. The material is also strengthened with 60% by weight of glass fibers comprising

#### LANXESS AG

Contact: Michael Fahrig Corporate Communications Spokesperson for Trade & Technical Press 50569 Cologne Germany

Phone: +49 221 8885-5041 michael.fahrig@lanxess.com

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industrial glass waste instead of mineral raw materials. The alternative raw materials that LANXESS uses in the precursors for polyamide 6 are chemically identical to their equivalents of fossil origin ("drop-in solutions"), so Durethan BLUEBKV60H2.0EF exhibits the same characteristics as the virgin material and can be processed just as easily using exactly the same production tools and facilities with no conversion work needed.

"This high-strength, high-rigidity structural material can be deployed wherever its purely fossil-based equivalent Durethan BKV60H2.0EF has traditionally been used in series production – so in automotive construction for the production of car front ends, brake pedals and oil pans," says Dr. Guenter Margraf, Head of Global Product Management at HPM.

But developers are setting their sights on more than 92% sustainable raw materials. "We're currently working on increasing the content of sustainable raw materials in this compound to 100%," says Margraf. This requires ammonia synthesized with carbon-neutral hydrogen. Over the medium term, the specialty chemicals company is also planning to replace the additives used in its plastics with sustainable equivalents.

## Further sustainable compounds set to be launched

With Durethan ECOBKV30H2.0, ECOBKV35H2.0 and ECOBKV60XF, LANXESS recently unveiled three polyamide 6 compounds containing 30%, 35% and 60% by weight respectively of recycled fiber made from glass waste as calculated using the ISCC Plus-certified mass balance method. In response to major customer demand, this product family has been extended over the past few months to include even more compounds based on polyamide 6 and 66. LANXESS is also using the recycled glass fibers for the mechanical reinforcement of its Pocan-brand polybutylene terephthalate (PBT) compounds. Early products include Pocan ECOB3235 and the flame-retardant ECOB4239, each of which contain 30% by weight of recycled glass fibers as calculated using the certified mass balance method.

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# Independent certification of sustainability in the supply chain

The sustainable origin of the raw materials is certified to ISCC Plus ("International Sustainability and Carbon Certification"). This applies to not only the LANXESS production sites in Antwerp and Krefeld-Uerdingen but also all precursors originating exclusively from suppliers that are also ISCC Plus-certified.

The mass balance method, which was introduced with ISCC Plus certification, compares raw materials used against product quantities on the market in order to establish a link between input and output for accounting purposes. If the raw material quantity required for manufacturing a defined product quantity is substituted with sustainable alternatives, the method can be used to determine the quantity of sustainable mass in the end product. This makes the product's sustainability characteristics transparent for users.

ISCC is a standard that was developed for purposes including assessing the sustainability requirements of the EU RED (EU Renewable Energies Directive) and is increasingly being used worldwide in the chemical industry too. LANXESS is a member of the ISCC Association and plays an active role in further developing the sustainability certification.

You can find more information about ISCC Plus-certified products from LANXESS at <u>techcenter.lanxess.com</u>.

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# **Image**



LANXESS is offering a new, particularly sustainable product under the name Durethan BLUEBKV60H2.0EF. In the easy-flowing compound, 92 percent of the raw materials are replaced by sustainable alternatives. This is a top value among glass-fiberreinforced plastics.

Photo: LANXESS

## **LANXESS AG**

Contact: Michael Fahrig Corporate Communications Spokesperson for Trade & Technical Press 50569 Cologne Germany

Phone: +49 221 8885-5041 michael.fahrig@lanxess.com

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LANXESS is a leading specialty chemicals company with sales of EUR 6.1 billion in 2020. The company currently has about 14,800 employees in 33 countries. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World and Europe) and FTSE4Good.

#### **Forward-Looking Statements**

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