

# News Release

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## Multilayer packaging: innovative and sustainable

### ■ **BASF, Borealis, Südpack and Zott present prototypes of food packaging made from 100% recycled material**

Multilayer packaging reliably ensures high-quality and fresh food products thanks to its properties. It protects the products and keeps them hygienic, thereby extending the shelf life of food. This is of particular importance in light of global food supply – one third of all food produced worldwide is spoiled before it reaches consumers' plates. Smart solutions with multilayer packaging can play a part in reducing this unnecessary waste.

Multilayer packaging is sustainable: it does not require much material and can now also be produced from chemically recycled material.

“Today's high-tech film packaging solutions consist of multiple materials and layers with different properties, such as an oxygen barrier. And thanks to the optimized use of materials, we were able to reduce the packaging volume to a minimum,” said Johannes Remmele, Managing Director of Südpack.

Multilayer packaging consists of up to 11 individual, ultra-thin layers, making it considerably lighter and thinner than comparable packaging. In addition to reducing the amount of raw materials used, this also contributes to considerably lowering CO<sub>2</sub> emissions during transport. All in all, multilayer packaging is clearly more resource efficient than its alternatives.

However, multilayer packaging could only be recycled to a limited extent, because

mechanical recycling processes are not suitable for composite materials. “Within the ChemCycling project, BASF is working on advancing the chemical recycling of plastic waste, because this will make it possible to process and reuse previously non-recyclable plastics such as mixed plastics. In collaboration with our partners, we have now for the first time produced a prototype packaging made of chemically recycled polyamide and polyethylene. This goes to show that the recycling of multilayer packaging could soon come full circle,” explained Christoph Gahn, who is responsible for the polyamide business at BASF.

This pilot project was made possible thanks to the collaboration between the four partners BASF, Borealis, Südpack and Zott. BASF supplies chemically recycled polyamide, while Borealis provides sustainably produced polyethylene. Südpack, one of Europe’s leading producers of film packaging for food products, uses these materials to produce multilayer film for a specially sealed Mozzarella packaging for Zott Gourmet Dairy.

Zott enjoys numerous benefits thanks to this multilayer film. “In our dairy, we continuously review the entire value chain to determine where we can be even more sustainable and how we can sensibly extend our sustainability standards. Now more than ever, customers expect that the packaging of their high-quality and sustainably produced food is as resource-efficient as possible. This is why it was important to us to be part of this pilot project right from the start in order to share our experience as well as our high-level requirements on packaging and its barrier functions, and to contribute to the development of a solution with identical functionality and increased environmental performance. We are very optimistic and hope that this project will make it to series production,” explained Andreas Strunk, Head of Production, Technology & Supply Chain Management at Zott.

“What is special about this pilot project is that both components of the packaging – polyamide and polyethylene – are made from chemically recycled material,” emphasized Maurits van Tol, Borealis Senior Vice President Innovation, Technology & Circular Economy Solutions. “This innovative solution came about thanks to the selection of special polymers. In addition, the collaboration between the companies involved made it possible for the first time to consistently certify each step up from the raw material to the finished packaging.”

The raw materials for polyamide and polyethylene were produced in very small quantities as part of the "ChemCycling" project. The pyrolysis oil derived from plastic waste was supplied by a partner and fed into BASF's Verbund production site in Ludwigshafen as feedstock. According to the certified mass balance method, both plastics have an allocated 100% share of recycled materials.

More information on ChemCycling can also be found in the press release "New products from plastic waste" (P254e/19) and at: [basf.com/chemcycling](https://www.basf.com/chemcycling)

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**About BASF**

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The approximately 122,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of around €63 billion in 2018. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at [www.basf.com](http://www.basf.com)

**About Borealis**

Borealis is a leading provider of innovative solutions in the fields of polyolefins, base chemicals and fertilizers. Based in Vienna, Austria, Borealis currently employs 6,800 staff and is active in more than 120 countries worldwide. In 2018, Borealis generated sales revenue of EUR 8.3 billion and a net profit of EUR 906 million. Mubadala, through its holding company, owns 64% of the company, with the remaining 36% belonging to OMV, an international, integrated oil and gas company based in Vienna. 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), and Baystar™, a joint venture with Total and NOVA Chemicals in Texas, USA. [www.borealisgroup.com](http://www.borealisgroup.com)

**About SÜDPACK**

The SÜDPACK Packaging Group is based in Ochsenhausen, Germany. Founded in 1964 by Alfred Remmele, the family-managed business operates 18 sales offices and production sites in Germany, France, Poland, the USA and Switzerland. SÜDPACK specializes in lid films, hard/soft films and bags. Films are printed using flexographic, gravure and digital printing processes. SÜDPACK Medica, a subsidiary of SÜDPACK Verpackungen GmbH & Co. KG, manufactures sterile packaging for the medical industry under clean room conditions. With some 1,400 employees, the corporate group generated more than EUR 410 million in sales in 2018. Further information about SÜDPACK is available on the Internet: [www.suedpack.com](http://www.suedpack.com).

**About Zott**

Gourmet Dairy Zott is an independent family-owned company that looks back on a long tradition. With more than 3,000 employees, group sales amounting to around one billion euros and 940 kg of processed milk, Zott is one of Europe's leading dairies. Zott exports its products to more than 75 countries throughout the world. In addition to the group's principal plant in Mertingen (Bavaria), the company also operates further production sites in Germany and Poland. Zott's most famous brands are Monte, Sahnejoghurt, Jogobella and Zottarella. As a renowned food manufacturer, Zott is highly committed to acting responsibly and with integrity. Its very own sustainability concept, Zott Caring for Life, extends across five thematic areas along the entire value chain, from milk as a raw material to social responsibility. The dairy provider's corporate policy and strategic orientation are a reflection of its dedication to ecological, social and societal aspects. [www.zott-dairy.com](http://www.zott-dairy.com) , [www.zottarella.com](http://www.zottarella.com)