



Compostable beechwood cellulose tube netting

The fresh 'net'-work.



Using compostable and recyclable packaging not only limits the drain on fossil fuels, such as crude oil, but also allows biodegradable substances to enter the supply chain. PACKNATUR has managed to develop compostable tube netting for fruit and vegetables. So, what's the secret behind these innovative nets? LENZING™ Modal cellulose fibres.

Perish the thought – organic potatoes in plastic bags and organic fruit sealed in plastic. What could be worse? Over the past few decades, the packaging industry has been focused on plastic – even for organic produce. However, an increasing number of consumers want to buy their organic vegetables in organic packaging, too. Compostable Packnatur® tube netting made from beechwood cellulose has been in use since 2013. Packnatur® cellulose tube netting made from

LENZING™ Modal is not only used by Europe's leading supermarket chains and organic fruit and vegetable producers, but is also conquering the international market. This has meant that potatoes, onions, citrus fruits, beetroot and black radishes have been able to benefit from this innovative netting.

There are many factors to be considered when manufacturing environmentally friendly products, including their production and decomposition. In an ideal world, manufacturing uses locally sourced recycled materials as raw materials, putting them to a worthwhile intermediary use before their energy is recovered at the end of their lifecycle. The raw material used in Packnatur® cellulose tube netting is beechwood, which is recovered from forest thinning in central Europe (one-third from Austria, two-thirds from central Europe, from certified forestry). This is transformed into modal fibres by Lenzing AG – the global market leader in the environmentally friendly manufacture of cellulose fibre – using processes in line with the strictest environmental standards.

Compared to conventional dyeing, where dye is transferred to the finished fibres, spin-dyed fibres require 64% less water, 90% fewer chemicals, 20% less energy and 62% less heating, while producing 64% less waste water. The pigments are fully integrated in the fibres, rendering them suitable for food use. The production of raw materials does not compete with the production of food, and avoids the need for irrigation or the use of chemicals on farmland. Beechwood forests regenerate naturally and do not need to be replanted. Forest thinning helps keep forests healthy. Forests preserve the quality of the air we breathe and transform CO₂ into oxygen. Transport distances should be kept to a minimum, so that fossil resources are used as little as necessary. The Packnatur® cellulose tube netting is biodegradable and HOME COMPOST-certified in Europe and the USA.

NATURALLY PROTECTED.

The breathable natural nets keep consumers' produce fresher for 2 or 3 days longer and prevent the premature sprouting of potatoes and onions. The packaging is soft to the touch and looks very natural. The net is currently available in the standard colours of white, potato yellow, sunny yellow, lemon yellow, onion yellow, red orange, red, purple red, violet, holland green, brown and black. The Packnatur® cellulose net is compostable, allowing it to re-enter the food life cycle. Food that is no longer fit for sale can be disposed of in its packaging.

Bronze. Silver. Gold.
Recycled paper.

AN AWARD-WINNING CONCEPT

A world first from Austria, which has already won several awards:

- PAC Award 2024 for US-Partner Vandenberg & VPZ
- US Plastics Pact Sustainable Packaging Innovation Award 2023 for US-Partner Vandenberg
- Innovation Award Styria 2022

- Sustainable Food Award 2019 / Sustainable Packaging category / runner-up
- WorldStar Packaging Award 2018, Food Packaging category, Sustainable Award in silver, Presidential Award in bronze
- European CEO Entrepreneur of the Year Award 2017 / Western Europe / Packaging Industry
- National Champion at the European Business Awards 2016/17
- Green Product Award 2016
- 2016: 6th place in the world ranking of all A' Design Award entrants from the last 8 years in the Sustainable Products, Projects and Green Design Award category
- Trigos Steiermark 2015 nominee
- Among the top 3 in the International Green Tec Awards 2015, Production category
- Green Packaging Star Award 2014
- Internationaler A' Design Award 2014 in silver, Sustainable Products and Projects category / Green Design Award
- Fruit Logistica Innovation Award 2014 nominee
- ÖGUT Environmental Award 2013
- International Materialica Design & Technology Award 2013, best of the CO₂ Efficiency Category
- Fast Forward Award 2013 (Styrian business and innovation award)
- fibre plus 2013 for innovative cellulose products
- Energy Globe Austria Award 2013 nominee
- Energy Globe Styria Award 2013
- Commended for an 'Exemplary Packaging Solution' in the Austrian Awards for Exemplary Packaging 2012
- Bronze Daphne Award for Environmental Technology 2012

Partner feedback

The vegetable-growers' organisation, Marchfeldgemüse*, DI Herbert Bucher, Managing Director:

"The cellulose tube netting produced by our much-valued partner is a wonderful way to pack our vegetables sustainably and contribute to the range of packaging solutions available to our customers."

*The vegetable-growers' organisation Marchfeldgemüse is Austria's largest organic packaging company for field vegetables. This organisation is responsible for handling and marketing Austrian vegetables that have either been ecologically grown or organically certified.

Jenkins Freshpac Systems New Zealand, Jamie Lunam, CEO:

"Customers are extremely excited by the support from the industry for the change and with no need to upgrade equipment. They have changed over with either no, or only very minor adjustments to equipment to run the new plastic free material."

Lenzing AG, Dr Marina Crnoja-Cosic, Head of Application Development New Business Areas:

"The company culture of the Lenzing Group is geared towards long-term partnerships. For this, we need strong partners with whom we can create innovative solutions for the future. LENZING™ Modal fibres are used to make high-quality fruit and vegetable netting for organic packaging. Food-safe and 100% compostable netting is replacing non-degradable, conventional plastic packaging. Renewable, local wood serves as the raw material for this globally unique packaging innovation. The netting was developed as an initiative of VPZ Verpackungszentrum together with Lenzing AG in what was an exclusively Austrian value chain. The development partners made valuable contributions to ensure the technical specifications of the product were met. The close cooperation between all partners enabled a successful market launch after a short period of time."