

**Press release****Chemical recycling helps to reduce CO<sub>2</sub> footprint and consumption of fossil feedstock for cheese packaging**

Sustainability is key in all areas and in all aspects at SÜDPACK – and is also a permanent call to action. More than 50% of the company's investments are dedicated to technologies that help to improve sustainability. 30 percent of its turnover is already generated by sustainable products. ZERO WASTE is SÜDPACK's major goal. Thus, one goal is to support its customers in closing loops and reducing the consumption of fossil resources.

SÜDPACK considers chemical recycling to be an important and indispensable part for a circular economy in the plastics industry. And it does so whenever mechanical recycling reaches its limits despite "Design for Circularity". Chemical recycling can be used to recycle multi-layered materials as well as contaminated and mixed plastics that are not recyclable with mechanical recycling processes. For food packaging, SÜDPACK believes that the combination of mechanical and chemical recycling processes is an ecologically and economically reasonable alternative. In this way, easily separable plastic fractions can be sorted out on a sensor basis and recycled mechanically, whereas other material fractions can be processed into virgin material using chemical recycling.

For this reason, SÜDPACK entered into a strategic cooperation with Carbolig two years ago. The primary goal was initially to use the pilot plant to recycle the company's own materials generated during the production of packaging films. Now, first customer projects are becoming real.

**Arla Foods explores new way to recycle plastic waste**

Together with Arla Foods, SÜDPACK has developed a business model to make maturing bags for mozzarella cheese circular. Using the chemical recycling process,

the plastic is kept within the loop and recycled into new packaging instead of being sent to incineration reducing the overall need for fossil feedstock as well as the carbon footprint.

The mozzarella cheese is being produced at Rødkærsbro dairy in Denmark. It needs to mature in specially designed maturing bags for about two weeks. The plastic films need to be multi-layered for food safety reasons, but this also means they cannot be recycled through mechanical recycling which is the industry standard across Europe. Therefore, the only option so far has been to send them to incineration after fulfilling their essential role in the production process.

To achieve a higher grade of recycling and as part of Arla's commitment to improve circularity and eliminate the use of virgin feedstock, SÜDPACK and the farmer-owned dairy cooperative are carrying out a large-scale test using chemical recycling to convert 80 tonnes of plastic waste into new packaging.

"Instead of sending our plastic films to incineration, resulting in a one-off energy gain, we recycle them and use the recycled material to create new packaging thus reducing the carbon footprint as well as the need for virgin fossil feedstock. It might sound obvious but in the complex world of recycling this is an exciting step in our journey towards fully circular packaging," says Grane Maaløe, Lead Packaging Development Manager at Arla Foods.

### **Keeping it in the loop**

Even if the maturing bags were suitable for mechanical recycling, it wouldn't be allowed to bring the recyclate into food contact material again. As a result the films wouldn't be recycled as new food packaging but downcycled and used for something else and exiting the loop.

“Utilising the processing capabilities at Carboliq, our chemical recycling plant in Germany, we can ensure that the films produced for Arla’s cheese maturing purposes does not exit the loop but instead is recycled into new packaging. One tonne of mixed plastic does not equal one tonne of new packaging, but it does reduce the need for fossil feedstock and it paves the way for increased investing in this infrastructure going forward,” says Dirk Hardow from SÜDPACK.

Factoring in the loss of the electricity and thermal energy that incineration delivers, and the negative impact of transporting the films from Denmark to Germany, the calculation behind the test still comes out in favour of chemical recycling when it comes to overall carbon emissions. Per tonne of plastic waste, the full processing including the chemical recycling process emits up to 50 per cent less than sending to incineration.

SÜDPACK and Arla Foods are currently testing with 80 tonnes of plastic film from Rødkærsbro dairy. After concluding the test, they will evaluate and plan next steps.

**Image Caption:**

- 1: Arla Pizza cheese, below cheese maturing bags
- 2: First truck load of used maturing bags travel to Carboliq for chemical recycling
- 3: Arla Mozzarella cheese in cheese maturing bags

**About SÜDPACK**

SÜDPACK is a leading manufacturer of high-performance films and packaging materials for the food, non-food and medical goods industries. Our solutions ensure maximum product protection as well as additional pioneering features with minimum material input.

The family business, which was founded by Alfred Remmele in 1964, is headquartered in Ochsenhausen. The production sites in Germany, France, Poland, Swit-

zerland, the Netherlands and the USA are equipped with the latest plant technology and manufacture to the highest standards, including the capacity to operate under clean room conditions. The global sales and service network ensures a high degree of proximity to the customer and comprehensive application technology support in more than 70 countries.

With its state-of-the-art Development and Application Center at its headquarters in Ochsenhausen, the innovation-oriented company offers its customers an optimal platform for carrying out application tests and for developing individual and tailor-made solutions.

SÜDPACK is committed to sustainable development and fulfills its responsibility as an employer and towards society, the environment, and its customers by developing packaging solutions that are highly efficient and sustainable.

[www.suedpack.com](http://www.suedpack.com)

#### **About Carbolig**

Carbolig GmbH is based in Remscheid and is the technology platform of RECENSO. It is responsible for the business area regeneration of hydrocarbons in waste streams. The company manufactures and operates plants for oil recovery from mixed and contaminated plastic wastes. Carbolig supplies the CLR (circular liquid resource) it produces to the petrochemical industry, which uses it as a substitute for fossil raw materials in the manufacture of new, high-end polymers.

[www.carbolig.com](http://www.carbolig.com)

#### **About Arla Foods**

Arla Foods is an international dairy company owned by more than 8,900 farmers from Denmark, Sweden, the UK, Germany, Belgium, Luxembourg and the Netherlands. Arla Foods is one of the leading players in the international dairy arena with well-known brands like Arla®, Lurpak®, Puck® and Castello®. Arla Foods is focused on providing good dairy nourishment from sustainable farming and operations and is also the world's largest manufacturer of organic dairy products.

[www.arlafoods.com](http://www.arlafoods.com)

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