

# rPET<sup>100</sup>

## Heat-resistant and fully recyclable sheet material

The idea of a temperature-resistant packaging solution made of PET emerged about three years ago as a result of the requirement for hot sterilisation of yoghurt packaging before filling. Conventional PET is temperature-resistant only up to approx. 70°C. In most cases, conventional C-PET is not suitable for applications up to 100°C due to the high raw material and thermoforming costs. In addition, the additives in C-PET are problematic for recycling.

### Circular Recycling

Our vision is the development of solutions that are suitable for circularity. Therefore, from the start, the goals were clear to create a packaging solution for

- 100 percent food grade recycled material,
- heat-resistance of 100°C,
- without polymer-based additives and therefore suitable for circular economy, so that the packaging can be recycled again into the same packaging after it has been used. For the Circular Economy, the so often advertised „recyclability“ is not a clear definition, as from many “recyclable” packaging only lower-grade products can be produced.

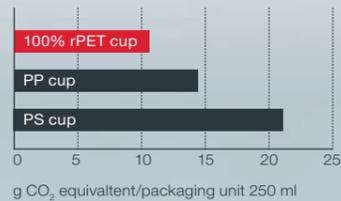
### More cost-effective than PP and PS

Unlike the currently available C-PET, rPET<sup>100</sup> only requires minor modifications to existing thermoforming tools and the cycle rate is in the same

range as comparable moulds made for non-temperature-resistant PET. The sheet is crystallised in the thermoformer by mineral crystallisation nuclei using a PET-based master batch. This master batch, which has been specially developed to meet the requirements, is commercially available and is distributed by one of the largest global manufacturers. In terms of price, the raw material input increases by only 10 % compared to non-temperature-resistant PET. The thermoforming costs are comparable to PET.

### Reduced CO<sub>2</sub> footprint

The use of recycled material in the packaging significantly reduces the CO<sub>2</sub> footprint. Detailed studies show the superiority of rPET<sup>100</sup> over PS and PP solutions.



### 100% food grade with 100% recycling content

Thanks to the unique material properties of PET in terms of diffusion and migration, Starlinger viscotec's rPET<sup>100</sup> solution in combination with our

decontamination solutions is suitable for 100% use in food packaging according to European regulations.

### Wide range of applications

Two years ago, a pilot project for the production of yoghurt cups was launched as part of the school milk project. The milk and yoghurt cups, which are used in more than 100 schools in Austria, have been recycled in a closed-loop for more than a year with return rates of over 90 percent. The project was awarded the World Packaging Award in Gold as the most sustainable packaging of the year 2022. In addition to dairy applications, rPET<sup>100</sup> can be used for hot beverage cups, hot beverage lids, to-go meals and packaging for instant noodles.

We are pleased to present our rPET<sup>100</sup> solution to the general public for the first time at the K show and are convinced to have taken another step towards a Circular Plastics Economy.

Markus Fellingner,  
Starlinger viscotec



INSTALLED PLANTS

333

+6.1 %

INSTALLED CAPACITY IN TONS

2,884,500

+8.5 %

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