

## 31st Dresden Packaging Conference

# Hard-to-Find Recyclates

Statutory recycle quotas and the specifications of brand-name producers are weighing heavily on the packaging branch these days and turning recycle availability into a hot issue. Some polymers are simply not available in sufficient amounts. Experts at the 31st Dresden Packaging Conference provided insights into the current situations and explained why the situation could worsen in the future.

**P**ublic criticism of plastics targets packaging first and foremost. The pressure to produce more sustainable products is therefore especially high on packaging manufacturers. This is why the digitally organized 31st Dresden Packaging Conference (2nd and 3rd December 2021) hosted by the German Packaging Institute, dvi, spotlighted sustainable packaging and the circular economy.

The lecture program focused mainly on recycle availability. According to Dr. Joachim Christiani, CEO of the Cyclo-HTP certification institute, this is simply not given for practically all polymers in sufficient quantities. His lecture included an overview of the recycling status of each of the materials that are relevant for packaging. Accordingly, recycling capacities have to be radically expanded in almost all fields in order to conform to the terms of the recently amended German Packaging Act. However, the specifications of the market and brand-name producers, some of whom have set their own goals for the use of recyclates, would have a much stronger effect on the packaging branch.

Strong deficits are mainly the case, Christiani says, where flexible kinds of packaging are produced in great quantities. These include films, bags, or sacks. He states that the LDPE (low-density polyethylene) frequently used for them is a particular headache when it comes to recycle quantities. Also difficult is the situation for trays and other packagings made from polyethylene terephthalate (PET), except for the shining example of PET bottle recycling. The main reason for this is that such packagings have previously not been sufficiently designed to be recycled, for instance, in regard to the glues or labels used.



Recyclates of many polymer types are hard to get right now. © Maridav; Adobe Stock

Due to the packaging law and producers' requirements, quite a lot has been happening on the market, observes Christiani.

## *Recycling Companies Can also Support Design for Recycling*

Until now, recycling companies were mainly investing in equipment for recyclates in great demand and for easily recyclable plastics. Meanwhile, more and more facilities are being constructed for hard-to-recycle materials, such as wastes from mixed polyolefins (MPO), for flexible polypropylene (PP), and for PE films. The recycling quotas, Christiani continued, have led to a partial decoupling of the price for compounded plastics. Until now, they followed the prices of new material and were usually somewhat lower. With the obligation to employ specific percentages of recycled materials, this is changing. It is especially the case of polymers that were being recycled in great quantities, he concluded.

To increase the available recycle quantities all those involved have to get in motion, in Christiani's opinion. This includes the packaging manufacturers, final consumers, sorters, and the recycling companies as well. The latter should retrofit their facilities to provide manufacturers more freedom to design for recycling.

The current scarcity of recycled polymers was also confirmed by Christian Schiller, CEO of Cirplus, an online marketplace for recyclates. For every ten suppliers active on the platform, eight are sold out up to three months in advance or even longer. "At the moment, you can sell just about any recycle," Schiller summarized. That also leads to clearly higher price increases on the market. This is most clearly the case for recycled PET (rPET). Since January 2021, prices have increased by 74 % on the average, he reports. The 66 % increase for rLDPE and 64 % for rPP turned out somewhat lower, but were still considerable.

Michael Düsener, in charge of purchasing at plant supplies manufacturer

Compos, offered insight into the procurement practices for recyclates. In many of their packagings, such as bottles for liquid fertilizer and sacks for potting soil, the company employs up to 90 % recycle content. Düsener also confirmed the difficult situation regarding availability. At the moment there are still sufficient supplies available at acceptable prices, but he also fears that the situation will continue to worsen. That is due, among other things, to increasing competition from other branches. "The market is just too small," as he succinctly summarized. Mainly for LDPE and HDPE (high density PE), Düsener reckons with a difficult supply situation. On the other hand, PP availability can be expected to improve.

### Paragon PP

Düsener also expounded on the quality of available recyclates. Top quality is currently available for PP he says, and quite good for HDPE.

But the LDPE situation is tough. Its processing requirements are very stiff,

and the availability of the quality they require is limited. It comes mainly from special collections, he points out, and not from collected household waste. In the next year or two, however, he believes the quality of LDPE recyclates will improve at least to a sufficient degree.

### Retail Groups Are Aggravating the Situation

From chemical recycling, Düsener is not expecting any rapid progress. Its possibilities for food packaging in particular are quite promising. However, until now the systems have been, with very few exceptions, limited to laboratory-scale. Since most of the waste disposal and recycling industry has invested in mechanical recycling, he does not reckon with a rapid upscaling of capacities.

The situation in the recycle market could also worsen, he surmises, because large retail groups are increasingly buying up disposal and recycling companies. They thereby secure the required

quantity of raw materials for themselves. However, that means less recyclates available on the market. For companies that lack the necessary capital to own their own recycling companies, as Düsener points out, that could cause problems in the future. ■

Florian Streifinger, editor

## Info

### Service

Additional information about the Packaging Conference on the event's website:

[www.verpackung.org/events/digitale-verpackungstage](http://www.verpackung.org/events/digitale-verpackungstage)

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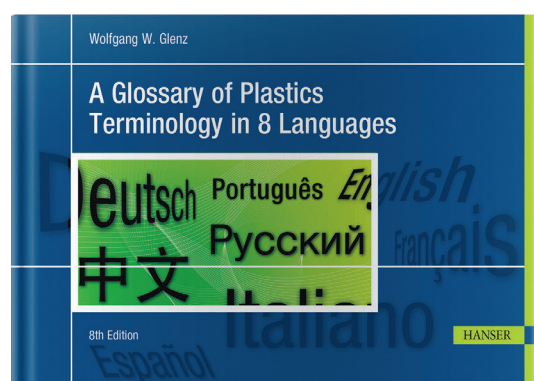
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