

THINK LABEL _FREE

Bottle recycling is a growing business, so any development in bottle design that helps cut the cost of the process is welcome. One element that can add to overall recycling costs is the label. Labels for PET bottles can be made in paper or in plastic, and they can be attached with glue or by shrink wrapping. But in all cases, they need to be removed from the bottle during washing and sorting, so that the PET can achieve a purity that enables it to be profitably recycled into a new bottle.



Removing labels from used bottles is costly for the recycler – not very costly, but costly all the same – and so of course for the packaging company is the process of producing the labels in the first place, warehousing and handling them, and then attaching them to the bottles. So why not eliminate all these costs by not using labels at all on PET bottles?

Food and beverage giant Danone thought it was worth a try. Which is why it teamed up with SIPA to develop and produce label-free bottles for spring water in Poland, Żywiec Zdrój. SIPA was responsible for development during the engineering phase of the package, for all the prototyping, and for production of very special molds for the SIPA's 12 cavities stretch-blow molding platform used by Danone.

A limited-edition 400-mL bottle for Żywiec Zdrój still water has come onto the market in April 2021. It is a triumph of bottle design and production engineering.

The development of this highly eco-friendly rPET bottle presented a formidable challenge for SIPA, since the information and decoration normally found on the label had to be integrated into the body of the bottle. In addition, the bottle shape and size were conceived to save as much possible on the pallet in order to save transport and handling costs. Furthermore, the bottle is made from 100 percent post-consumer PET, as well as being highly recyclable.

The surfaces of the mold cavities created by SIPA incorporate a combination of embossments and debossments – raised and recessed designs – that are mirrored in the surface of the finished bottles. The extreme quality of the molds, together with the precision in the blow molding process, is a precondition for obtaining detail on the bottle that is attractive and – for the lettering – legible.

“Considerable work during prototyping went into ensuring the visibility of the logos,” says SIPA's Packaging development Manager. “This is not only necessary from an aesthetics point of view, but also because the law requires that information relating to water quality is clearly visible on the bottle.”

As for the customer, Danone's Żywiec Zdrój brand manager Maria Uszyńska says: “We are glad to present the first bottle on the Poland market without a label and made of 100% recycled plastic. This is another step of our company towards closing the plastic cycle.”

