

PRESS RELEASE

Containers made entirely of rPET

Greater stability with less material: KHS develops PET bottle with glued-in handle

- Container for home care and food products fully circular
- Up to 30% less material used
- Bottle body and handle made entirely of rPET

Dortmund, October 19, 2022 – KHS has further developed its rPET containers for the home care and food sectors. In addition to bottle handles slotted into place mechanically, the Dortmund company now offers a glued-in process that gives users plenty of benefits: stretch blow molded using the preferential heating method, the KHS PET bottle is more stable than the extrusion-blow-molded polyolefin alternatives¹ currently available on the market. Glued-in handles also require a simpler contour than the clip-in variety, again saving on material and at the same time increasing efficiency in the stretch blow molding process. Both the bottle body and handle are fully recyclable and made of rPET.

The development of the 2.3-liter PET bottle with a glued-in handle is the result of a one-and-a-half-year cooperation between KHS and Logoplaste Innovation Lab. The aim was to design a bottle specifically for home care products with the smallest possible carbon footprint. With its ready-for-market system KHS and Logoplaste Group wish to support the industry's striving for greater sustainability.

¹ Polyolefins are plastics such as HDPE or PP often used in blow molding technology for packaging outside the beverage industry.

Reduced consumption of energy and resources

“Our adhesive technology enables us to cut down on the amount of energy and material used in production and manufacture a container that’s both more stable and visually more appealing than the standard products currently available on the market,” says Sebastian Wenderdel, PET sales business development manager at KHS in Hamburg, Germany. Direct comparison reveals that up to 30% fewer resources are used in the manufacturing process, with 10% in material saved over a clip-in handle. Instead of producing the bottle on an extrusion blow molder as is common, stretch blow molding it is particularly energy-efficient – a not inconsiderable advantage in view of the rising prices for energy and raw materials.

In conjunction with preferential heating KHS provides an extremely precise and reliable piece of plant equipment. This tried-and-tested, energy-efficient heating method permits homogenous distribution of the material during the stretch blow molding process in plastic bottles with an irregular and complex design, thus lowering the number of resources used and boosting bottle stability. Neck alignment with millimeter accuracy as an optional component allows precise product dosing with the help of oriented spout caps.

Furthermore, as the new PET bottle does not have any seams – as opposed to those on standard containers made of HDPE or PP – it has proved convincing in rigorous in-house drop tests, claims Wenderdel.

When selecting a suitable adhesive, the design team drew on the years of expertise accumulated by KHS during the Nature MultiPack project. The container provides a further plus when it comes to product marketing. “The transparent PET material makes the product visible,” Wenderdel states. Moreover, customers can have their very own bottle designed with the help of KHS Bottles & Shapes service program.

Moving towards a circular economy

With the development of its new PET bottle with a glued-in handle KHS is moving closer towards a circular economy in this regard – and with this system wishes to not only address manufacturers of home care products but also food producers. “We provide a circular container whose bottle body and handle consist of 100% recyclate and are themselves fully recyclable. This is still fairly unusual for containers with an integral grip,” emphasizes Wenderdel. As PET is the plastic with the highest recycling rate worldwide, it is also more readily available on the market than materials such as HDPE or PP. These also have the disadvantage that unlike rPET they are not yet circular. “The growing demand for environmentally-friendly packaging and stricter legal requirements governing the use of recycled plastics are perfectly met by our latest development,” Wenderdel concludes.

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Pictures and captions

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Picture captions

PET bottle with glued-in handle

The new PET bottle with a glued-in handle from KHS reduces material consumption by up to 30%. Both the bottle body and handle are fully recyclable and made of rPET.

Sebastian Wenderdel

“Our adhesive technology enables us to cut down on the amount of energy and material used in production and manufacture a container that’s both more stable and visually more appealing than the standard products currently available on the market,” says Sebastian Wenderdel, PET sales business development manager at KHS in Hamburg, Germany.

About the KHS Group

The KHS Group is one of the world's leading manufacturers of filling and packaging systems for the beverage and liquid food industries. Besides the parent company (KHS GmbH) the group includes various subsidiaries outside Germany, with production sites in Ahmedabad (India), Waukesha (USA), Zinacantepec (Mexico), São Paulo (Brazil) and Kunshan (China). It also operates numerous sales and service centers worldwide. KHS manufactures modern filling and packaging systems for the high-capacity range at its headquarters in Dortmund, Germany, and at its factories in Bad Kreuznach, Kleve, Worms and Hamburg. The KHS Group is a wholly owned subsidiary of the SDAX-listed Salzgitter AG corporation. In 2021 the KHS Group and its 4,954 employees achieved a turnover of around €1.245 billion.

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