

PRESS RELEASE

Circular Packaging

Holistic PET container concept sets standards: KHS Loop LITE reduces the carbon footprint significantly

- New development combines pioneering KHS technologies
- Recyclable PET bottle for CSDs made of 100% recycle
- Maximum product protection and elimination of secondary packaging

Dortmund, September 14, 2022 – Reducing the carbon footprint is high on the agenda of the beverage industry. In order to facilitate achieving this goal, KHS presents Loop LITE, a fully recyclable PET container for highly carbonated beverages, which significantly reduces the use of plastic over its entire life cycle. The newly developed weight-reduced bottle¹ is made of 100% rPET and, thanks to its ultra-thin FreshSafe-PET glass inner coating, offers impressive freshness as well as quality protection without affecting the recyclability of the PET material itself. With its Nature MultiPack, the Dortmund-based system supplier relies entirely on film-free secondary packaging. Caps (tethered caps) permanently attached to the bottle round off the holistic sustainability concept of KHS' new system.

“As experts for holistic PET container systems, we continuously develop sustainable packaging designs that contribute to both the ecological as well as the economic goals of our customers,” says Vesela Helwes, sales expert for PET market development at KHS. “This includes, for example, particularly

¹ No caps and labels

lightweight packaging that can be produced with a minimum amount of resources and recycled without compromise, thus contributing to the decarbonization of the industry. With our KHS Loop LITE, we have developed a new PET container concept that specifically addresses the specific needs of CSD beverage manufacturers and meets their high standards in every respect.”

Resource-saving and energy-efficient bottle production

Thanks to its specially developed design, the rPET packaging for highly carbonated beverages makes it possible to reduce the amount of material used by up to 25% compared to conventional branded CSD bottles on the market. The bottle body can also be completely recycled and segregated by type. The innovative and particularly lightweight thread makes resource-conserving bottle production possible, and the permanently attached caps contribute towards achieving a 100% closed loop. In addition, we were able to secure an up to 30% reduction of the labeling materials. The special geometry of the newly designed rPET bottle base decreases the pressure required for the stretch blow molding process and can save up to 15% more energy and thereby cut bottle production costs.

Proven and unique KHS technologies

KHS additionally relies on field-proven technologies for Loop LITE, which holistically emphasize the sustainability concept of the container: thanks to its ultra-thin protective layer of silicon oxide (SiO_x), FreshSafe-PET, for example, forms an effective barrier on the inner walls of PET containers. The flavor and carbonation are retained while at the same time preventing oxygen from entering the product to thus avoid the loss of vitamins and taste. With its innovative coating system that offers an environmentally friendly alternative to PET bottles made of difficult to recycle composite materials, the new container concept makes it possible to lengthen the shelf life of bottled beverages by up to 26 weeks despite the significant reduction in weight.

This is a great advantage especially when transporting products over long distances. Moreover, the container is designed to greatly increase the packing density for pallet transport. As a result, the carbon footprint of the packaging is reduced by up to 60% versus standard systems with bottles made of uncoated and new PET.

With the Nature MultiPack, one of the most sustainable types of secondary packaging on the market, KHS Loop LITE relies entirely on secondary packaging that is completely film-free. Instead of plastic film, the bottles are held together with dots of adhesive. This again noticeably reduces the amount of plastic used.

KHS Loop LITE offers ecological and economic advantages

“With the currently increasing cost of raw materials, the cost savings resulting from the substantially lower overall material usage are significant versus conventional solutions on the market. This indicated in the calculation of the total costs, which we specifically point out in the course of discussions with customers,” says Helwes. KHS Loop LITE is of particular interest to brand name producers. “With our new marketable concept, we are systematically pursuing the course we are taking towards *circular economy*. The line-compatible, non-returnable PET system not only represents a feasibility study, but also directly aids beverage bottlers in their quest to convert to an environmentally friendly and sustainable portfolio,” says Helwes.

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KHS Loop LITE (Source: Frank Reinhold)

The newly developed weight-reduced bottle body made of 100% rPET can be completely recycled and segregated by type. The innovative and particularly lightweight thread and the permanently attached caps are aimed at achieving a 100% closed loop and a resource-saving bottle production. The same applies to the labels requiring up to 30% less material.

Lightweight system (Source: Frank Reinhold)

The newly developed weight-reduced bottle body is made of 100% rPET and, thanks to its ultra-thin FreshSafe- PET glass inner coating, offers impressive freshness as well as quality protection without affecting the recyclability of the PET material itself.

Vesela Helwes (Source: private)

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Circular packaging diagram (Source: KD1)

With its KHS Loop LITE, the system supplier presents a fully recyclable PET container for highly carbonated beverages, which significantly reduces the use of plastic over its entire life cycle.

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 sectors. In addition to the parent company (KHS GmbH), the company group is comprised of various subsidiaries outside Germany with production sites located in Ahmedabad (India) and Waukesha (USA), Zinacantepec (Mexico), São Paulo (Brazil) and Kunshan (China) in addition to numerous international sales and service offices. KHS manufactures modern filling and packaging systems for the high-capacity range at its headquarters in Dortmund, Germany, and at its plants 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 group and its 4,954 employees achieved a turnover of around €1.245 billion.

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