

PRESS RELEASE

PET bottles

KHS SUPREME: clear benefits for aseptics

- KHS SUPREME combines high-quality design with the product protection properties of glass bottles
- Maximum protection thanks to Plasmax barrier technology for premium products at outputs of up to 60,000 bottles per hour

Dortmund, February 24, 2026 – With KHS SUPREME, the KHS Group is taking the protection of oxygen-sensitive beverages up to the next level. The innovative system combines the benefits of glass with the handleability of PET by applying Plasmax barrier technology.

KHS presents the result of an extensive development study: with the KHS SUPREME PET bottle, the Dortmund turnkey supplier is focusing on the product protection of oxygen-sensitive beverages such as tea. Here, KHS makes use of its tried-and-tested Plasmax barrier technology, a wafer-thin, transparent layer of silicon oxide that coats the inside wall of PET bottles like glass. Less than 100 nanometers thick, it reliably protects the sensitive bottle content from oxidation, retaining its taste, color and quality for lengthy periods of time. This helps to make the product last up to ten times longer.

Plasmax technology, that KHS has been successfully using for over 20 years, is being continuously further developed at its Hamburg factory. This site is KHS' competence center for PET, with the team's pooled expertise directly incorporated into every single innovation to support customers worldwide with the development of pioneering packaging systems.

Protection for quality-sensitive beverages

“Our barrier system is ideal for premium products such as green tea that’s extremely quality-sensitive and has to satisfy the highest requirements on markets such as Asia,” explains Philipp Langhammer, product manager for barrier technology at KHS. Tea oxidizes easily, leading to unwanted changes in color and taste. The glass barrier prevents this, making for long shelf lives, freshness and safety.

This technology, originally developed for pharmaceutical glass containers, is based on many years of research and process optimization. The first Plasmax systems were piloted in the food sector back in the early 2000s. Since then, KHS has further developed its Plasmax barrier and this year scaled it up to industrial production speeds of up to 60,000 bottles per hour – without any detriment to its protective properties.

Technology meets sustainability

Besides its technical precision, the barrier is also convincing with respect to its environmental friendliness. One major advantage of Plasmax technology is that it is completely recyclable: the glass coating is removed by caustic during the recycling process without affecting the quality of the material. Unlike chemical scavenger technologies that make recycling more difficult, here, the purity of the separated PET is maintained. The coating is also fully compatible with 100% [r]PET: this means that it can be recycled and applied to recycled PET containers. “We thus refer to this as a fully circular barrier technology,” says Langhammer. “Our style of packaging combines all the benefits: top barrier performance and full recyclability.”

KHS will be presenting its pioneering system at interpack in Düsseldorf, Germany, from May 7 to 13 in Hall 13, Booth A31. With KHS SUPREME, the Dortmund systems manufacturer demonstrates its extensive powers of innovation in the PET segment.

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Pictures and captions

(Sources: Frank Reinhold and Jörg Schwalfenberg)

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Picture captions

Philipp Langhammer (source: Joerg Schwalfenberg)

“Our style of packaging combines all the benefits: top barrier performance and full recyclability,” says Philipp Langhammer, barrier technology product manager at KHS.

KHS SUPREME

The KHS SUPREME PET bottle combines high-quality design with the product protection properties of glass bottles.

Maximum product protection

KHS SUPREME provides maximum product protection for quality-sensitive beverages thanks to innovative Plasmax barrier technology.

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 2024 the KHS Group and its 5,626 employees achieved a turnover of around €1.654 billion.

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