

PRESS ARTICLE

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StarLITE®-R Premium: Sidel's new streamlined rPET bottle base elevating high-end products



StarLITE®-R Premium is a sleek, high-performance bottle base for distinctive, 100 percent rPET bottles

Sidel has expanded its StarLITE®-R range to include a new premium bottle base suitable for liquid dairy products, flavoured water as well as juices, nectars, soft drinks, isotonics and teas.

“This bottle is specifically crafted for the premium market, where consumers expect exceptional performance and striking shelf appeal when purchasing a high-end product. Our new bottle is designed to endure every stage of its journey—from production through the supply chain, to the supermarket shelf, and ultimately into the consumer’s hands. The bottle quality and performance has also been rigorously tested in Sidel’s laboratories under industrial conditions.” says Pierrick Protais, Packaging Innovator Leader at Sidel.

“Consumers also look for a sophisticated, streamlined appearance, and our new bottle design meets these expectations by offering a base that is distinctive and high performing with a low environmental impact.”

Streamlined, high-end design with hidden top-performing technical features

Premium bottles are typically heavier than standard designs to ensure a great consumer experience through bottle rigidity and preserved beverage quality. When bottles have increased PET thickness, their bases are prone to deformation especially if manufactured at high speeds.

StarLITE®-R Premium bottle base has a sleek, elegant and streamlined aesthetic. The flat-looking bottle bottom creates a high impact bottle display on supermarket shelves, and is compatible with round and square-round shaped bottles; single and multi-serve sizes; and can be used with opaque and transparent PET.

Sidel's StarLITE®-R Premium's technical features allow a 100 percent rPET bottle to be blown at high speed while securing maximum base performance for a top bottle quality with a visually appealing look.

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The design uses a Sidel patented vault technology to avoid any visible ribs on the bottle base and to optimise its geometry. Made of a tall central dome, surrounded by lower radiating ridges with alternating widths and lengths, the bottle base is easy to blow, and perfect material distribution and a high base clearance are ensured. The base offers guaranteed bottle stability thanks to its wide-standing surface. Additionally, the mould base includes an enhanced cooling circuit for efficient bottle base chilling, especially with rPET, which is processed at higher temperatures when compared with virgin sources.

These technical features allow the bottle base to be highly performant when manufactured at a high speed of up to 2,500 bottles per hour, per mould thanks to the optimised geometry of the bottle design.

Premium look and performance with low environmental impact

"Premium bottles are typically seen as less sustainable than standard versions, as they use more PET material, for increased wall thickness, and they require higher blowing pressure," says Protais. "However, with global packaging regulations increasingly focused on environmental impact, manufacturers are now seeking exclusive product alternatives that provide carbon savings. That's precisely what StarLITE®-R Premium offers."

StarLITE®-R Premium can be manufactured using 100 percent rPET and Sidel has adapted its mould base technology to accommodate the material, to ensure a top-quality bottle. Similarly, this easy to shape base requires a lower blowing pressure.

Sidel's StarLITE®-R Premium bottle base offers producers significant carbon dioxide savings. With the switch from virgin to 100 percent rPET, manufacturers can save up to 3,100 tonnes of carbon dioxide equivalent per year,¹ and by reducing the blowing pressure of up to 25 percent when compared to a market average premium bottle, up to 61 tonnes of carbon equivalent savings per year can be achieved².

Ready for a wide range of production setups

This new premium bottle base is designed to accommodate bottle formats ranging from 0.25L to 2L, making it highly versatile and it is capable of reaching up to 2,500 bottles per hour per mould (b/h/m).

This base is compatible with a wide range of bottle designs and premium bottle weights, offering exceptional flexibility. It can be produced on EvoBLOW, Universal, and Series 2 platforms, and is suitable for both regular and aseptic filling lines. Additionally, it is easy to retrofit into existing production lines, ensuring a smooth integration process.

Expanding StarLITE®-R range

¹ Comparison based on: 100% rPET vs. virgin PET | 1L, 28g bottle | 140M bottles produced per year | Environmental footprint reference data: 2.43 t CO₂ eq / ton of virgin PET and 1.63 t CO₂ eq/ ton of rPET | Data source: Ecoinvent, Method IPCC 2013, Category climate change, Indicator GWP 100a

² Comparison based on: 24b market average vs. 18b StarLITE-R Premium | 1L, 28g bottle | 140M bottles produced per year | Data source: Energy factor TERNA 2019 for European average, UK included (278 g CO₂eq. / kWh)

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The premium bottle base is the latest addition to Sidel's signature StarLITE®-R range, joining the ranks of innovative designs like the StarLITE®-R Nitro and StarLITE®-R for carbonated soft drinks (CSD). Launched earlier in 2024, the StarLITE®-R Nitro is a unique, high-resistance bottle base specifically engineered for still nitrogen-dosed products in 100 percent rPET bottles. Meanwhile, the original StarLITE®-R for CSD, was Sidel's first solution dedicated to rPET, offering enhanced protection against deformation, improved stability, and increased resistance to bursting.

Find out more about StarLITE®-R and how you can access this kind of support for your business on the [Sidel website](#).

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Sidel is a leading global provider of packaging solutions for beverage, food, home and personal care products in PET, can, glass and other materials.

Based on over 170 years of proven experience, we help shape the factory of tomorrow, through advanced systems and services, line engineering, eco-solutions, and other innovations. With over 40,000 machines installed in more than 190 countries, Sidel has 5,000+ employees worldwide who are passionate about providing equipment and service solutions that fulfil customer needs.

We continuously ensure we understand the evolving business and market challenges our customers face and commit to meeting their unique performance and sustainability goals. As a partner, we apply our solid technical knowledge, packaging expertise and smart data analytics to assure lifetime productivity at its full potential.

We call it **Performance through Understanding**.

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