



A delicate balance of precise geometry

Carefully designed

Closures are literally the backstop of preforms. With the perfect preform only as good as its closure, one knows that a closure has many responsibilities, from ease of opening to effective protection of the product within. Closures need to perform in partnership with the preform, both from an application and an environmental perspective. Even if a closure is consumer- and product-friendly, recent legislation on tethered closures highlight how crucial it is that designs are also in accordance with the circular economy.

The EU directive on Single Use Plastics in May 2019 highlighted design requirements to connect caps to bottles from 2024, with regulations extending from the Circular Plastics Alliance launched in December 2018 by the European Commission. This high-level, multi-stakeholder platform gathers the complete plastics value chain to ensure the responsible progression of plastic packaging throughout its entire lifecycle. With plastic packaging producers keen to stay ahead of the legislation, understanding how the legalities of closures is changing is integral to continued profitability, as well as crucial to the positive influence of the industry at a time when public perception of plastic is low. In addition to the tethered requirements, closures must adhere to the increasingly strict rules of additives and colourants, in order to support their ability to be recycled in standard collections and to protect the value stream of the recycled content it creates.

Circular closures

Appreciating that forward-thinking plastic producers can be part of the solution by evaluating and boosting their sphere of influence means that the design and production of responsible closures and preforms is more important than ever before. Global plastic packaging producer Retal operates in over 60 countries worldwide and is vocal about its commitment to the circu-

lar economy. Continued investment and expertise in design of tethered closures sits alongside its myriad actions including installing the EU's largest solar panel roof in Lithuania, buying renewable energy wherever possible and signing up to organisations such as Waste Free Oceans and RecyClass.

The technical development of responsible tethered closure solutions that enhance its preform portfolio is supported by the R&D team's deep expertise in utilising the latest 3D CAD software. Development director Anton Sugoniaev explains how responsible use of colourants and additives rightly influences the company's ongoing development of effective, efficient and responsible HDPE closures, saying, "Closures are very sensitive, far more than preforms, so we must concentrate our expertise on getting to that delicate balance of precise geometry. A closure that is easy to turn for consumers, including those of reduced mobility, yet also provides strength and shows excellent stress cracking resistance, has to be carefully designed by technical experts." Retal has produced over 10 bn closures, with its closures' portfolio initiated with the foundation of its first single-piece closure machine nearly two decades ago, with steady growth seeing today's activities currently standing at 60 closure production lines at ten sites across Eurasia and in the US.

High standards

Working in partnership with many of the world's leading food and beverage brands, Retal's commitment to creating and producing responsible plastic packaging solutions means that these high volumes of closures are assured, certified ISO 9001:2001 and regularly inspected by local and international standards, such as the PET. RUS' Quality Management System which meets the ISO 9001:2008 requirements. Key account director Alexander Kalinin states that Retal's continual development in the closures category means that its current positive position in the market makes Retal a reliable closures partner. He says, "With nearly 20 years' expertise in the closures business, we have seen continued investment alongside extensive technical understanding of how the EU regulations on plastics additives and colourants affects closures and their recyclability and performance. By adjusting our equipment, enhancing our laboratories' capabilities and staying ahead of technical legislation, we will continue to expand our PCO1881 and tethered closures range."

Another advantage of the light weight of the new closures solution means that customers have the choice not to invest in the new standard 26/22 as it is fully compatible with the current 1881 equipment due to being practically the same weight, plus it is also suited to both carbonated and non-carbonated beverages.

This predicted expansion will be supported by Retal's centralised procurement, with closures warehousing available in every plant of the Group. Investment in super-lightweight PCO1881 closures, including vision quality control, printing and laser engraving is projected, further boosting the performance of the closures as well as the environmental footprint, supporting Retal's promise of being active in its sphere of influence for the good of the circular economy.

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