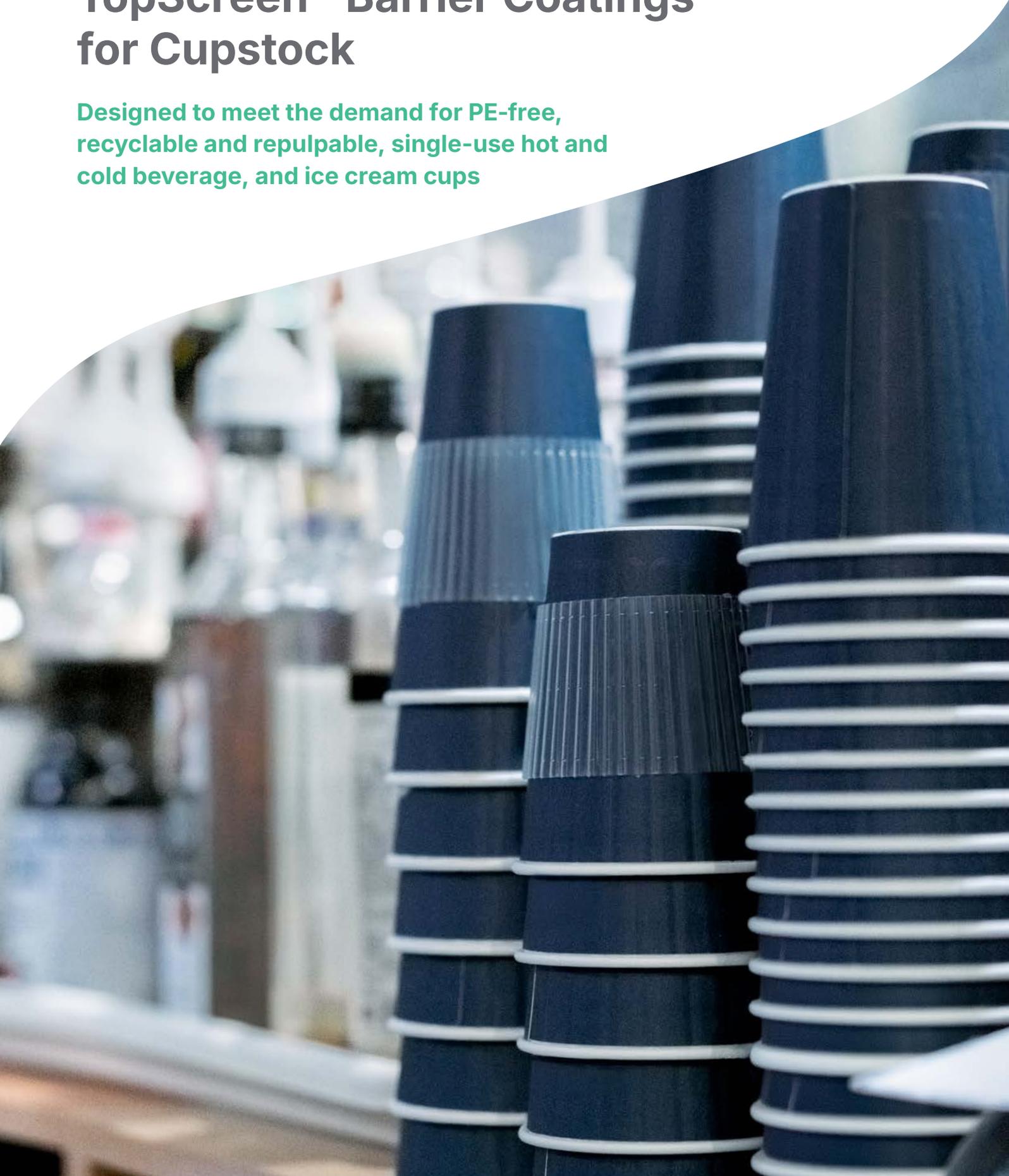




TopScreen™ Barrier Coatings for Cupstock

Designed to meet the demand for PE-free,
recyclable and repulpable, single-use hot and
cold beverage, and ice cream cups



Technology Overview

TopScreen™ barrier coatings for cupstock provide a versatile, easy to use solution for producing next generation cupstock with a superior liquid barrier—without the need for polyethylene (PE) film.

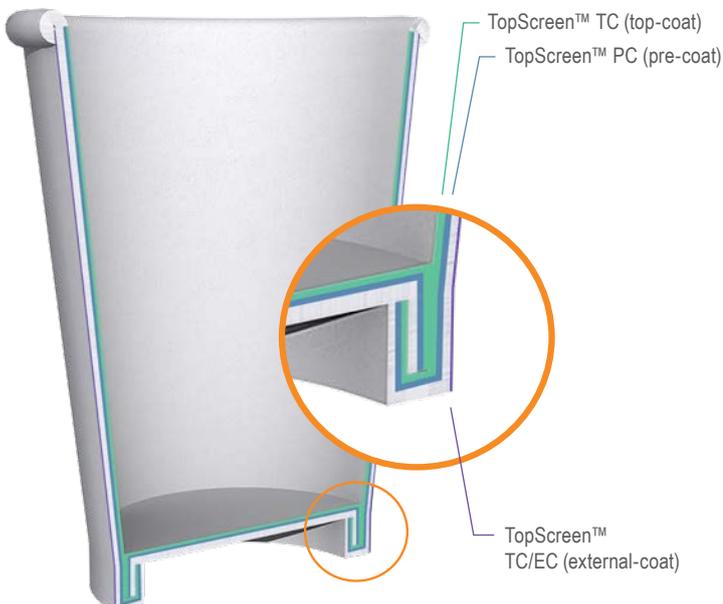
These coatings can be applied using standard equipment and work seamlessly with conventional cup forming processes. TopScreen™ barrier coatings are fully recyclable and repulpable, offering an environmentally friendly alternative to PE laminated board.



Technology Description

TopScreen™ barrier coatings are available in both precoat and topcoat options, providing a highly adaptable solution for next generation cupstock. While the precoat layer is not required to achieve strong performance, it can enhance the efficiency and consistency of the topcoat.

The topcoat delivers the essential barrier and functional properties needed for demanding applications. Together, the combined system provides robust protection against hot and cold liquids—including ice cream—and supports reliable heat sealing. These coatings are fully compatible with standard cup forming technologies, including both hot air and ultrasonic sealing, helping manufacturers streamline production without equipment changes.



This illustration is for example purposes.

Technology Application

TopScreen™ barrier coatings provide a highly effective water barrier for cupstock paper used in a wide range of paper cups and food containers. These waterborne dispersions can be applied using standard coating application methods, including metered size presses, film, rod, air knife and curtain coaters, as well as gravure and flexographic printing presses.

Ideal for hot and cold beverages, ice cream and other quick serve applications, TopScreen™ coatings also support excellent printability—enabling high quality typography, logos and graphics on finished cups. In addition, the coatings are suitable for registered printing, helping reduce adhesive requirements for greater cost efficiency and improved recyclability.

Regulatory Compliance

TopScreen™ products comply with regulatory and standard frameworks: BfR XXXVI (Germany), EU 1935/2004 (Europe), FDA 21 CFR § 176.170 (USA) and FDA 21 CFR § 176.180 (US). GB compliance is in place for some of the products in the range. For more detailed information, refer to specific Regulatory Data Sheets.

Sustainability

Paper treated with TopScreen™ products is fully recyclable and repulpable, allowing post consumer cups to be recovered and converted into new cups or other paper based packaging. They also meet the necessary barrier requirements for compostability, supporting more sustainable end of life options for fiber based packaging.

Critical Parameters for Water-based Barrier Coatings

Parameter	Key Considerations	Implications
Formulation	Anti-blocking Cost Raw materials Processability Sealability Shelf-life Stability Viscosity	Cup making Shipment, storage Coating weight uniformity Competitiveness
Cup Stock Paper	Paper substrate Surface roughness Surface starch	Plybond Coating weight, pre-coat Sealability, blocking
Coating Weight	Coating weight control Double-side coating Single-side coating Precoating	Cost, repulpability Sealing, blocking (on the roll)
Coating	Air knife Blade Curtain Rod	Coating weight uniformity Sealability, blocking
Drying	Drying equipment Temperature Time	Blocking, deposits
Transportation and Storage	Temperature Time	Blocking
Cup Production	High speed Hot air mechanical Hot air servo Low speed Medium speed Ultrasonic	Sealability Productivity Cost Printability
Shipment and Storage	Temperature	De-nesting



More Information

For more information about TopScreen™ barrier coatings for cupstock, please contact your local Solenis sales representative or visit us online at solenis.com/foodpack.



To learn more about how Solenis can help address your toughest challenges and more, please visit [solenis.com](https://www.solenis.com)