

ContourSM PFAS-free Oil & Grease Resistant Technology

Designed to replace the use of per- and polyfluoroalkyl substances (PFAS) in the production of molded pulp food containers



Solenis is the partner of choice for leading food and beverage paper packaging producers. In addition to offering the broadest range of papermaking additives in the industry, we offer an innovative portfolio of environmentally friendly barrier coatings for food packaging applications. These food contact barrier coatings not only enable papermakers to develop paper-based alternatives to plastic packaging but also, in many cases, to meet their sustainability goals.

Value Proposition

ContourSM PFAS-free oil & grease resistant technology is a non-PFAS solution that provides functional barrier properties to thermoformed molded fiber articles. It enables the replacement of single-use plastics in food containers with sustainable molded fiber-based solutions.

ContourSM technology comprises a range of products that are compostable, recyclable, regulatory-compliant and a cost-effective replacement for PFAS in current food service applications.

Designed to work as a system, comprising functional and process additives, the tailored program is applied internally and meets barrier and other quality requirements, as well as performance criteria, under most circumstances.



Technology Description

ContourSM technology is a robust and flexible technology platform designed to deliver required barrier and strength properties. It consists of multiple components: water barrier, oil and grease barrier, strength and retention, and drainage technologies.

Technology Application

The Solenis ContourSM solution brings together several capabilities — water and oil resistance, strength, additive retention, drainage/dewatering management and contaminant control. Each program is tailored to the customer's specific fiber furnish, production process and end-use requirements by modifying one or more important variables, including order of addition, mixing, retention, dewatering, drying efficiency, chemistry optimization and productivity.

Current commercial applications are added to the pulp slurry prior to wet molding, pressing and drying. Surface applications, aimed at enhancing barrier performance, are in varying stages of development. By combining "internal" and surface

treatments, paper and board packaging manufacturers will be able to achieve additional levels of performance — for example, for longer-duration food packaging applications.

Regulatory Compliance

Products in this platform are compliant with regulatory and standard frameworks: FDA (USA), BfR (Europe) and GB9685 (China). Regulatory Data Sheets are available upon request.

Sustainability

This technology meets composability, repulpability, recyclability requirements and is not PFAS based. This state-of-the-art chemistry can deliver a renewable and a non-plastic based end-product.

Cost

The cost-in-use for the ContourSM program is competitive with legacy programs that include PFAS-type grease barrier applications, with the application cost ranging from \$150 to \$300/ton.



Solenis' Technology Portfolio for Molded Fiber Articles

Technologies	Value Delivery
 TopScreen™ Barrier Coatings	Internal and surface applied programs to control penetration, absorption and transmission of liquids, vapors and gasses.
 Hercobond™ Plus Dry Strength Additives Xelorex™ Paper Performance Additives Kymene™ Wet-strength Resins	Strength solutions for compression resistance, torsional rigidity, reduced fiber costs, and wet strength.
 Pergabase™ Basic Dyes Pergalite™ and Solar™ Paper Pigments Pergasol™ Direct Dyes	Paper colorants that produce a wide spectrum of colors.
 PerForm™ Advanced Retention and Drainage Aids	Retention and dewatering programs designed to reduce cycle time, maximize additives efficiency and minimize scale formation.
 Spectrum™ Microbiocides	Microbial control of biofilm formation and pulp degradation, control spores and odor control (VFA's).
 DeTac™ Pitch and Stickies Control Agents Zenix™ Scale Inhibitors ReNew™ Cleaning Agents	Contaminant control and mold release to minimize formation of deposits/scale on process surface, reduce sticking of parts to tooling, and removal of deposits during downtime.
 Advantage™ Defoamers Afranil™ Defoamers	Defoamer and antifoam formulations for control of surface foam and entrained air that can increase system deposits, affect quality and increase cycle time.
 Pulp Mill Additive	Pulping additives and processing aids to improve quality and/or uniformity of pulp furnish, enzymatic refining.
 Water Treatment Solutions	Raw, process, cooling, wastewater treatment to remove solids, control biofilm formation, reduce corrosion and/or scaling.

More Information

Solenis' expertise lies in customizing and implementing ContourSM solutions according to customers' needs and demands for the type of article being produced, raw materials used, and specific process employed.

For more information about ContourSM PFAS-free oil & grease resistant technology, please contact your local Solenis sales representative or visit us online at [solenis.com/foodpack](https://www.solenis.com/foodpack).



Advanced solutions for your toughest challenges.

Solenis is a global leader in specialty chemicals for water-intensive industries. With an average of 20 years expertise, our team is the industry's most knowledgeable. That's how we solve your toughest operational and sustainability challenges—whether you're in the pulp, paper, oil and gas, petroleum refining, chemical processing, mining, biorefining, power or municipal market. Combining the right people, the right experience and the right technology, we're built to deliver value.



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