

# TISSUE AND TOWEL SUSTAINABILITY

**Bringing the right products and people  
to your papermaking**



As the global leader in tissue and towel functional and process technologies, Solenis has a strong history in driving sustainable development. Our platform of innovative products and services enables tissue mills to responsibly manage fiber usage, save energy, conserve water, and improve safety and compliance.

## Overview

For more than 50 years, Solenis has been a trusted partner to tissue and towel producers looking to delight end-user customers, improve operational efficiency and comply with stricter government regulations. We offer solutions that help customers comply with environmental restrictions and consumer safety requirements. Our portfolio includes innovative chemicals, on-site experts and on-call application specialists — a total solution that can help mills deliver higher-quality products, drive enhanced productivity and cost savings, and support compliance efforts.



## Responsible Fiber Management

Responsible fiber management forms the cornerstone of sustainability for every mill, which is why Solenis offers a number of technologies that enable greater diversity in fiber sourcing. Our recent innovations enable mills to:



**Decrease consumption of virgin fiber.** Reduced basis weight papers require less virgin fiber, but they often suffer strength and softness deficits. Hercobond™ 7000 dry strength resins from Solenis help overcome these challenges. They deliver supreme flexibility in wet-end systems, enabling higher dry strength while maintaining excellent softness.

**Increase the usability of recycled fibers.** Enzymes have become increasingly common in mills to modify the quality of fiber and to widen the refining window. Solenis' Hercobond™ 8000 dry strength resins enable tissue makers to significantly improve sheet strength, reduce fiber degradation and increase recycled fiber utilization.

**Introduce more plantation-sourced fibers.** The use of eucalyptus and acacia can help tissue makers diversify their pulp portfolio, but they introduce their own production challenges. Crepetrol™ creping adhesives and Rezsol™ release aids from Solenis minimize dust when using such short fibers while they extend the life of Yankee cylinders and creping blades.

## Energy Savings

Papermakers consume significant quantities of fuel and electricity, making energy efficiency one of the highest priorities for mills looking to achieve environmental targets, cost savings and improved output. Solenis has the expertise and the product line to help — our solutions enable mills to:

**Make water drainage more effective.** Increasing the effectiveness of water drainage yields lower dryer energy requirements. PerForm™ SP advanced retention and drainage aids from Solenis combine the drainage benefits of traditional microparticles with the fines and filler retention capabilities of micropolymer technologies for superior water drainage. And our Hercobond™ 6000 paper performance additives can often reduce or eliminate the use of wet-end additives, allowing for more effective water drainage while improving dry strength.

**Improve the efficiency of the Yankee dryer.** In any mill, the Yankee dryer represents a significant opportunity for energy savings. Solenis' Crepetrol™ creping adhesives and Rezsol™ release aids are designed to provide the desired film rheology over a wide operating window of machine conditions and furnish variables.

**Increase operational efficiency across your boilers and cooling water systems.** Solenis offers a variety of chemistries and equipment that ensure your water and energy use is efficient and comply with regulatory requirements while maximizing your systems' reliability and protecting your equipment assets. For boilers these include corrosion, scale inhibitors and dispersants for internal boiler and steam treatments. Our Amertrol™ deposit inhibitors ensure reliable coordinated phosphate programs in high pressure boilers while our Amercor™ corrosion inhibitors protect





steam lines. For cooling systems Solenis offers a wide range of chemistries that address microbiological control, corrosion and scale inhibitors in particular our Performax™ MX corrosion and deposit control chemistries for high performance systems.

## Water Conservation

Tissue and towel producers, especially those in high water-risk areas that effectively plan ahead with aggressive risk mitigation programs, will be well positioned for the future. Solenis has worked closely with a number of mills to develop these programs, which seek to reduce freshwater consumption on a number of fronts. We offer innovations to:

**Improve real-time monitoring.** Solenis' OnGuard™ monitoring and control systems, which include proprietary sensors and analyzers, controllers and our online data management service, provide complete assurance that your treatment programs are performing optimally 24/7, 365 days per year. When coupled with our superior chemistry, mills can reduce water and energy costs.

**Facilitate the operation of closed systems.** Closed water circuits can result in deposition problems. Solenis innovations help papermakers address these issues. For example, DeTac™ pitch and stickies control agents combine the benefits of detackifiers, stabilizers and fixatives to address multiple deposition parameters. And antiscalant solutions from Solenis help to control the formation of virtually any type of scale.

**Reduce contaminants in wastewater.** Solenis has a broad portfolio to address solids removal and reductions in COD/BOD in your effluent streams. Our R&D programs are designed to develop technologies that meet current and future environmental standards. Our Drewfloc™ and Praestol™ flocculants enable your mill to reducing sludge disposal costs, discharge fines as well as assisting in total cost of operations. We also offer bioaugmentation and odor control lines to assist in meeting these requirements.



## Safety and Compliance

Protecting the safety, health and welfare of workers is a key element of any sustainability initiative. One of Solenis' highest priorities is to make papermaking better for employees and safer products for consumers:

**Food contact material safety standards.** Solenis' G3 Kymene™ wet strength resins have been developed to aid tissue and towel producers that must meet requirements for paper and paperboard components that have contact with aqueous and fatty foods. This additive meets recommendations issued by the German Federal Institute of Risk Assessment (BfR) and the U.S. FDA for safe food contact with paper products or components.

## More than 50 Years

### A trusted partner in the Tissue and Towel Industry

**Hercobond™** Dry Strength Resins

**Crepetrol™** Creping Adhesives

**Rezsol™** Release Aids

**PerForm™ SP** Advanced Retention and Drainage Aids

**OnGuard™** Monitoring and Control Systems

**DeTac™** Pitch and Stickies Control Agents

**Spectrum™** Biocides

**Kymene™** Wet Strength Resins

**Performax™ MX** Corrosion and Deposit Control Chemistries

**Amertrol™** Deposit Inhibitors

**Amercor™** Corrosion Inhibitors

**Drewfloc™** Flocculants

**Praestol™** Flocculants





# Solenis

## Strong Bonds. Trusted Solutions.

Solenis supplies specialty chemicals for water-intensive industries, including the pulp and paper, oil and gas, chemical processing, mining, biorefining and power markets. Whether you want to increase production, develop new products, reduce costs or simply do more with less, we can help. With our innovative technologies, passionate people and unrivaled experience, Solenis is ready to deliver the solutions you need.

To learn more, contact your technical sales representative or visit us online.

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