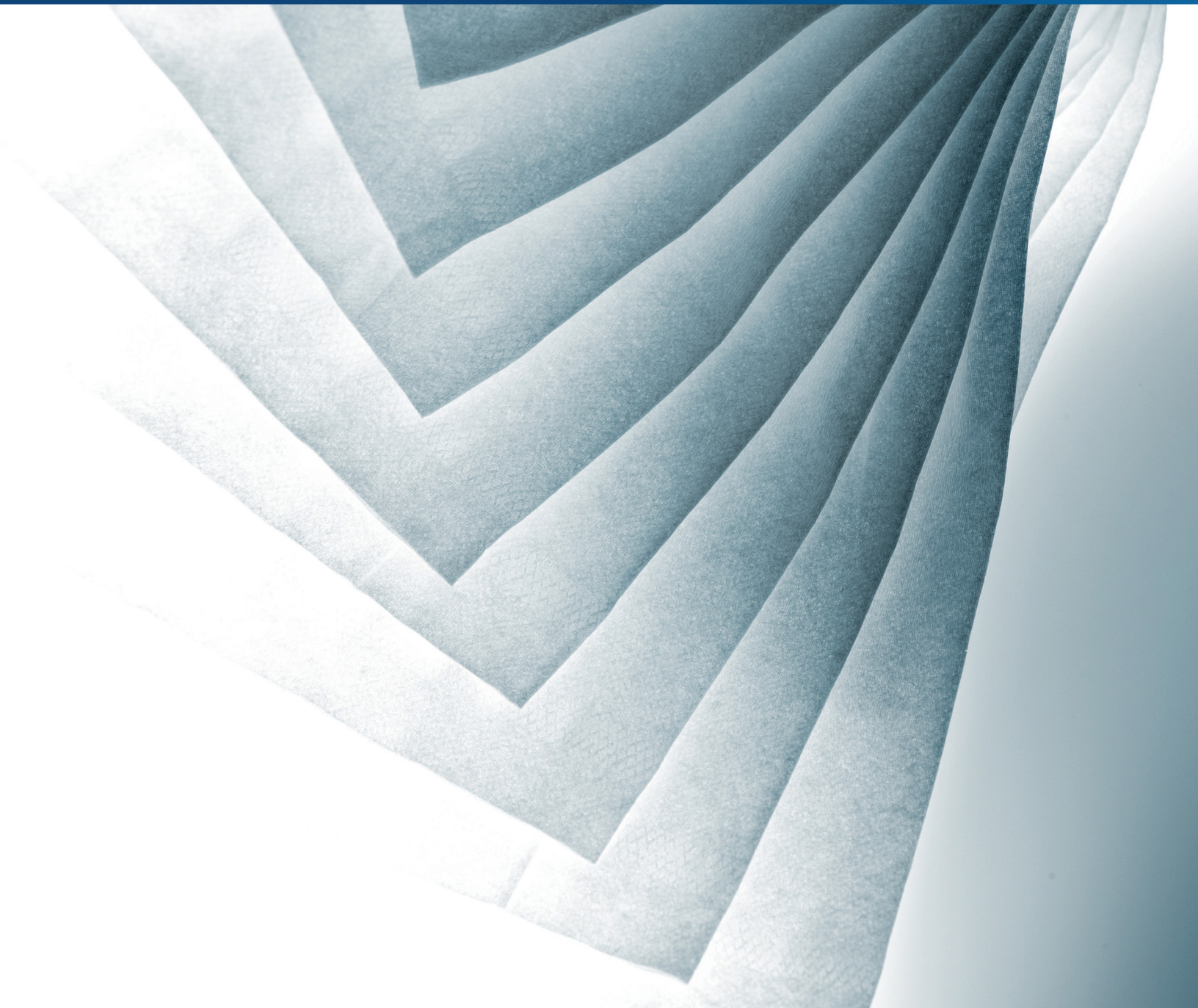


NALCOWater
An Ecolab Company

TULIP™ Creping Technology

Improving Softness, Raising Productivity



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TULIP Creping Technology Delivers:

- Improved Total Cost of Operation (TCO) through efficiency and utilization of alternative furnishes
- Improved softness while maintaining traditional sheet characteristics
- Improved technology in pursuit of chatter abatement
- Improved (less) product variation
- Improved energy efficiency

Program Description

TULIP Creping Technology provides a sustainable source of competitive advantage due to a unique bundling of technologies. By combining innovative chemistries with suitable automation systems and monitoring tools, significant improvement in the creping can be documented.

In recent years, tissue makers have moved towards lower moisture creping to satisfy market-driven demands for premium tissue products. These moves are driven by a desire to improve softness and bulk characteristics of the sheet. Low moisture creping is a proven technology for improving the creping transformation and achieving the desired sheet properties

Lower moisture creping is also associated with a higher cost of operation due to increased energy demand and numerous machine runnability issues.

TULIP Creping Technology provides an opportunity to break away from low moisture creping while still allowing the tissue maker to achieve the desired goals.

Technology Benefits

TULIP technology differentiation is primarily due to the unique properties related to the following attributes:

- Greater adhesion
- Wider creping moisture operating window
- Improved coating uniformity and softness

- Superior re-wettability without negatively affecting coating durability
- Environment-friendly technology with no VOC and chloro-organic by-products

Nalco Water developed TULIP Creping Technology based on proprietary creping chemistry. When coupled with the appropriate modifying release, the resultant platform delivers the desired production results. This platform provides high adhesion over a wide range of creping moistures. The increased efficiency of TULIP technology generally allows for a reduction of chemical add-on to up to 50 percent, or the ability to crepe at higher moisture while still delivering the desired results.

TULIP technology can provide high adhesion within a wider moisture range, and lab evaluations and industrial application have confirmed this.

TULIP Creping Technology

TULIP Creping Technologies have provided documented benefits to many tissue machines with various forming and pressing configurations. These include:

- Conventional creping, both wet and dry
- Crescent, TWF, SBR, and Fourdrinier formers
- Single and double felt presses
- Cast iron and metallized Yankee surfaces
- Creping moistures between 1.5 and 15 percent

The TULIP Creping Technology platform is capable of offering very high levels of adhesion – both at the suction press roll to ensure excellent sheet transfer and at the creping blade to ensure product quality expectations are met.

Contact Us

For more information about TULIP Creping Technology coating programs and their benefits for you, please contact your local Nalco Water sales engineer or visit www.ecolab.com/offerings/tulip-creping-technology.

ecolab.com/nalco-water

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