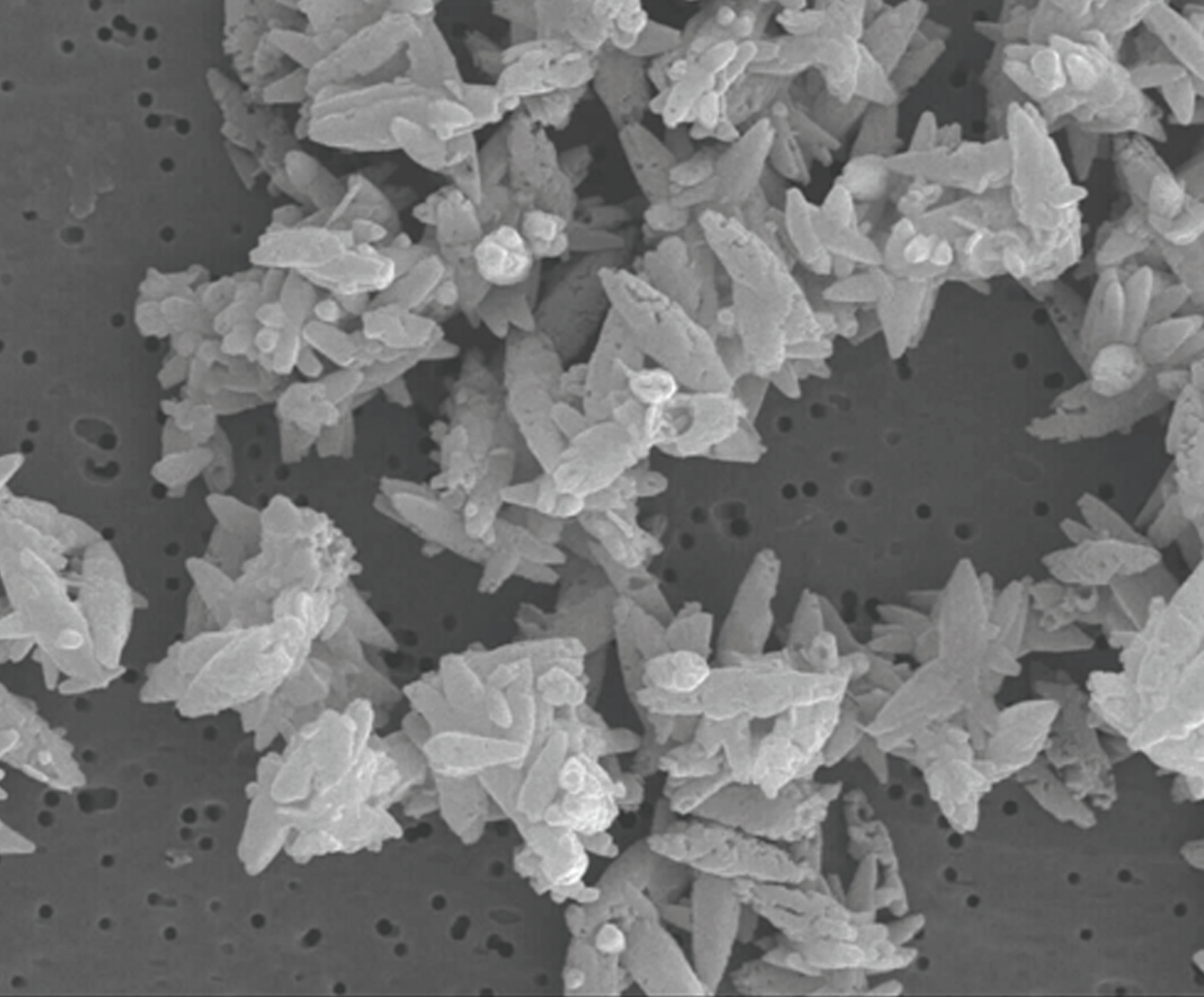




FillerTEK™ Technology Platform

*A Comprehensive Approach Designed to
Achieve Higher Filler Loadings*

NALCO Water
An Ecolab Company

FillerTEK Technology Description

- Includes comprehensive and novel filler modification treatment programs
 - Chemistries
 - Equipment
 - Application expertise
- Reduced total cost of operation through utilization of less-expensive raw materials
- Increased sheet ash content while maintaining key sheet properties such as strength and optical characteristics
- A paper sheet that is less likely to dust or lint in printing and converting operations
- Ability to sell excess pulp to the market.

Program

Paper producers are under pressure to improve the overall efficiency of their operations in the face of unforeseen economic challenges, shifting market demands, and escalating costs. FillerTEK technology was designed specifically to meet papermakers' needs. This patented technology allows for more efficient use of raw materials without compromising product quality.

FillerTEK technology combines several aspects of wet-end chemistry to achieve higher filler content while maintaining runnability and paper quality. Increased

filler content replaces high cost fibers, reducing total cost of operations. This technology family is designed for customers utilizing PCC, GCC, chalk, or a blend of these as their filler source.

Technology Benefits

FillerTEK technology is applicable for printing & writing and board grades delivering the following value:

- **Increased filler loading level**
NALCO Water's patented filler treatment allows customers to increase their total filler loading 3-10 points and maintain the critical strength and optical properties of the end product.
- **Utilization of less expensive raw materials**
The technology may also provide the opportunity to use less expensive fiber sources.
- **Improved internal bond strength of final sheet**
FillerTEK technology can also be used to achieve increased internal bond strength at the mill's current level of sheet ash.

- **Sheet less prone to linting and dusting**
Commercial sheets produced with FillerTEK technology were found to dust less in printing and converting studies.
- **Final product with good press room runnability**
Commercial grades produced with FillerTEK technology showed no negative impact in print trials and runnability.
- **Reduced drying energy and steam consumption**
Sheets containing higher levels of filler loading are easier to dry. Steam reductions up to 23% have been observed allowing for potential production increase.
- **Staying competitive with the global economy.**

NALCO Water Innovation Delivers Value

For more information about FillerTEK technology, please contact your local NALCO Water sales engineer, or visit nalco.ecolab.com/program/fillertek-technology. Scan below for more info on FillerTEK



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