

RECORDED BENEFITS

- Simple 1-tote platform eliminated the need for a multi-tote approach
- Overall program costs were reduced 10% versus the incumbent condition
- Superb doctorability under a lower modifier dosage requirement gave improved heat transfer and caliper
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Solenis Adhesive Chemistry Helps Mill Simplify Program and Reduce Costs While Improving Softness

Crepetrol™ XCEL 2700 Adhesive Agent

Customer Challenge

A North American through-air-dried (TAD) customer producing bath and towel reached the design limit of drying on a high-speed asset and was interested in maintaining softness while wanting to challenge the only adhesion platform it had known for more than five years.

Recommended Solution

After careful consultation, Solenis proposed a complete replacement of the incumbent adhesive chemistry with an equivalent mg/m² of Crepetrol XCEL 2700. All other chemistries remained the same.

Additionally, the use of Solenis' OnGuard™ VBX vibration monitoring tool would be installed to provide a valuable and real-time appraisal of product performance. Adjustments in all film chemistries including PVOH, modifier and phosphate were permitted as required.

Results Achieved

Within five minutes of the exchange, Crepetrol XCEL 2700 immediately showed a reduction in film mass outside the creped sheet. Vibration spectra began to show a new exposure of cured film layers that had previously laid underneath. The volume of the fiber-film being shed underneath the unchanged creping blade was also visibly greater.

By an appropriate increase in the PVOH-to-adhesive ratio and a decrease in the release/modifier dosage, the vibration spectra and the shed conditions on the dryer restored to pre-trial behaviors. Further, given the unique blend of Crepetrol XCEL 2700, the external phosphate dosage was also reduced, and the net result of all chemical changes appeared to give a higher creping temperature at equivalent TAD2 moisture and Yankee dryer steam pressure.

The overall effect was one of higher caliper and higher softness off the reel. Performance and ply-bonding in converting was equal to or better than typical.