

## RECORDED BENEFITS

- Dosage reduction of 46% to achieve desired a\*-value target of 7.5.
- Estimated annual savings: \$130K.
- Reduced deliveries and handling of product.

## New High Efficiency Direct Dye Reduces Chemical Use and Costs at Linerboard Mill

### Pergasol™ Orange 80LN Direct Dye

#### Improvement Opportunity

A linerboard producer located in North America was experiencing increased tinting costs while utilizing a competitor's direct dye product. Solenis has been promoting and successfully commercializing a new anionic direct dye, Pergasol Orange 80LN, as a more cost-effective alternative to the competitor's offering. Trials and commercial applications with Pergasol Orange 80LN have shown a considerable strength advantage at equal a\*-value.

#### Recommended Solution

Solenis met with mill personnel, including the mill's Quality Manager, and Product Development at Corporate Research. A lab study was proposed and conducted at the Wilmington Research Center comparing Pergasol Orange 80LN against the incumbent product. The results of the lab study showed that switching to Pergasol Orange 80LN would result in a 50% dosage reduction to meet the 7.5 a\*-value target. Solenis proposed a dye trial utilizing the mills existing dye system.

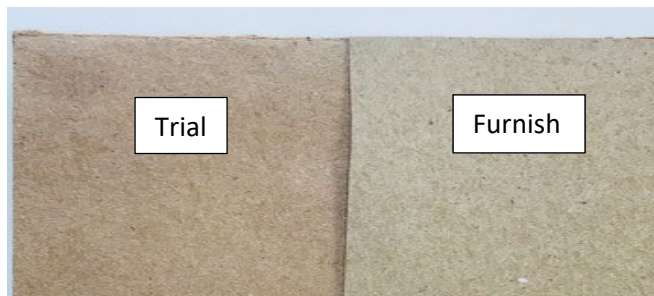
#### Results Achieved

The following key performance indicators were agreed upon and codified prior to the trial:

- Ease of handling and pumping. **No issues noted**
- Run to target a\*-value of 7.5. **Achieved**
- Dosage reduction of 40-50%. **Achieved**

#### Paper Machine Specifics

- 2-ply Fourdrinier
- Production Rate: 80+ TPH
- Furnish: 100% OCC
- Neat dye addition at screens to top ply



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