Bercen, Inc.

Where Innovative Solutions Begin!

BERCHEM® 4095* Eliminates Scratching and Improves Gloss

CASE STUDY

MILL OVERVIEW:

Mill: Board

Grades: Coated Bleached Board

Furnish: Bleached Kraft

Machine: Fourdrinier

Production: 1200 tpd

Speed: 2000 fpm

SYSTEM OVERVIEW:

Blade Coater:

Latex
Protein
Clay
AZC
Dispersant
Lubricant

Solids: 61%
Hercules: 74 cps
pH: 9.4
Brookfield 6100 cps

MILL OBJECTIVE AND TESTING REQUIREMENTS:

The mill wants to see an improvement in gloss from their gloss calendar along with improved runnability and sheet quality. Scratching is also a concern on the blade application. The customer monitored visual inspection of scratching. Gloss testing was performed on site by the customer.

PRE-TRIAL OBJECTIVES:

Studies were performed at Bercen's Cranston, Rhode Island laboratory. A series of rheology tests were performed, including Hercules high shear, Brookfield viscosities, and GWR. The initial study revealed improved water retention as well a 9% decrease in Hercules high shear. Further testing showed a 17% improvement in GWR with only a 3% increase in Brookfield viscosity. With the improvement in GWR, there was a strong indication the scratching problem could be reduced, if not eliminated.

APPLICATION:

Based on the lab studies, a dosage rate of 1.0 parts of **BERCHEM® 4095** to be added during the batch make down was recommended.

RESULTS:

The trial ran for approximately one week with the elimination of all visual scratching and improved runnability on the machine.

Gloss improved an average of 3 points from the gloss calendar.

* U.S. Patent Numbers 5,858,933 and 4,766,015