

## DE-LINTING WITH SIZESTAR® 300 L

SizeStar® products are a range of innovative, multifunctional chemicals developed to improve printability through a number of different mechanisms – improving internal and surface bond strength to reduce fiber lift and controlling hydrophobicity to increase resistance to penetration.

It is well known that a high linting and dusting tendency of newsprint will almost certainly cause a higher frequency of production stops in offset printing.

Such stops are connected with production losses and high costs for blanket cleaning. Linting and dusting are terms used to define the tendency of a paper surface to shed loose and weakly bonded particles and accumulate these on the blanket during offset printing.

Dust is filler or other fines materials, which are not firmly attached to the paper surface. Such materials are easily removed from the paper surface during printing and accumulate on the printing blanket especially in the first printing unit. The result is a deterioration of the print quality to the point where the press must be stopped and cleaned.

Fibers are removed from the surface of the paper when the external forces exceed the forces holding the fibers together. This programme deals with the area of internal treatments of thermomechanical pulp (TMP) and recycled fiber containing paper grades such as newsprint. The objective of such treatments was to reinforce the surface strength of the paper in order to decrease the linting and dusting of the paper during printing.

### SizeStar® 300 L

SizeStar® 300 L is a semisynthetic polymeric sizing agent, which improves internal sizing and decreases dusting. It gives good control of sheet hydrophobicity and subsequent improvement in heat set offset printing performance.

SizeStar® 300 L is applied as an internal sizing agent in newsprint to impart resistance to the penetration of water and fatty liquids in the substrate. SizeStar® 300 L is added to thickstock at a point of high shear for optimum distribution in the stock. Recommended dilution before dosage is 1:10.

The objective was to determine the overall positive impact on linting on Newsprint with the use of SizeStar® 300 L. SizeStar® 300 L was added to the suction of the machine chest.

### SUMMARY:

- An overall reduction in lint chemical was achieved
- A significant overall reduction in starch and polymer was achieved.
- A reduction in the lint view numbers was achieved
- An improvement in sheet properties in terms of Tear and Tensile were observed even with an increase in sheet ash of 0,5% during the trial period.

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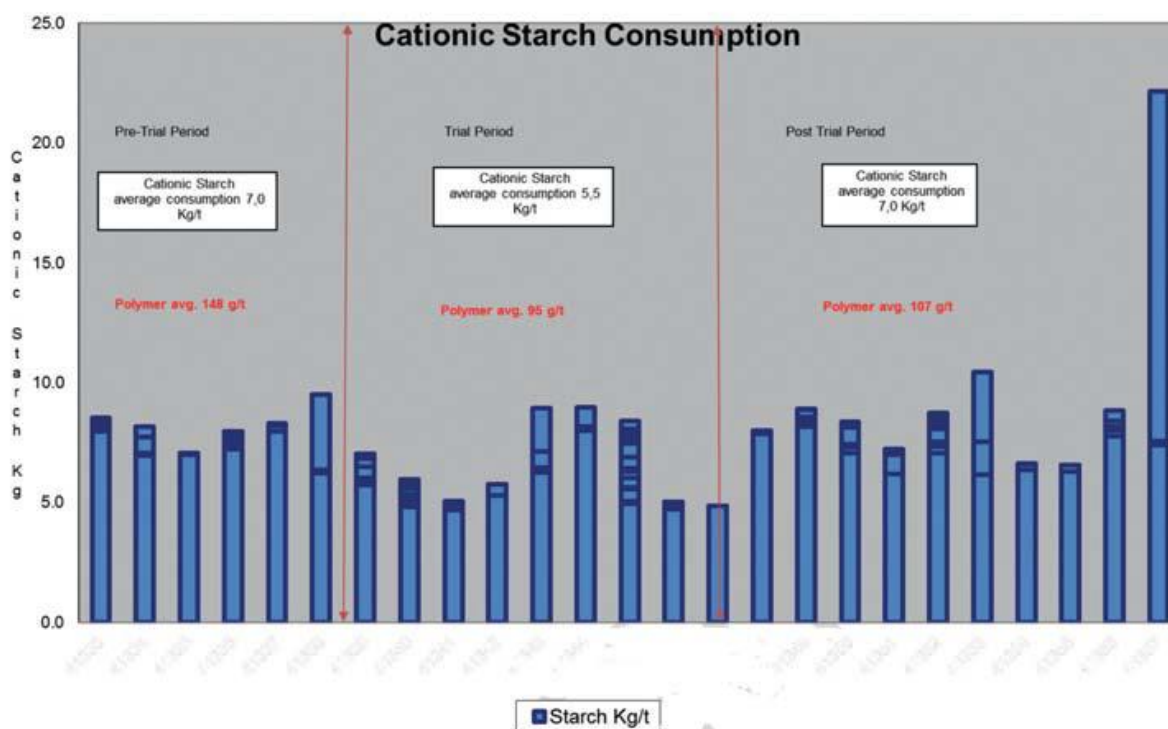
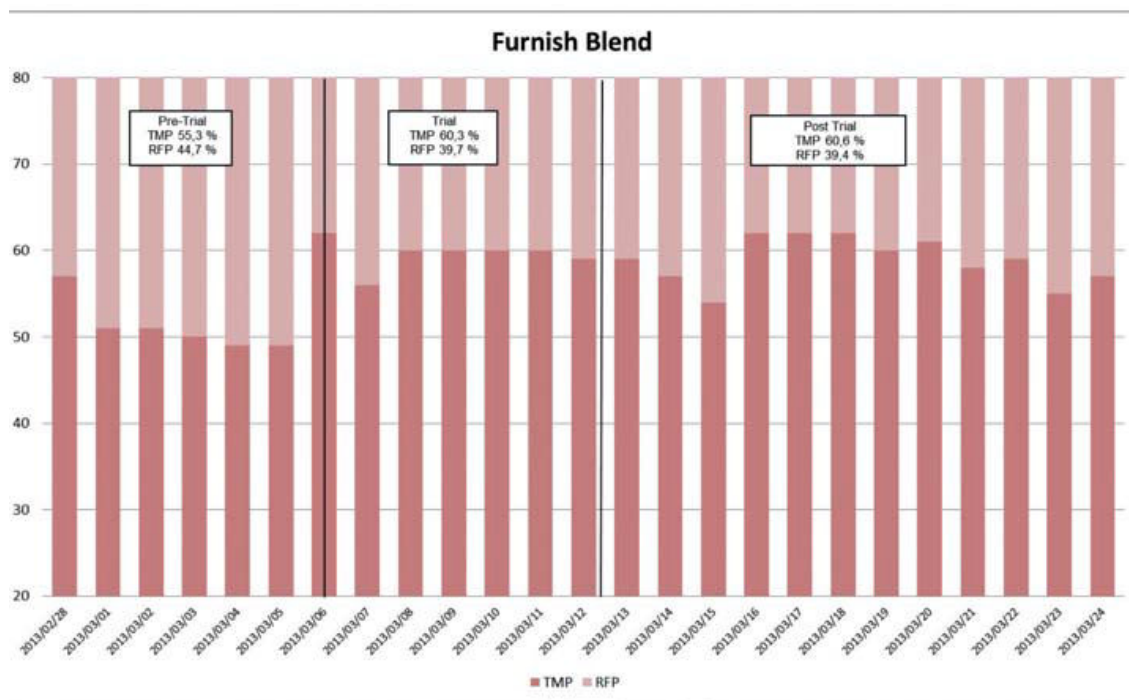
### TRIAL RESULTS SUMMARY:

	Pre-Trial	Trial	Post Trial
Modified Cationic Starch (Kg/t)	7,0	5,5	7,0
TMP (%)	55,3	60,3	60,6
RFP (%)	44,7	39,7	39,4
Lint Chemical (Kg/t)	3,5	3,3	3,4

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### Tensile & Tear Comparison

