

# Dusting and Lint Reduction in AKD Sized Agro-based Paper - An Experience

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## Abstract

A conversion to Alkaline paper making with AKD size offers the Paper Maker an opportunity for improving the Product quality and system cleanliness, however we have experienced Dusting & Linting during offset printing on non-surface sized Wheat Straw-based Paper. The effect on surface strength of AKD sized paper may be due to more retention of fines & fillers with the use of high molecular weight low charge density Retention Aid polymer which is foremost requirement in AKD sizing as regards to retention of AKD is concerned. The present paper highlights the reduction in Dusting and Linting during offset printing in AKD Sized Paper by utilizing the concept of wet-end chemistry in choosing the correct wet-end chemical and its optimization. Based on feedback received from customer regarding the dusting, we studied the changes and trials were taken with Cationic Starch, DSR of improved cationicity & crosslinking agent in starch. Printing trials were taken on same sheet & web fed printing machine and found significant improvement in printability of paper. Number of prints were increased from 2500 to 6000 impressions in sheet fed and 5000 to 10000 impressions in web offset printing machine before cleaning the blanket. Printability, in regards to dusting, improved further on changing the bleaching sequence from conventional  $CE_pHH$  to ECF bleaching,  $OD_0E_{op}D_1$  i.e. 8000 in Sheet-fed & 12000 in web-fed. It was also experienced that residual Chlorine & high conductivity in pulp and hardness & TDS of water have detrimental effect on printability with respect to Dusting & Linting due to increase in Cationic demand.