NALCO

Essential Expertise
for Water, Energy and Air℠

POSITEK 3G™ Microparticle Technology

Enhanced Sheet Quality
Improving Drainage and Productivity

ENGINEERED QUALITY

POSITEK 3G Microparticle Technology

ENGINEERED QUALITY

POSITEK 3G Microparticle Technology Delivers

- Increased machine efficiency and improved production rates
- Improved sheet properties such as formation, porosity, and strength
- Reduced energy use to dry the sheet
- Reduced costs through increased sheet filler levels
- Environmental friendliness, no contribution to VOC
- Improved runnability and wet-end stability through improved chemical retention

Program Description

POSITEK 3G is the latest generation in Nalco microparticle program technology. The program is designed to promote drainage and retention without causing any negative effects caused by over-flocculation.

POSITEK 3G 8699 is a colloidal silica dispersion that is specifically structured to enhance retention and drainage in acid and alkaline paperboard, tissue and towel, bleached board, corrugated medium, ground wood, and wood-free fine paper systems.

The POSITEK 3G Approach

POSITEK 3G is a high performance retention and drainage program comprised of individual components, including coagulants for a fresh source of cationic material, retention aids for retention control, microparticle for drainage control and the services of a Nalco on-site wet-end expert. Using this program gives the papermaker the tools to optimize machine performance.

POSITEK 3G 8699 microparticle addition is used to promote drainage in a controllable way and increase retention of filler and fiber fines. This approach has demonstrated increased retentions can be achieved while maintaining or increasing formation and optimizing sheet properties.

POSITEK 3G Benefits

- Improved water removal, due to reduced headbox and tray solids, that results in more efficient sheet pressing and drying and ultimately steam consumption
- Improved sheet quality, optical and printing properties as a result reduced two-sidedness from even distribution of fillers and fines through z-direction of the sheet
- Maximum fiber, fines, and filler retention in both acid and alkaline papermaking systems
- Reduced consumption of wet-end additives, such as wet and dry strength, PCC, titanium dioxide, clay, starch, sizing agents, and dyes due to improved fines retention
- Improved formation and strength through more uniform floc formation and even distribution of fillers and fines
- Increased filler loadings and the subsequent reduction in fiber costs due to improved small particle retention in printing & writing and board & packaging grades
- Reduced sewer losses and lower effluent treatment costs as a result of improved first pass retention
- Controllable drainage in high-speed paper machines that results in increased runnability and improved production rates
- Provides the papermaker help to meet environmental compliance, as it does not contribute to VOC levels

Solutions that Deliver Results

Paper producers are under pressure to improve the overall efficiency of their operations in the face of unforeseen economic challenges, shifting market demand for their finished products and escalating costs. SMART Solutions® for Efficiency allows for more efficient use of raw materials, process additives and improved paper machine performance utilizing new proprietary technology like **POSITEK 3G** specifically designed to meet papermakers' needs.

Turning Problems Into SMART Solutions.

For more information on the POSITEK 3G Microparticle program and SMART Solutions for Efficiency, contact your local Nalco Paper Services representative at 630-305-1000.

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