Pulp & Paper Chemicals


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The fastest gains are expected in the specialty additives segment, due to their ability to reduce paper production costs and improve environmental compliance and product quality.

US demand to reach 19.8 million tons in 2011

Demand for pulp and paper chemicals in the US is forecast to advance 1.0 percent annually to 19.8 million tons in 2011. A shift in product mix toward higher-priced chemicals will support growth in market value, which will reach $8.7 billion. In general, pricing for pulp and paper chemicals jumped abnormally during the 2004 to 2006 period due to a rise in energy costs (i.e., natural gas, crude oil and petroleum). However, price increases should moderate going forward. The fastest gains are expected in the specialty additives segment, due to the paper industry’s desire to reduce production costs and improve environmental compliance and product quality -- objectives that can be achieved through the use of multifunctional specialty chemicals. Increases in paper and board production will support overall demand for chemicals, as will the use of recycled paper and trends toward brighter paper and board products that meet international standards.

Fillers and coating pigments to remain dominant by volume

Fillers and coating pigments will continue to represent the largest pulp and paper chemical segment in terms of volume. In particular, fillers are widely used by papermakers to reduce the amount of fibers, thereby reducing costs as fibers are much more expensive than fillers.

Growth will largely be centered in calcium carbonates (especially precipitated varieties), which are the principal filler and coating chemicals in use. Clays will remain widely used, although growth will be below average as kaolins lose ground to both precipitated and ground calcium carbonate. Good opportunities exist for chemical suppliers that can develop new fillers, allowing higher loading levels without reducing paper strength and overall quality.

Specialty additives to be fastest growing market

Specialty additives are generally the most expensive chemicals, and as such this segment accounts for half of total chemical demand in the US pulp and paper industry in sales value, but only one-quarter of the total volume. Growth factors include the increasing demand for whiter, brighter and glossier paper. The use of recycled paper and continuing efforts to reuse process water will support demand for water treatment chemicals such as biocides, coagulants and flocculants. Specialty products also help to improve the strength, water resistance, opacity, and other performance and aesthetic characteristics of paper and can be used to improve productivity (e.g., allowing faster operating speeds on machinery), protect equipment and machinery, and reduce waste and emissions.
Demand by End-User

Paper Mills

Demand for pulp and paper chemicals consumed in paper mills is forecast to increase 1.0 percent annually to 14.0 million tons valued at $6.1 billion in 2011. This represents an improvement over the last ten years, when demand suffered from a confluence of negative forces including weak paper fundamentals, the phaseout of chlorine pulp bleaching and the declining use of a number of other chemicals, such as caustic soda (demand for which will continue to decline, but at a slower rate). Through the forecast period, demand will be supported by improved prospects for paper production and trends toward brighter papers. Value growth will be supported by a shift in product mix toward higher-value specialty chemicals.

Paper mills account for a large share of almost all pulp and paper chemicals. In particular, paper mills consume the vast majority of fillers and coating pigments (89 percent of total demand in volume, in 2006) and specialty additives (68 percent, same basis) in the overall pulp and paper industry.

Printing and writing papers will continue to account for the majority of the chemicals used in paper mill operations, and will record more rapid growth than other paper grades. This is due to the increasing use of specialty chemicals and higher loadings of fillers and opacifiers to create smoother, brighter printing grade papers. Although coated papers will continue to account for most of the demand, uncoated printing papers are also increasing their share of the chemicals consumed, as papermakers look to produce higher quality uncoated grades. Tissue paper will record above-average gains, supported by production growth of these paper grades, which include paper towel, facial tissue, napkins and toilet paper. The production of newsprint consumes smaller amounts of chemicals, since the demand for higher gloss and opacity is not as great in these lower price uncoated grades. Demand for chemicals in newsprintmaking...
GEO Specialty Chemicals Incorporated
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Lafayette, IN 47904
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http://www.geosc.com

Sales:  $400 million (verified by company, 12/07)
Employment:  800 (verified by company, 12/07)

Key Products:  aluminum-based flocculants and coagulants, and trimethylolone

GEO Specialty Chemicals is a privately held manufacturer of over 300 specialty chemicals for water treatment, wire and cable, pulp and paper processing, oil and gas production, coatings, construction and electronics applications. The Company operates through four segments: Trimet Products, Water Treatment Chemicals, Process Industries and Peroxy Chemicals.

The Company participates in the US pulp and paper chemicals market via the Water Treatment Chemicals and Trimet Products segments. The Water Treatment Chemicals segment supplies an extensive range of water treatment chemicals and related products to paper mill, municipal water, industrial wastewater, oil and gas production, and agricultural customers. These products include ULTRAFLOC and ULTRAPAC aluminum-based flocculants and coagulants, which include aluminum sulfate, aluminum chloride solution, polyaluminum chloride and aluminum chlorohydrate, as well as custom blends of these chemicals. In paper mills, ULTRAFLOC and ULTRAPAC chemicals are used for influent and effluent water clarification, retention, formation, anionic trash charge neutralization, pH control, pitch control, alkaline papermaking contaminant scavenging, rosin sizing and wet strength

“Demand for sulfur in the pulp and paper industry will advance 1.8 percent per year to 120,000 tons in 2011, valued at $4 million. Demand is primarily centered on the addition of sulfur to cooking liquors in the sulfate pulping process and for cooking liquor pH control. Gains will also stem from the use of sulfur (and sulfur-containing chemicals) to dissolve impurities in wood pulp to improve the paper quality.”

--Section VII, pp. 161-2
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