

Nano-dispersed Biopolymer to replace wax emulsions in packaging

ANTWERP, Belgium, June 9, 2008: TopChim releases TopScreen DS13, an environmental friendly, patented, nano-dispersed biopolymer to substitute wax emulsions in super hydrophobic paper and cardboard packaging.

The packaging industry is seeking easy recyclable and environmental friendly packaging solutions made of renewable resources. TopChim, a Belgian R&D-focused chemical company specializing in paper coatings and paper coating additives, has developed an innovative biopolymer as a competitive, ecological substitute for wax emulsions used in the coating production of hydrophobic paper and board packaging. This 2-year research program has resulted in a new coating technology for paper and cardboard that counters the disadvantages of using wax emulsions while maintaining the excellent water barrier performances.

"Paper and cardboard treated with wax emulsions is not very repulpable or recyclable." says Henk Van den Abbeele, founder and R&D Director of TopChim. "This disadvantage was the major driving force behind our R&D effort and resulted in the most important advantage of using TopScreen DS13. Paper and cardboard coated with TopScreen DS13 is as easily repulpable as non-treated paper or cardboard. By its very nature this biopolymer has no negative impact on the recyclability or biodegradability of the packaging".

The new biopolymer is of vegetable origin, while most used wax emulsions are produced from petrochemicals. This biopolymer shows other important advantages for the surface treatment of paper and cardboard compared to the use of wax emulsions. TopScreen DS13 requires no stabilizers even with a high solid content, while viscosity remains low (65% solids at +/- 300 cps with Brookfield 23°C 100 rpm spindle 5). Coating machines using TopScreen DS13 can simply be rinsed with water. Furthermore, TopScreen DS13 has a higher temperature resistance and is less sticky, which improves the handling of the treated paper and cardboard in production.

TopScreen DS13 is approved for a wide variety of paper and board coating applications, both online and offline. TopScreen DS13 contains a biopolymer with a monodisperse distribution of nano-particles with a regular shape.

TopScreen DS13 will be introduced during the second half of 2008 in Europe and South America. TopChim has a total production capacity of 10,000 tons at 2 plants in Europe to produce this nano-dispersed biopolymer and plans to invest in additional production capacity in South America.



PRESS RELEASE

About TopChim

TopChim is an established research-driven chemical company, specializing in paper and card board coating technology, based in Belgium and Brazil, operating in Europe and Latin America. The company applies the latest technologies in chemical science to develop high-performance ecological coating solutions for the paper and cardboard industry. Its pioneering work is the result of active collaboration with European institutes and universities involved in fundamental research in chemistry. TopChim is committed to continuing its search for solutions for optimal paper and paper coating production that are both environmentally friendly and economically attractive. The research efforts of TopChims' Nanoscience department have been translated amongst other things into the industrial-scale production of nano-hybrid pigments.

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