

REVOLUTIONARY ADHESIVE THERMAL CONDUCTIVITY ENHANCER

Improve production speeds with faster drying adhesives



Accelerate adhesive drying to maximize production speed with CORAGUM® TCE (Thermal Conductivity Enhancer)

CORAGUM TCE Thermal Conductivity Enhancer is a revolutionary new corrugating adhesive additive, designed to accelerate adhesive drying and increase production speeds. Composed of nanotechnology microfibrils that disperse into adhesives and dramatically increase heat transfer and water removal, CORAGUM TCE enables corrugated boards to dry with less heat while delivering greater productivity.

CORAGUM TCE is particularly beneficial for double and triple wall production and can address bonding issues caused by shear impact from scores on incomplete bonds. This breakthrough additive also improves performance of heavy weight and specialty papers that are difficult to bond. Boards made with CORAGUM TCE dry flatter and improve printability, which can also impact strength performance as a result. CORAGUM TCE is highly efficient, needing on average only 1/10th the dose of other performance additives.

CONVENIENCE & PERFORMANCE™ 

Ingredient
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IDEAS TO SOLUTIONS

Add CORAGUM[®] TCE to improve speed and performance with less waste

Faster machine speeds

- Improved thermal conductivity of corrugating adhesive, leading to faster drying and increased production speeds
- Improved performance and efficiency on heat-limited production

Improves board properties

- Produces flatter, drier boards with improved printability and overall strength

Reduced waste

- Reduces blistering and delamination

Applications

- Multiwall board
- High density paper
- Heavyweight paper
- Specialty paper

Targeted solutions for real-life challenges

The challenge

A corrugator making double wall with limited heat on the triple stack was experiencing bond failure resulting from a three-point score impacting the immature bond. A jet assist was added, but it was not able to significantly improve bond performance. The end result was that the plant had to lower production speeds in order to avoid bond failure.

The solution

CORAGUM TCE was dosed directly into the double back run tank, which was the bond that was impacted. The bonding immediately improved and the plant was able to increase production speeds with no other changes needed. To further improve performance, the adhesive formulation was optimized to maximize film formation and to reduce adhesive application — all while meeting bond performance.

The results

The combination of formulation improvements and dosage of CORAGUM TCE in the double back adhesive was able to dramatically improve machine speed on double wall, increasing heavyweight grade speeds by as much as 50% and lighter grades as much as 70%. CORAGUM TCE was only added when double wall grades were run. As a result of double wall speed increases and debottlenecking, the plant had a 10% overall production increase in the first month alone, a sizable improvement that typically only occurs with a major capital investment. With CORAGUM TCE, the customer returned their plant to a low waste, low cost, profitable facility — and the operators gained the confidence to run the machines routinely at full production speeds.

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