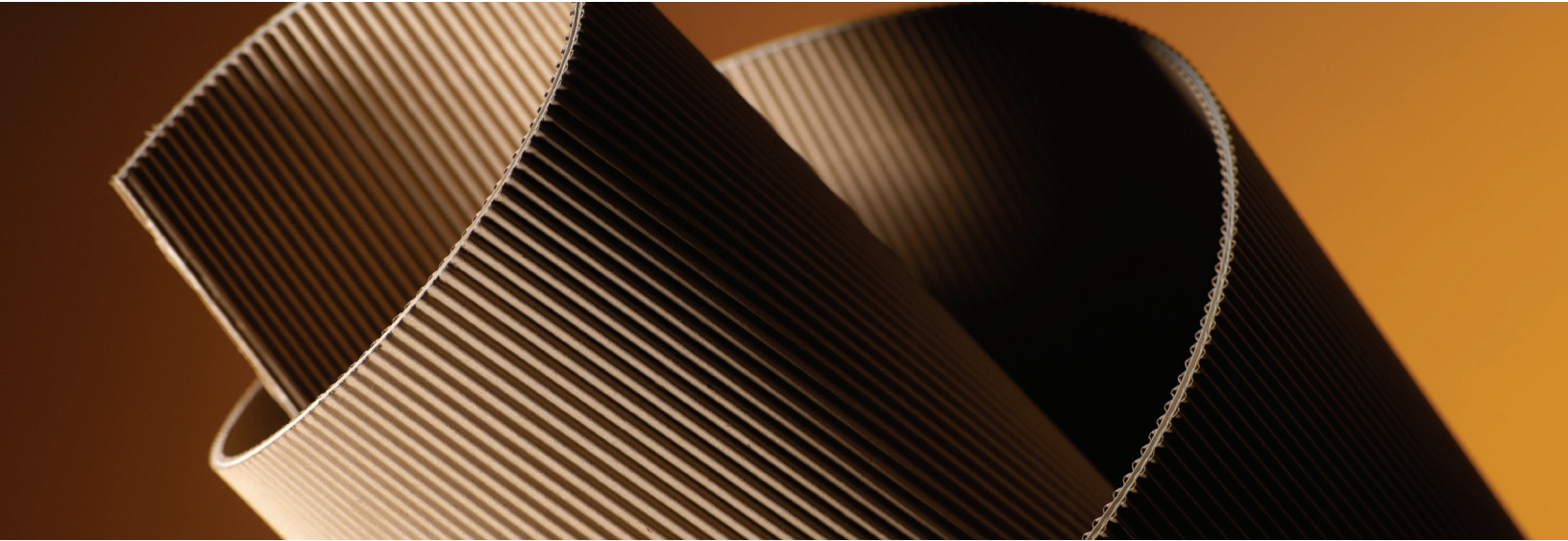


TARGETED SOLUTIONS FOR REAL-LIFE CHALLENGES

# CORAGUM<sup>®</sup> PR-Xtreme high shear performance resin



CORAGUM PR-Xtreme performance resin **improves wet tack (green bond)**, and **performance of high shear corrugating adhesives**.

CORAGUM PR-XTREME performance resin improves adhesive intra-molecular structure, providing maximum tack and film strength for bonding performance while reducing costs. Its unique chemistry enables reducing adhesive solids and consumption without sacrificing performance, and provides wet strength for MRA board grades. Because it is a concentrated additive, it will typically be added at up to half the dose of other additives, making it a cost-effective solution.

*Available in drum and tote quantities and can be clear or tinted purple for identification in adhesives.*

## FEATURES & BENEFITS

### Maximises intra-molecular structure of the adhesive

- Provides tack and film strength to bond more difficult papers without affecting stability in storage
- Improves runability, maximises bond performance and speed, while reducing adhesive solids, consumption and cost.
- More consistent adhesive application at low gap settings

### Increases corrugator speeds

- Improves green bond on high performance and speciality coated papers
- Improves bonding and speed on double and triple wall grades

### Improves bond and wet strength

- Improves water resistance in difficult to bond papers and MRA board grades
- Improves bonding and speed on double and triple wall board
- Enables bonding of speciality coated and wax replacement papers

## APPLICATIONS

- Water resistant bonding
- High CMT & SCT
- High density paper
- Heavyweight paper
- Recycled paper
- Speciality coated paper
- Double and triple wall



**Ingredion**<sup>™</sup>

## SUCCESS STORY: CORAGUM® PR-XTREME HIGH SHEAR PERFORMANCE RESIN

### 1 challenge

A corrugating plant was trying to balance production costs versus the performance requirements of speciality grades of paper. Attempts to reduce starch consumption with lower solids and adhesive additives had resulted in the highest waste costs in the plant's history, and high-end grades of boards were suffering from up to 30% rejects as a result of bonding failure.

This facility ran two corrugators, a new high speed machine and an older workhorse that has limited on temperature control and gap reduction. The plant needed to run both corrugators from the same adhesive storage tanks, and the same high shear mixer. The mixer is equipped with a single-point additive addition, which is used for performance additive or resin as needed. While the plant does not run much water resistant board, it has found that most grades benefit from moisture resistance. Several of its premium grades are made with highly sized paper that typically experiences low fibre tear and up to 30% of the finished board will be rejected from poor bond. Part of the limitation on these grades is poor temperature control across the corrugators. Attempts to reduce solids and starch costs have been partially effective, however waste production has increased compromising the cost savings measures put in place.

### 2 solution

The primary need of the facility is performance improvement, but the facility also needs to provide moisture resistance with a single addition point, CORAGUM® PR-Xtreme performance resin was incorporated into the corrugating adhesive directly in the high shear mixer.

The unique blend of film forming performance additive and wet strength resin was able to improve the adhesive performance at lower solids, while still meeting speed, strength, and moisture resistant needs. Because CORAGUM PR-Xtreme performance resin is formulated as a concentrated and cost saving additive, lower addition rates are used than equivalent performance resins. As a result, the plant is able to use low doses for regular production and dose higher levels when highly sized papers are used for their premium board grades.

### 3 results

After one month of using CORAGUM PR-Xtreme performance resin in their adhesive system, the plant was able to realise a waste reduction to it's lowest levels in two years. Starch consumption for the plant was maintained at below 19.0g/m<sup>2</sup> across all board grades, and the premium board production which had suffered from up to 30% waste had waste reduced to less than 5%. The light treatment for moisture resistance also improved overall bonding of non-MRA grades as well as the moisture resistant speciality grades.

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Delivering solutions.™

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