High charge your products with starch

Sustainability and savings can go hand in hand

What if you could make linerboard with greater efficiency and fewer synthetic chemicals—at a lower cost? Our plant-based, high-charge additives can help improve your process, your sustainability efforts and your bottom line. And, with decades of experience in papermaking, Ingredion is the partner to help you produce stronger, lighter linerboard.
Where performance meets profitability

High-charge starches from Ingredion allow you to solve sustainability and affordability challenges at the same time. Our wet-end solutions can replace synthetic chemicals and reduce energy while offering a range of other benefits across your operation:

**Higher performance**
- Replace synthetic chemicals
- Improve wet-end additive efficiency

**Process control**
- Improve machine drainage and retention response
- Increase machine speed
- Achieve productivity gains without additional capital expense

**Cost savings**
- Generate more strength using less starch
- Obtain a wider operating window, allowing your additives to achieve more
- Save energy with reduced drying demand
- Enhance grade development capabilities

**Customized solutions for competitive products**
When you work with Ingredion, you get the benefit of our high-performance, made-from-nature ingredients, as well as our operations expertise, providing you the best possible solutions for your goals and challenges. Choose from our broad range of starch additives, including:

**OPTIBOND® wet-end cationic hybrid corn starches**—High-efficiency products that generate strength, drainage and retention performance

**OPTIPRO® wet-end cationic starches**—Provide strength, retention and drainage gains at low addition levels

**TOPCAT® cationic additives**—Liquid, ready-for-use products promoting improved productivity and reduced synthetic chemical use

**Smart thinking for smart savings**
Enjoy the win-win of performance and savings with our starch solutions. When we collaborate with you through Ingredion Idea Labs™ innovation centers, we look for ways to optimize costs across your operation. We’ve helped paper mills achieve significant additive savings—while maintaining or improving the quality of their products—and we can do the same for you.

Innovate with CONVENIENCE & PERFORMANCE
**United States: 1-800-443-2746 | Canada: 1-866-422-7201**
ingredion.us/papermaking