

RECYCLED FURNISH



WHEN RECYCLED FURNISH QUALITY IS LOW, YOUR EXPECTATIONS DON'T HAVE TO BE.

Improve strength and quality with patented Busperse[®] stabilization technology from Buckman.

With the declining quality of today's recycled fiber, it is harder than ever to maintain sheet strength and contain costs. The higher levels of starch and calcium carbonate filler can easily be degraded by microbial activity resulting in loss of yield and increased scaling downstream. Unfortunately, retention and drainage aids, strength resins and additional starch just aren't enough.

That's why Buckman has developed Busperse stabilization technology. It stabilizes starch and calcium carbonate by controlling the microorganisms that can destroy them. So, even in the face of declining furnish quality, you can improve product quality and yield, reduce system conductivity and reduce the total cost of operation.



Improve recycled fiber performance with Busperse®

Increases starch and ash retention.

Decreases system conductivity.

Recycled fiber is coming with higher and higher starch content in OCC. Ash content is increasing, as well. The destructive force of amylase produced by microorganisms in the system detracts from the full benefit you should be seeing from starch recycled with your furnish.

These amylases break down starch in waste paper and broke to produce higher amounts of simple sugar, resulting in higher bacterial growth and even more amylases. At the same time, bacterial action causes calcium carbonate to dissolve, creating higher conductivity. The answer is to stabilize the starch and the filler and preserve the starch's ability to provide strength to your finished product. That's where Busperse stabilization technology comes in.

Busperse helps you preserve starch and filler, maintain strength, reduce system conductivity and save money on strength aids and wet end chemistry.

Busperse protects the starch.

- Stops fermentation
- Reduces amylase enzyme production
- Reduces glucose levels that sustain microbial growth
- Stabilizes starch

Busperse protects the filler.

- Reduces volatile fatty acids and pH depression
- Prevents calcium carbonate from dissolving

Busperse protects the system.

- Reduces microbiological activity and the resulting runnability and odor issues it can cause
- Reduces effluent COD (chemical oxygen demand) loading
- Reduces the potential for calcium carbonate scaling
- Reduces conductivity to ensure optimal chemistry efficiency

Busperse protects the bottom line.

- Increases sheet strength
- Increases yield
- Reduces costly use of starch, dry strength, defoamer and other chemistries
- Increases return on investment

CASE STUDIES

The Challenge: A 100% recycled mill making 130 tons/day of corrugating medium had a system hardness of 2,500 ppm CaCO₃ with a level of 1,100 kg/day equivalent CaCO₃ going out with the effluent.

The Solution: Buckman applied Busperse stabilization chemistry.

The Results: The mill increased production by 12.5% while making the following reductions:

- 56% reduction in filler loss
- 39% less sizing usage
- 38% less wet end starch usage
- 73% less wet end defoamer usage
- 49% less dry strength usage
- 52% less PAC usage

The Challenge: A 100% recycled mill making 1,100 tons/day of liner and corrugating medium had a high system conductivity.

The Solution: Buckman initiated a Busperse stabilization program to reduce COD loading to the effluent and increase yield via calcium carbonate stabilization.

The Results: The mill maintained strength targets while realizing:

- 53% reduction in the system conductivity
- 10% reduction in COD loading
- 13.5 kg/ton reduction in size press starch usage
- 75% reduction in the frequency of anaerobic sludge replenishment
- Increase in sheet ash content

Learn more.

As recycled fiber quality diminishes, you can continue to meet strength goals without undermining your financial goals. Look to Busperse stabilization technology and keep your expectations high. For more information, contact your Buckman representative or visit buckman.com.

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