Buckman™
Chemistry, connected.

Busperse® 2454

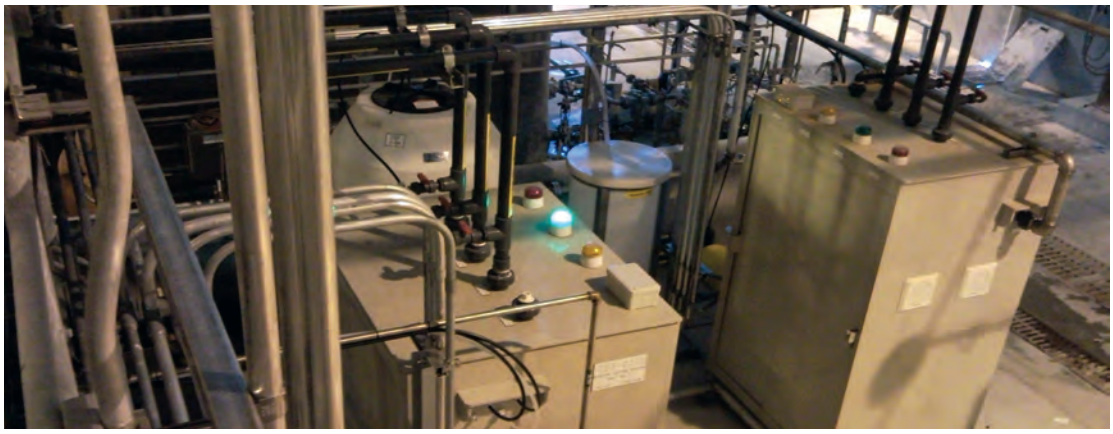
PAPER TECHNOLOGIES

The power of stability across your papermaking process

There are a number of significant trends in the industry that are affecting the overall dynamic of your papermaking process. There are drivers for decreased water usage, such as regulatory requirements and cost. Rising contamination in recycled OCC is also affecting quality. And there's a shift to using anaerobic digesters for effluent treatment.

In the face of these trends, organizations take various approaches. They're adding more functional chemistries to drive performance and meet necessary final product strength standards. They're frequently adding monochloramine via batch feeding, or so-called slug dosing. And to fight effluent treatment plant upsets, they're using more nutrients, expending more effort, and increasing testing.

Many factors, including some that are beyond your control, affect how process chemistries function in your environment. Treating at the point of the problem can simply create new variability down the line. With Busperse® 2454, you can dose a more stable monochloramine more intelligently. With our continuous dosing methodology and technology that applies MCA with flexibility to each dosing line, you can maintain the correct dosing at all times, at every point in the process. As a result, you'll optimize your functional chemistries and reduce corrosion and scale buildup. And with our more stable MCA, which is a more persistent, longer-lasting and appropriately oxidative monochloramine, you can use less of the expensive process chemistry that can have unpredictable downstream effects. All this means you'll use MCA to maintain stability throughout the entire process.



A better biocide chemistry from the world leader in deposit control technology.

Currently being used in more than 350 applications worldwide, Buckman's Busperse® 2454 is superior to conventional deposit control programs. No free chlorine. No strong oxidant. And little or no organic and chemical demand. That makes it safer and more stable, which is great for people and planet. Just as important, Busperse 2454 is more effective at maintaining clean system surfaces, fighting deposits, and reducing organic deposits in stock and water circuits. That makes it great for the bottom line.

Dramatic improvements

Busperse 2454 can help improve your operation dramatically and create significant savings in all these key areas:

Wet End Efficiency. Helps reduce consumption of wet end starch and the use of retention aids, fixation chemistries, dyes, defoamers and size. Can help stabilize wet end chemistry by reducing VFA production. Effluent. Reduces COD load and improves odor control.

Product Quality. Improves product strength, reduces the occurrence of holes and sheet defects, reduces odors, and minimizes off-grade production and food grade rejects. Approved by FDA and BfR (BgVV).

Productivity. With fewer breaks, higher ash content, increased machine speed, and fewer boilouts and washups, higher machine efficiency results.

A wide range of applications

When used as recommended, Busperse 2454 is appropriate for all papermaking systems and is highly effective in:

- Paper machines: fine paper, newsprint, tissue, board and packaging
- Pulp applications
- Virgin pulp transfer systems and storage
- Paper mill water treatment – Influent – Effluent – Cooling water
- Deinking lines – Catalase control – Slurries and additives (starch & fillers)

Benefit from Buckman Ackumen™ MCA-i™

Maintaining a reliable and safe process on an ongoing basis requires you to understand what's happening throughout the process, but that's a lot of variables to contend with. With Buckman Ackumen™ MCA-i, you can monitor and respond to variability throughout the process. Using predictive dosing, you can dose the right amount of MCA at all times. And our predictive, preventive maintenance helps keep your equipment running at peak efficiency. As a result, you'll minimize the negative impacts of big swings and avoid unplanned downtime to maintain productivity, quality, and profitability.

Learn more

Now you can treat your equipment and the environment to a whole new level of protection. Find out more about the Busperse 2454 system from Buckman. Contact your local Buckman representative or visit us online at buckman.com.

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Success Stories:

Case Study 1

In its 2020 sustainability report, DS Smith referenced their partnership with Buckman by name as a proof point in their climate mitigation efforts. They said: "Rising temperatures increase stress on water resources. As water is crucial to papermaking, it is important that our mills mitigate risks to future availability. DS Smith partners with chemical supplier, Buckman, in several mills to alter our chemical mix which enables more water recirculation and less starch waste and effluent contamination." Specific results include:

- 74% calcium carbonate precipitation reduction in anaerobic reactors
- No need to inject fresh anaerobic biomass in the reactors, saving money and emissions
- Improved performance of anaerobic biomass; generated 60% more biogas with a 1.5% savings to total consumption of fresh methane
- 40% reduction of calcium carbonate in the activated sludge tank, resulting in less required maintenance

Case Study 2

A 100% recycled mill was experiencing system hardness of 1,500 ppm as $CaCO_3$ and had 1,100 Kg/day equivalent $CaCO_3$ going to effluent. The goal of their treatment program was to reduce COD and increase yield. Using Buckman MCA—with application points at the pulper, clear filtrate, and broke—they achieved the following results:

- 53% reduction in system hardness
- 10% reduction of COD loading
- 1.1% average increase in sheet ash content
- 13.5 Kg/ton reduction in size press starch usage while maintaining strength at or above targets
- 75% reduction in anaerobic sludge replenishing frequency

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