BIOCCORTEC® NEWSLETTER

Cortec® Coated Products (CCP)
Eau Claire, WI

CELEBRATING 15 YEARS OF GREEN TIER EXCELLENCE!

Last summer marked 15 years of participation in the Wisconsin Green Tier Program for our Cortec® facilities in Spooner and Eau Claire!

Since June 2010, Cortec® Spray Technologies (CST) and Cortec® Coated Products (CCP) have voluntarily followed 12 Green Tier requirements, demonstrating a long-term commitment to environmental leadership that goes above and beyond state regulatory standards.

"[T]his program has allowed Cortec® to constantly pursue excellence in environmental performance and continued improvement of our EMS [Environmental Management

System]," shared Derek Jensen, Environmental Specialist.

We're proud to be part of a program that aligns so strongly with our values—and helps us grow with sustainability at the core.

Learn more about Cortec's participation in the Wisconsin Green Tier!

Cortec® Coated Products: https://dnr.wisconsin.gov/topic/ GreenTier/Participants/CortecCoatedProducts.html

Cortec® Spray Technologies: https://dnr.wisconsin.gov/topic/GreenTier/Participants/CortecSprayTechnologies.html

QUICK GUIDE TO BIOBASED RUST REMOVAL AND PREVENTION

Looking to go biobased in your corrosion control? Here are some practical applications we've highlighted this year for several of our biobased products. Click the links for more info!

Remove rust inside gearboxes with VpCl®-422. More details: www.cortecvci.com/news-alert-gearbox-rust-removal-and-protection-the-hard-way-or-the-easy-way/



Remove trailer hitch rust with VpCI®-423. More details: www.cortecvci.com/news-alert-rusty-trailer-hitches-make-sure-they-bear-the-load/



Curious to know more about the USDA BioPreferred® Program that Cortec® has been participating in for almost 15 years?

Check out the background of this federal green initiative and browse the full catalog here:



Protect woodworking tools from corrosion by wrapping them in CorShield® VpCl®-146 Paper. More details: www.cortecvci.com/news-alert-rust-prevention-tips-every-woodworker-should-know/



Design bridges with MCI®-2005 to extend service life. More details: www.cortecvci.com/press-release-building-bridges-to-extended-service-life-with-mci/



Protect aluminum irrigation pipe internals with EcoLine® AL-Corr™. More details: www.cortecvci.com/press-releasesustaining-equipment-sustainable-farming-the-circular-economy-for-irrigation-and-corrosion-protection/



ENVIRONMENTAL CORNER: COMPOSTING AT CORTEC® WORLD HEADQUARTERS

Cortec® Environmental Specialist Derek Jensen takes a look at our inhouse organic waste recycling program World *Cortec*® at Headquarters, where we choose to buv compostable plates, forks, spoons, and knives for our employees and encourage organics recycling wherever possible.



Let's talk about what happens to the food scraps and compostable utensils we toss in the compost bin at Cortec® Headquarters. At Cortec®, our sustainability efforts extend beyond energy use and recycling. Our organics composting has the ability to be used again and sold for retail. When we dispose of food waste and compostable materials at work, those items are collected and transported to Dakota Prairie Composting in Shakopee, Minnesota, where they're turned into something useful rather than sent to a landfill.



At the Dakota Prairie facility, organic materials like food scraps, compostable paper, and yard waste are blended and decomposed under controlled conditions. When waste enters the facility it goes through six steps to go from organics waste to retail dirt and mulch.

Step 1. Waste is sorted and ground or shredded.

Step 2. Waste is mixed together based on contents to achieve the optimal nitrogen and carbon ratio.

Step 3. The waste is placed into an aerated static pile where air and humidity are controlled for 12 days.

Step 4. The compost is flipped and moved to a second pile where heat is introduced for 10 days.

Step 5. Piles of compost are moved over to windrows to cure for 45 days.

Step 6. The finished compost is sorted by size and type to be sold for agricultural and landscaping use.

In other words, the banana peels, coffee grounds, and paper towels from our plant eventually become part of a circular economy in composting, supporting farms, gardens, and green spaces across Minnesota. By simply sorting our compostables correctly, we help reduce landfill waste, cut costs, and return nutrients to local soils, keeping our company's environmental policy in front of our decisions as a business.

If you want to learn more about Dakota Prairie Composting, use this link to check out their products and operations: https://dakotaprairiecomposting.com.

You have to join the solution, to prevent pollution.



Derek Jensen
Environmental Specialist



A PEEK AT BIOSOLUTIONS

Bionetix® International, a subsidiary of Cortec® Corporation, is seeing exciting growth in the biosolutions industry. Not only are these solutions nature-based; they can also contribute to the biodegradation of contaminants and the production of biofuels. Here are some highlights from this last year.

Biofuel Production

Ethanol cannot be made from corn without the use of the enzyme α -amylase to break down starchy substances into simpler sugars that can then be fermented. <u>ECL1000</u> is therefore an important biocatalyst for nations who want to expand ethanol production from corn.

Learn more: <u>www.cortecvci.com/news-alert-the-key-to-unlocking-a-treasure-chest-of-biofuel-resources/.</u>



Biogas, on the other hand, captures methane from waste and converts it into heat and energy. Often, the process is less than efficient, but Bionetix® offers products that can help stimulate production.





BCP12™ contains select microorganisms and nutrients that promote healthy hydrolysis, acidogenesis, and acetogenesis to boost conversion of carbohydrates, fats, and proteins into methane formers. Moreover, BCP12™ has demonstrated activity even in the presence of inhibitors commonly found in lignocellulosic biomass,* making it an excellent addition to anaerobic digesters at facilities that process waste from food, crops, or pulp and paper.

Another great addition to anaerobic digesters is <u>BIOGAS</u> <u>BOOSTER 3™</u>, a blend of three micronutrients specially chosen to stimulate microbial activity. These micronutrients are stable and bioavailable, ensuring easy microbial uptake.

Learn more about enhancing biogas production here: www.cortecvci.com/press-release-turn-up-the-heat-next-winter-with-better-biogas-production/

Biosolutions for Cleanup

Incineration and synthetic dispersants are two oil spill cleanup methods that can cause secondary contamination problems. A more logical approach is harnessing the natural ability of microorganisms to consume hydrocarbons. In



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nature, this may take many years, but bioremediation can speed up the process in a matter of months.

Bionetix® offers several great nature-based hydrocarbondegrading bioremediation technologies. BIOSURF™ contains biosurfactants that enhance hydrocarbon bioavailability by reducing surface tension. This makes contaminants more bioavailable to hydrocarbon-eating microorganisms like those in BCP35™. In multiple trials, such biological treatments have significantly reduced hydrocarbons in a relatively short period of time, a feature that allows for in

situ cleanup without introducing harsh chemicals or smoke into sensitive environments.

Biosolutions are also gaining ground with biological cleaning technologies like ABC 4000™. This cleaning concentrate is powered by beneficial bacteria (think probiotics) that produce targeted enzymes to digest a variety of organic material, such as greases, oils, starches, proteins, and cellulose. As the multiple spore blends in this ready-touse liquid concentrate activate, they begin to biodegrade grease and grime, making it easy to rinse away unwanted materials and remove the source of odors. Thanks to the wide variety of enzymes produced, ABC 4000™ can be used as the base culture for a broad range of cleaning products for both hard surfaces, fabric, and more.

Learn about the potential of ABC 4000[™] here: www. cortecvci.com/press-release-attention-formulators-getready-to-unleash-natures-microscopic-cleanup-crew/

*York University NSERC Engage Project Report, "Novel Bacterial Blend to Enhance Biomethanation of Municipal Sewage Sludge," 11 December 2020. Prepared by Prof. Brar's Team: Dr. Bikash Tiwari, Rahul Saini, and Mona Chaali.



4119 White Bear Parkway, St. Paul, MN 55110 USA Phone (651) 429-1100 | Fax (651) 429-1122 | Toll-Free (800) 4-CORTEC STAY CONNECTED









