

BioCORTEC® NEWSLETTER

May 2023

A Milestone Achievement for the Bioeconomy and CUI

Our release of [CorroLogic® CUI Inhibitor Injection](#) last October was monumental in two ways. First, it provided an injectable, high temp solution to the insidious problem of corrosion under insulation (CUI). Secondly, it used biobased raw material to do so.

For years, a practical solution to the problem of CUI on high temp piping has proved elusive except for materials that could only be applied by removing existing insulation and/or before applying new insulation. While our team had developed a Vapor phase Corrosion Inhibitor that could be injected into existing insulation, creating minimal interruption to processes, the product was limited to use on surfaces that did not significantly exceed 300 °F (149 °C). Although CUI often happens at lower temperatures, piping itself can experience extreme temperature swings during the full range of operations. The CUI inhibitor therefore needed to survive these high temperatures in order to be effective during the more vulnerable low temperature periods.

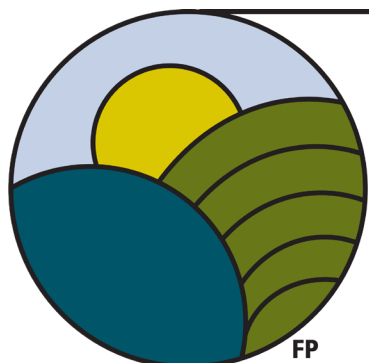
By careful research and close study of select raw materials, Cortec® R&D came up with a product in 2022 that was stable at temperatures upwards of 600 °F (315 °C). The inhibitor demonstrated vapor migration and corrosion protection, with hydrophobicity as a strong indicator of the inhibitor's presence on the metal surface. At one point in the experimental stage, hydrophobicity was so extreme that the product developer could barely keep drops of saltwater



solution from rolling off the treated panel when trying to complete corrosion testing. She finally had to place washers on the metal panels to keep the saltwater droplets in place.

In keeping with Cortec's commitment to using biodegradable or biobased raw materials where possible, CorroLogic® CUI Inhibitor Injection was made with biobased material and accordingly sent off for third-party biobased testing under the USDA BioPreferred® Program.* Not long after the product was released, it was awarded the USDA Certified Biobased Product Label confirming (via third-party testing) that the product contains 100% USDA certified biobased content.

CUI is an enormous problem in petrochemical, refinery, and marine environments, with an [estimated 40-60% of piping maintenance](#) costs in oil and gas stemming from CUI-related expenses. Considering both the financial cost and the potential danger of CUI on pipes carrying hazardous liquids, we are proud to introduce a new solution that is also a milestone achievement in the bioeconomy.



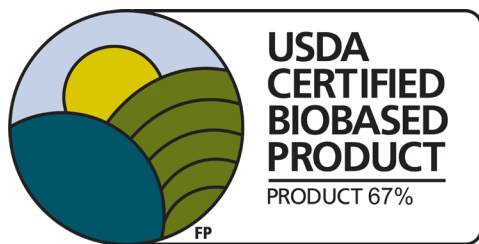
**USDA
CERTIFIED
BIOBASED
PRODUCT**
PRODUCT 100%

*For more information, go to <https://www.biopreferred.gov>.

Making Structures More Sustainable with MCI®

How do [MCI®-2005](#), concrete durability, and sustainability fit together? The longer a concrete structure lasts, the better, because it reduces the need to make replacement concrete, which is an energy intensive resource. Since cement, a main component of concrete, is blamed for as much as [8% of global CO₂ emissions](#), this reduction could have significant implications for sustainability.

Along with the search for greater durability is society's quest to use products made from renewable resources instead of relying so heavily on petroleum-based substances. In this respect, MCI®-2005 truly stands out from the crowd as the only corrosion inhibiting concrete admixture that is also a USDA Certified Biobased Product. MCI®-2005 contains 67% USDA certified biobased content and is therefore a great way to earn credits toward LEED certification through the use of renewable materials.



For the last two decades and more, MCI®-2005 has been used in structures around the world exposed to everything from the high water-table/saline-soil conditions of the Middle East to the intense brine of desalination processes. It is an outstanding choice for contractors and engineers seeking extended service life and sustainability!



Cortec® Coated Products (CCP) Commended for Sustainability Efforts

Our coated papers plant in Eau Claire, Wisconsin, was honored by a visit from Wisconsin Governor Tony Evers and his delegation Tuesday, March 28th.

Governor Evers was travelling across the state to promote his clean energy budget proposal and learn more about businesses that pursue environmental compliance. As a member of the voluntary Wisconsin DNR Green Tier program for more than a decade, CCP was a prime candidate for demonstrating how sustainability programs like the Green Tier play out in real life.

During a tour of the plant, Governor Evers took time to meet several of our line operators and ask many questions about how things are done at CCP. Caleb Pheneger (COO), Guy Van Riper (Wisconsin Plant Manager), and Cliff Cracauer (EVP Sales & Marketing) escorted the governor through the plant and shared how CCP has been able to improve efficiencies and sustainability. These efforts include using less power and water, reducing scrap, and using more recycled material.

Local news stations Channel 8 (La Crosse) and Channel 18 (Eau Claire) covered the event and captured Governor Evers commending Cortec® for its sustainability efforts. "This plant frankly at Cortec® does a great job of meeting a lot of the expectations that the state has and so it's important," the governor said. Cortec®, likewise, was honored to have Governor Evers take time to stop by and learn how the Green Tier program works at CCP. "It was fantastic to have Governor Evers there," Cracauer said, "and it's truly appreciated that he took the time out of his schedule to visit our plant and see the successful program that we've had in place."

Learn more about the visit at Channel 8 (https://www.news8000.com/news/gov-evers-touts-environmentally-sustainable-efforts-during-tour-of-eau-claire-business/article_ac578e86-cdb1-11ed-b372-e77a09e15c3c.html) and Channel 18 (https://www.wqow.com/news/politics/governor-evers-in-eau-claire-visit-promotes-clean-energy/article_9cb6e432-cdb0-11ed-bc80-f8951214ec6.html).



Image credit: WKBT-DT Channel 8 news, Wisconsin.



Image credit: WKBT-DT Channel 8 news, Wisconsin.



Tips for Making the Most of Eco Works® Certified Compostable Films & Bags

A strong environmental commitment has led Cortec® Corporation to develop products such as Eco Works® 10 and Eco Works® 45, certified commercially compostable films with 10% and 45% biobased content, respectively. Eco Works® 10 and 45 are 'OK compost INDUSTRIAL' certified by TÜV Austria and meet the EN 13432 standard (equivalent to ASTM D6400) for disposal in a commercial composting environment.* However, making and buying biobased compostable film is only the first step in achieving a "circular economy"—the rest is up to the user. Cortec® suggests the following tips for getting the most out of Eco Works®:

1. **Confirm the availability of industrial composting sites in your area and their acceptance of Eco Works® film or bags.** Fortunately, composting facilities are on the rise and Eco Works® meets appropriate scientific standards for industrial composting, but local requirements are sometimes tricky, and it is better to be safe than sorry!
2. **Check for local grants to launch your organics recycling program.** This can be a big boost to get your environmental initiative off the ground.
3. **Make sure compostables go in the right bin!** Clearly identify composting bins and what can go into them. You can find printable signs online to show restaurant or cafeteria patrons where to put food and compostable packaging waste. Above all, do not use compostable plasticware and bags if you are just going to throw them out in the regular trash! It somewhat defeats the purpose of buying compostable items.
4. **Educate your customers.** Some eco-friendly store patrons will know exactly what to do with Eco Works® 10 check-out bags when they see the 'OK compost INDUSTRIAL' logo on the side. Others may need more education on how to dispose the bags responsibly. To help, stores may include signs or notes that suggest reusing the bags as organics bin liners (in cities that do organics recycling) or saving them for spring or fall yard cleanup (where commercially compostable bags are mandated for yard waste collection). This could even save patrons the trouble of buying their own!

If you are specifically interested in organics recycling, click here to learn more about starting an organics recycling program: <https://www.cortecvci.com/press-release-how-and-why-to-start-an-organics-recycling-program-with-eco-film/>

** These products are intended to be composted in a commercial composting facility operated in accordance with best management practices. Check locally to see if such a facility exists in your community and if they will accept this product. Not suitable for backyard composting.*

Oh, the Things You Can Do with Old Boxes!*

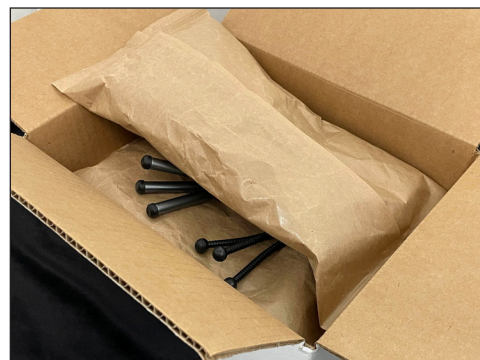
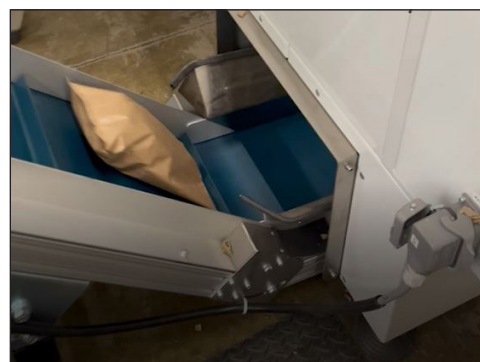
When you were a kid, did you like to play with boxes? Big freezer boxes were the perfect hideout, and small packing boxes were great building blocks for miniature furniture.

Although those days are generally gone for us as adults, one tool distribution company has proved that there are still creative ways to put cardboard boxes to good use after they've done their primary job. One U.S. company is now taking its many incoming shipping boxes, chopping them up, and using them as fill material for dunnage bags made out of EcoShield® Heat Sealable Paper. The new method of recycling was made possible with special processing equipment from Europe, along with an AVM vertical form, fill, and seal machine from PAC Machinery's sister company, Audion.

The end result? Instead of investing resources to bale, stage, pick up, and transport used boxes, the company recycles them in house. Instead of having to spend six figures extra for packaging fill paper, the company fills its packaging voids with dunnage bags made onsite out of [EcoShield® Heat Sealable Paper](#).

Although this was the first installation of its kind in the U.S., it does not have to be the last, since this method opens up exciting opportunities for making the most of readily available resources! Watch a video of the equipment in action here: <https://youtu.be/nN9EgMhmca8>

**With apologies to Dr. Suess.*



How to Improve the Lives of Automakers with BioCorr® HP

What if you had a biobased rust preventative that you could offer automakers for almost any auto part at any stage in the manufacturing process without requiring removal later? For starters, you would probably find yourself talking about [BioCorr® HP](#), which combines the best of earlier BioCorr® formulations into one convenient corrosion solution especially geared to the auto industry.

BioCorr® HP is a water-based rust preventative that forms a virtually undetectable dry-to-touch film that, in most cases, does not need to be removed. This provides excellent multi-metal corrosion protection. It is compatible with yellow metals and does not interfere with transmission fluids. UV-marker technology makes it easy for workers to check for full coverage. On the sustainability side, BioCorr® HP

contains 54% USDA certified biobased content, making it an excellent environmentally responsible alternative to rust preventatives mainly derived from petroleum. BioCorr® HP also has excellent shelf-life emulsion stability to minimize the chance of product separation inside application equipment.



BioCorr® HP can be used on almost any metal auto part, including transmissions, machined components with tight tolerances, axle ends, and gears. It can be applied by dip or spray, robotically or by hand. With endless possibilities in store, BioCorr® HP awaits to be used to the fullest to improve the lives and worker environments of automakers and their suppliers!

New Bionetix® Products

ECO-SCENT SPORT™ is a ready-to-use odor neutralizer designed specifically to tackle sports-related odors. It can be used in standard spray bottles and sprayed directly over the odor problem area at the gym, in the locker room, in the duffel bag, or on your clothes. In addition to masking odors with its optional fresh fragrance, ECO-SCENT SPORT™ captures odor-causing molecules at their source using two of the most powerful natural odor neutralizers. The odor control does not stop there. ECO-SCENT SPORT™ also contains beneficial bacteria for residual odor control power. These probiotics work by digesting the source of the odor: excessive sweat residue.

EN-Z-KLEAN™ Ultra is a versatile enzyme-based liquid detergent that can be used in industrial and commercial laundry applications. Enzymes and probiotics enhance EN-Z-KLEAN™ Ultra with natural cleaning power. Free enzymes target and digest specific stains that are common in heavily soiled laundry. When used as a presoak, a healthy supply of good bacteria in EN-Z-KLEAN™ Ultra also awaken and add their stain digesting and cleaning power to the equation. Better yet, while EN-Z-KLEAN™ Ultra is tough on waste, it is gentle on nature. It is phosphate-free and produced with ingredients that do not harm fabrics or hands.

BIOBOOSTER SR™ tablets add beneficial microorganisms, nutrients, and enzymes to the wastewater lagoon and de-

liver them to the bottom of the pond, where they are needed most. The tablets slowly release active ingredients that digest organic waste and decompose biomass, thus reducing sludge volume. A shock dose of BIOBOOSTER SR™ is a great way to get existing sludge under control, followed by a maintenance dose every one to three months depending on sludge intensity. The less sludge there is, the less often dredging will be needed. The resulting cost savings can add up quickly!

The non-pathogenic bacillus blend of **ABC 9000™** attacks a variety of complex organic compounds and digests them, helping remove stains and odor-producing compounds. For further odor control, formulators can choose from ABC 9000™ in a pine, floral, or custom fragrance to mask unpleasant odors. ABC 9000™ also comes in a wide selection of colors—light green, blue, pink, off-white, or custom—for better aesthetic blending with the final product:

- Cat litter
- Carpet cleaners
- Powder and liquid laundry detergents
- Deodorizers (e.g., odor control powder or solids)
- And other water-soluble cleaners!



CORTEC
CORPORATION

Environmentally Safe VpCI®/MCI® Technologies



4119 White Bear Parkway, St. Paul, MN 55110 USA

Phone: (651) 429-1100, Fax: (651) 429-1122

Toll Free: (800) 4-CORTEC, E-mail: productinfo@cortecvci.com

Keywords: BioCortec, BioPreferred Program, USDA Certified Biobased Products, bioeconomy, compostable film, corrosion under insulation, box recycling, probiotics, Bionetix, Cortec

Created: 05/2023
©Cortec Corporation 2023. All rights reserved.