

# CORTEC *Vision*

April 2021

## Leaders in the Fight Against Packaging Pollution



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# Cortec® Film Extrusion Plants: Leaders in the Fight Against Packaging Pollution

Our VpCI® film extrusion plants in Minnesota and Croatia are both models of what packaging manufacturers can do to conserve resources and help fight plastics pollution in the environment.

Just in the last year, Cortec® Advanced Films (CAF) in Cambridge, Minnesota, [became a proud member of Operation Clean Sweep](#), a voluntary program that helps manufacturers reduce plastics pollution. CAF officially joined the program in the summer of 2020, signing a pledge to work toward zero loss of plastic pellets, flakes, and powder to the environment. In addition to employee training, CAF has made great strides in finding ways to prevent spills and capture stray pellets in an ongoing effort to keep the environment clean.

In Croatia, EcoCortec® has recently [finalized its role in the €1.95 million European BIOCOPACK project](#) to reduce pollution and promote sustainable packaging. The project started in 2017 and ended in 2020. EcoCortec® was mainly involved in developing the audit tool and also participated in pilot actions and supported the preparation of case studies.

Both CAF and EcoCortec® are also leaders in VpCI® plastic recycling and commercially compostable films production. Read about some of our compostable film developments, Eco Wrap® and EcoStretch™, on page 8.



## New Organics Recycling Program Uses Eco Film® Compostable Bags

We were pleased to launch a new organics recycling program at our global headquarters facility in January 2021. The program will collect food and paper waste that is usually thrown into the facility's garbage and turn it into compost instead. An especially exciting feature of the new program is that it gives us the opportunity to put to use our own Eco Film® commercially compostable bags manufactured at our Cambridge facility. These bags are certified for commercial composting (BPI #890974) and will be used as liners for organics collection bins around the facility. The organic waste will be sent to an industrial composting site in Rosemount, Minnesota, to be converted into soil amendments for local communities. Learn more about the program here: [https://www.cortecvci.com/whats\\_new/announcements/Cortec-Organics-Recycling-with-Eco-Film-PR.pdf](https://www.cortecvci.com/whats_new/announcements/Cortec-Organics-Recycling-with-Eco-Film-PR.pdf)



## Good Partners for Business and Community

EcoCortec® and CorteCros®, our two plants in Croatia, have been recognized by Company Wall credit rating agency for three consecutive years of excellent credit performance. Both plants have stood out with top credit ratings among tens of thousands of businesses evaluated in the region and each received a special commemorative plaque in recognition of the achievement. This is especially exciting for CorteCros®, who has recently launched onsite production and plans to continue expanding capabilities in the near future. It is also noteworthy for EcoCortec®, who recently celebrated 15 years of successful business and has shown incredible resiliency to adapt to new circumstances during the COVID-19 crisis. In addition to being rated as a good business partner, EcoCortec® has also reached out to the community by donating UV films to help those in the city of Glina protect damaged roofs and chimneys from severe weather conditions after the December earthquake that shook the region.



## Cortec® Headquarters Awarded Governor's Safety Award Two Years in a Row

Our White Bear Lake headquarters facility was honored to earn the Minnesota Governor's Safety Award for the second year in a row! It was recognized for excellence in workplace safety and health during the MN/SD Safety & Health Virtual Conference October 19<sup>th</sup>-20<sup>th</sup>. Jill Carlson, HR Representative and Safety & Facilities Coordinator at our corporate headquarters, commented, "To receive the Meritorious Achievement Award two years in a row is very cool! Everyone at our WBL facility plays a part in safety and without their engagement, we wouldn't be able to receive this award." She credited a new safety culture and the revamp of Cortec® Safety Orientation and Annual Safety Trainings for improving employee engagement and workplace safety over the last couple of years. "We have a great team at WBL and it shows!"



HELPING MAKE LIFE SAFER

## Another Year of No Non-Conformities for Bionetix® Quality!

Quality is important at Cortec® and its biotechnology subsidiary, Bionetix® International, which was proud to pass another year of ISO 9001:2015 quality audits with no non-conformities. This year, the audit was conducted via Zoom. Three audit report highlights included Bionetix® meeting its goal of no product returns in 2020, slightly surpassing its goal on average ratings for its 2020 customer satisfaction survey, and chronicling 10 new and revised products in progress.



### Adding Fresh Faces and New Energy to the Cortec® Team

We have recently seen some exciting additions to our Cortec® team and are looking forward to the ways these new team players will improve our products and services for you.

#### *Technical Services*

Last fall, we welcomed **Lisa Eischens** and **Patrick Shortridge** to the Tech Service team. Both Lisa and Patrick represent fresh new talent coming to us as recent graduates of Chemical Engineering programs. Lisa has a special interest in promoting environmentally responsible solutions to corrosion and packaging issues. Her goal is to be a dependable liaison between internal and external clientele at Cortec®. Patrick finds himself intrigued with the fact that even though corrosion is not a common subject of thought for many, its impact is incredibly widespread and costly. He is eager to go above and beyond assisting customers with solutions for their unique applications.

#### *Sales*

**Jon Connealy** is our new MCI® Central Regional Sales Manager for the states of Minnesota, Iowa, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Colorado. He has almost two decades of experience in construction and is also a longtime member of the International Concrete Repair Institute (ICRI) and the current Region 5 Director and Secretariat for ICRI National.

**Anthony Price** is a Cortec® end user turned Regional Sales Manager for Kentucky, Ohio, Indiana, Illinois, Missouri, West Virginia, Tennessee, and Mississippi. He joins us after a lengthy employment at Caterpillar, where he got to know Cortec® products firsthand. When looking for a career reboot last year, it suddenly dawned on him that Cortec® was the opportunity he'd been looking for to use his skills to the fullest!

**Murad Alsmadi** is our new Cortec® Technical Sales & Product Manager for Integrated Solutions. He brings with him a wealth of experience in international market development, as well as technical sales for an enzyme company. He sees an endless number of opportunities to save people money with Cortec's solutions to corrosion.

#### *Cortec® Advanced Films*

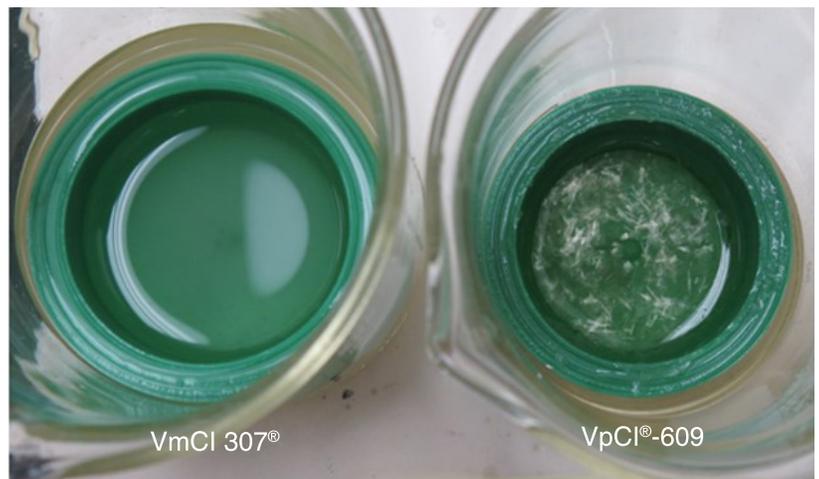
**Josh Face** is our new Plant Manager at Cortec® Advanced Films (CAF) in Cambridge, Minnesota. He has developed himself into a manufacturing data expert who is eager to uncover relevant facts and put them to work to optimize efficiency, reduce environmental impact, and continue improving CAF's performance as a critical supplier to customers.

## PRINT & ONLINE RESOURCE NEWS

In the last half year or so, we have released a number of excellent new resources to help you and your clients in the fight against corrosion.

### Long-Term Efficacy Testing of VCI Powders

Cortec® Laboratories recently released the results of long-term efficacy testing on two VpCI® Powders. This testing was done over the course of four and a half years to address the questions that Cortec® receives from time to time asking for proof that VpCI® Powder will protect long-term, whether it will lose its efficacy when continuously exposed to humidity, or whether it will turn acidic over time. The test evaluated VpCI®-609 and VmCI 307® in a humid sealed environment and concluded that both powders demonstrated the ability to continue providing corrosion protection for more than four years in this atmosphere. For test details and images, visit: <https://www.cortecvci.com/wp-content/uploads/Four-Year-Efficacy-Test-of-VCI-Powder-NA.pdf>.



### Layup Guides

Continuing on our path of providing layup guidelines for a variety of industries, we released our “Midstream Gas Plant Layup Guide” in late October and a “Substation Preservation – Corrosion Prevention” plan in January. In February, we added “Cortec’s Guide to Compressor Station Preservation in Operation and Layup.” These guides detail basic techniques that can be carried out for effective preservation and identify specific VpCI® materials that can be used for the purpose. Find them below.

Midstream Gas Plant: <https://www.cortecvci.com/midstream-gas-plant-layup-guide/>

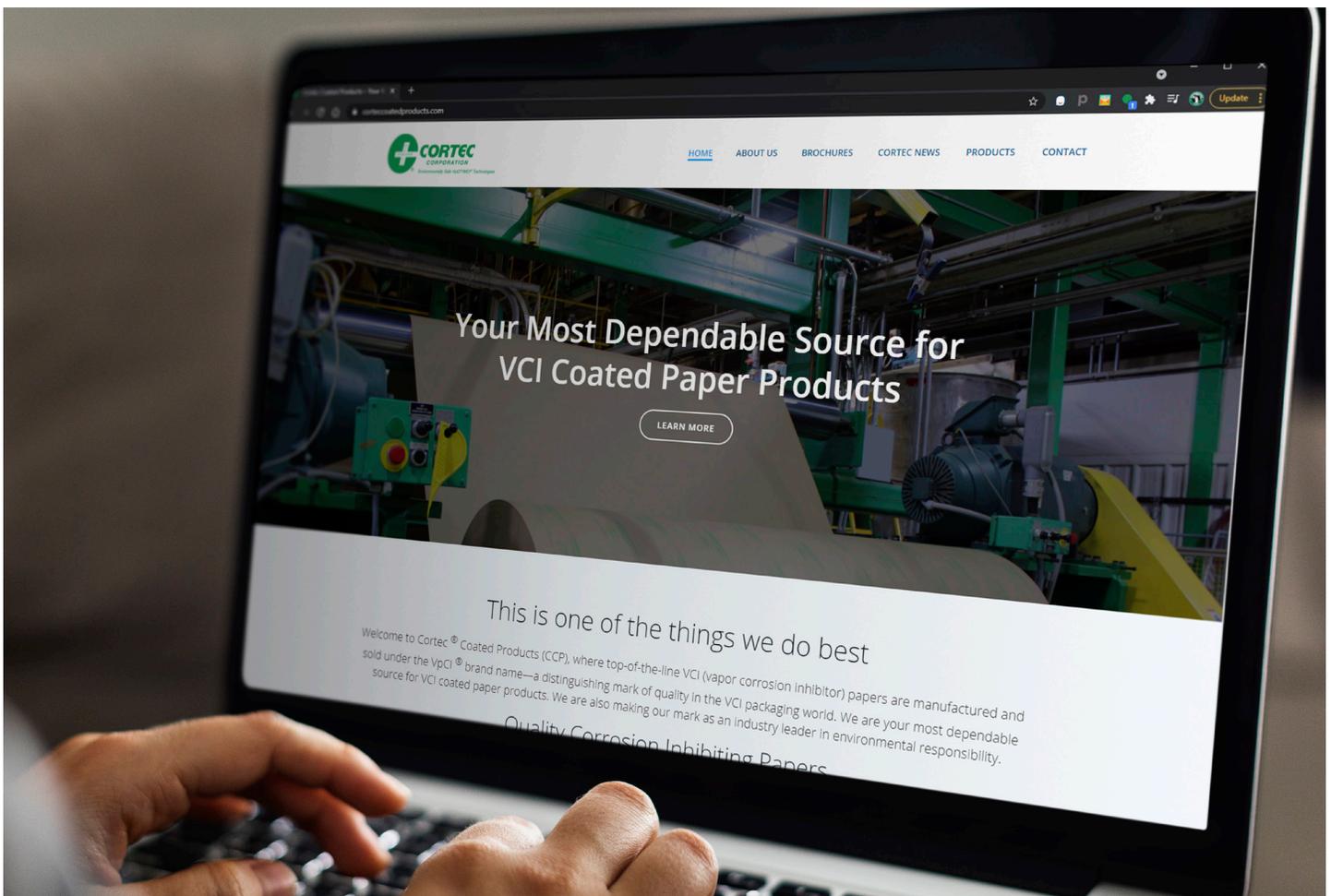
Substations: <https://www.cortecvci.com/substation-preservation-corrosion-prevention/>

Compressors: <https://www.cortecvci.com/cortecs-guide-to-compressor-station-preservation-in-operation-and-layup/>

### Brochure & Website Updates

We also released a freshly redesigned website for Cortec® Coated Products (CCP), “Your Most Dependable Source for VCI Coated Paper Products.” The website supplies basic background info on Vapor phase Corrosion Inhibiting paper products and also highlights CCP’s participation in the voluntary Wisconsin Green Tier Program since 2010. It provides a direct portal to information on CCP’s selection of corrosion inhibiting and recyclable moisture barrier papers. Browse here: <https://www.corteccoatedproducts.com/>.

Even more recently, we revised the VpCI® Metalworking Products Brochure with updated graphics and content. The products and selection guide are reorganized for easier navigation and identification of products according to end use (cutting fluids, lubricants, and general purpose rust preventatives) and carrier type (biobased, water-based, oil-based, solvent-based, 100% vapor phase). The brochure adds several exciting new products not previously included. Access the brochure: <https://www.cortecvci.com/Publications/Brochures/Metalworking%20Broch.pdf>.



### Helpful Handouts

To help potential end users understand the advantages of some important product lines at a glance, we have also created several easy to use handouts. One highlights how EcoLine® ELP stands up to the competition against products like WD-40®, LPS 2®, or CRC 3-36®: [https://www.cortecvci.com/whats\\_new/announcements/EcoLine\\_Sell\\_Sheet.pdf](https://www.cortecvci.com/whats_new/announcements/EcoLine_Sell_Sheet.pdf).

Another gives a quick and easy overview of EcoLine® biobased greases to facilitate the transition to “sustainable” lubrication in countless industrial applications: [https://www.cortecvci.com/whats\\_new/announcements/Biobased\\_Grease\\_Sell\\_Sheet.pdf](https://www.cortecvci.com/whats_new/announcements/Biobased_Grease_Sell_Sheet.pdf).

A third handout presents Cortec’s MRO (maintenance, repair, operations) info sheet in a Spanish translation to share with a broader base of users in Latin America and beyond: [https://www.cortecvci.com/whats\\_new/announcements/MRO-Sell-Sheet-Spanish-NA.pdf](https://www.cortecvci.com/whats_new/announcements/MRO-Sell-Sheet-Spanish-NA.pdf).

(LPS 2® is a registered trademark of Illinois Tool Works. WD-40® is a registered trademark of WD-40 Company. CRC® and 3-36® are registered trademarks of CRC Industries, Inc.)

### MCI®-2061 Demo Video

An exciting new demo video comes from our friends at Form & Build Supply and shows a high speed time lapse of MCI®-2061 being applied to concrete to clean up oil stains from golf course machinery. This is a great way to introduce “green” cleaning technology to your friends. MCI®-2062 contains microorganisms that biodegrade hydrocarbons in concrete. Spores that remain in the substrate after rinsing continue to degrade residual hydrocarbon constituents of the stain that weren’t removed in the initial cleaning process. Watch MCI®-2061 in action: <https://www.youtube.com/watch?v=NCSizZals48>.



## PRODUCT NEWS

We’ve had a variety of exciting new product update announcements in recent months!

### MCI®-2062: ‘Green’ Cleaner with Organic Waste Digesters

In November, we were excited to introduce the newest addition to our line of MCI® cleaners for concrete. MCI®-2062 is a biological-based surface cleaner similar to MCI®-2061 but targeted toward cleaning stains from organic wastes, proteins, fats, greases, and starches. This bio-enzymatic blend combines powerful cleaning chemistry with free enzymes and microorganisms capable of biodegrading a wide range of organic waste in order to leave facilities sparkling clean and odor-free. It is especially suited to concrete heavily soiled by organic wastes in and around dumpsters, restrooms, and food processing facilities! Learn more: [https://www.cortecvci.com/whats\\_new/announcements/MCI\\_2062\\_2061\\_PR.pdf](https://www.cortecvci.com/whats_new/announcements/MCI_2062_2061_PR.pdf).

### MCI® CorShield®: Go-To Brand for Exposed Rebar Protection

Although not a new product, our MCI® CorShield® is worth mentioning. Several months ago, we announced that it was being consolidated with MCI® Coating for Rebar NT under the MCI® CorShield® name for clearer identification of our go-to corrosion protection coating for steel reinforcement exposed to the elements. MCI® CorShield® is water-based and dries to a clear, soft, non-tacky film that eventually hardens and provides 6-24 months of unsheltered, outdoor protection. It also shows good adhesion to concrete according to ASTM A944-99. Read more: [https://www.cortecvci.com/whats\\_new/announcements/MCI\\_CorShield\\_PR\[2\].pdf](https://www.cortecvci.com/whats_new/announcements/MCI_CorShield_PR[2].pdf).

### EcoSonic® VpCI®-125 HP Permanent ESD Film & Bags

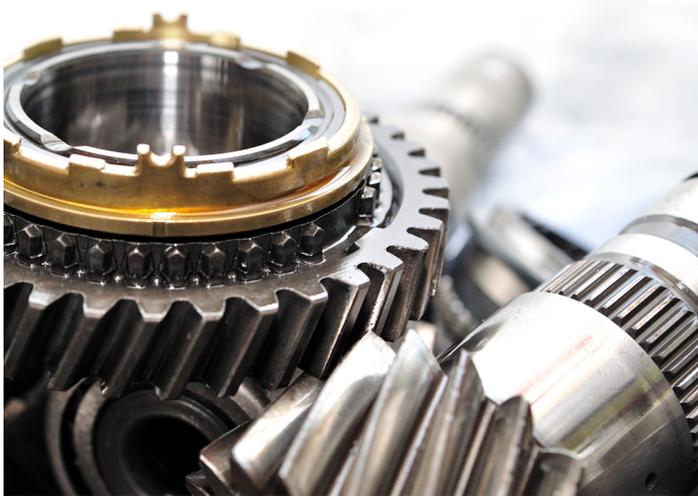
Our new improved version of VpCI®-125 Technology introduces high-performance anti-static, corrosion inhibiting film and bags for use in the protection of static sensitive multi-metal items such as electronics. EcoSonic® VpCI®-125 HP Permanent ESD Film & Bags contain permanent anti-static properties to immediately reduce or eliminate static buildup as long as the films or bags are in use, independent of the presence of humidity. They also form a molecular corrosion inhibiting layer on metal substrates and do not interfere with the physical or chemical properties of electronic components. Learn more: [https://www.cortecvci.com/Publications/PDS/EcoSonic\\_VpCI-125\\_HP\\_NEW.pdf](https://www.cortecvci.com/Publications/PDS/EcoSonic_VpCI-125_HP_NEW.pdf).

### Desicorr® NW VpCI®: Now Available in Larger Sizes

Past users of Desicorr® VpCI® Pouches found the dual desiccant/VpCI® action helpful for protecting metals from corrosion in spaces up to 5 cubic feet (140 L) per each Unit 1 Desicorr® NW VpCI® Pouch. While this was perfect for small packages of metal parts, it made application of multiple pouches excessive when protecting larger equipment voids or containers. Now, users who want to protect four or eight times as much volume as the smaller Desicorr® NW VpCI® sizes can do so by inserting one of Cortec's new Unit 4 or Unit 8 Desicorr® NW VpCI® Pouches into a package or void of up to 20 or 40 cubic feet (560 or 1120 L), respectively. Read more about the larger sizes here: [https://www.cortecvci.com/whats\\_new/announcements/New-Desicorr-VpCI-Sizes-PR.pdf](https://www.cortecvci.com/whats_new/announcements/New-Desicorr-VpCI-Sizes-PR.pdf).

### VpCI®-330: New Easy Spray, Inconspicuous Rust Preventative

VpCI®-330 is a brand-new rust preventative with excellent corrosion protection and improved user experience. It is easy to spray onto metal parts using a handheld trigger spray bottle or common spray equipment and leaves a light protective film that is detectable but does not alter the appearance of the metal surface. This is ideal for further processing and/or shipment where subsequent rust preventative removal is not feasible or desirable. Read more: [https://www.cortecvci.com/whats\\_new/announcements/VpCI-330%20PR.pdf](https://www.cortecvci.com/whats_new/announcements/VpCI-330%20PR.pdf).



### Eco Wrap®: Commercially Compostable Machine Grade Stretch Film

Our release of Eco Wrap® presented an exciting start to 2021 as the world's first industrial strength machine grade commercially compostable stretch film. This formula uses a certified compostable resin plus a tackifier additive to make an industrial strength compostable stretch wrap that can be used on most standard automated stretch wrap equipment.

The film is commercially compostable according to ASTM D6400.\* This is a breakthrough for the industrial packaging and warehousing industries in a time when there is renewed focus on preventing plastics pollution and launching sustainable packaging initiatives. Learn more: [https://www.cortecvci.com/whats\\_new/announcements/Eco-Wrap-PR-2021-01.pdf](https://www.cortecvci.com/whats_new/announcements/Eco-Wrap-PR-2021-01.pdf).



### EcoStretch™ powered by Nano VpCI®: Commercially Compostable Stretch Film for Corrosion Protection

Another exciting addition to our compostable films portfolio is EcoStretch™ powered by Nano VpCI®. This formula takes compostable stretch film up a notch in advanced technology as the first commercially compostable stretch film that provides corrosion inhibition! EcoStretch™ meets the ASTM D6400 standard for commercial composting\* and is perfect for stretch-wrapping metal equipment or components that need to be kept rust-free while minimizing the environmental impact of traditional plastic packaging. Learn more: [https://www.cortecvci.com/whats\\_new/announcements/EcoStretch-PR-2020-03.pdf](https://www.cortecvci.com/whats_new/announcements/EcoStretch-PR-2020-03.pdf).

### Cor-Pak® Stretch Hoods powered by Nano VpCI®: Advanced Stretch Hood Technology

Last, but definitely not least, EcoCortec® is now offering corrosion inhibiting stretch hoods for palletizing of metal goods. Stretch hoods are a rapidly growing packaging technique that EcoCortec® has further revolutionized by the addition of VpCI® Technology for corrosion protection. Cor-Pak® Stretch Hoods allow industries to quickly and securely wrap and contain heavy loads while protecting metal components from corrosion. Get more ideas on where to use Cor-Pak® Stretch Hoods here: [https://www.cortecvci.com/whats\\_new/announcements/Cor-Pak-Stretch-Hoods-PR.pdf](https://www.cortecvci.com/whats_new/announcements/Cor-Pak-Stretch-Hoods-PR.pdf).

\*This product is 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.

## BIOGAS BOOSTER 3™: New Micronutrient Blend from Bionetix®

Biogas is an exciting form of “green” energy that converts waste into heat and electricity. However, many variables can easily disrupt the anaerobic digestion process and reduce the efficiency of biogas production. Knowing this, our biotechnology subsidiary recently developed BIOGAS BOOSTER 3™, a micronutrient blend that contains three important micronutrients intended to boost biogas production, process stability, and efficiency by stimulating the microorganisms that do the work. Laboratory testing by York University in 2020 showed that the addition of BIOGAS BOOSTER 3™ increased biogas production in just one week and that biogas production was expected to continue to grow as time went on.† Learn more about this exciting new product here: [https://www.cortecvci.com/whats\\_new/announcements/BIOGAS-BOOSTER-3-PR.pdf](https://www.cortecvci.com/whats_new/announcements/BIOGAS-BOOSTER-3-PR.pdf).

†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.

## NEW ARTICLES

Cortec® has made it into many trade publication feature articles over the last months. Here are some article highlights that serve as great resources for your own continuing corrosion education as well as for sharing with colleagues or clients that might have similar applications.

### ‘Preserve and Protect’

World Cement  
November 2020

Many of you know how versatile Cortec’s Technologies are for use across industries. This article is another example of that cross-industry value. The article provides “The big picture” of VpCI® Technology, then goes on to describe some specific examples of how VpCI® can be applied to components on SAG, ball, and vertical mills. Although the article is specifically targeted to cement grinders, it uses examples from the mining industry that are relevant to the cement industry and almost any other. Read the article here: [https://www.cortecvci.com/whats\\_new/announcements/Cortec-2020-11-world-cement.pdf](https://www.cortecvci.com/whats_new/announcements/Cortec-2020-11-world-cement.pdf).

### ‘Start from the Inside Out’

World Pipelines  
December 2020

In December 2020, World Pipelines featured a great article on internal pipeline preservation using VCI. The feature covers a wide variety of pipeline applications: LNG pipeline spools, subsea pipelines and connectors, cased pipeline crossings, and hydrotesting. It also includes a number of excellent illustrative images courtesy of Cortec® Middle East’s experience in the field. Browse the article here: [https://www.cortecvci.com/whats\\_new/announcements/WorldofPipeline.pdf](https://www.cortecvci.com/whats_new/announcements/WorldofPipeline.pdf).

### ‘Welding Surface Prep: There is an Easier Way’

WELDFAB Times Tech  
October-November 2020

Jim Holden, P.E., our Director of Energy & Engineered Solutions, was interviewed for an article about the benefits of using weldable coatings to facilitate easier weld surface prep. Since weld surfaces need to be free of contaminants, such as corrosion, to ensure a good weld, and because of Jim’s positive experiences with Cortec® Technology, he found himself looking for a way to see if VpCI® coatings could be used to protect weld surfaces and eliminate hand grinding. Read the article to see what he discovered: [https://www.cortecvci.com/whats\\_new/announcements/WTT\\_05\\_OCT-NOV\\_20\\_R2\\_Interactive\\_Online.pdf](https://www.cortecvci.com/whats_new/announcements/WTT_05_OCT-NOV_20_R2_Interactive_Online.pdf)

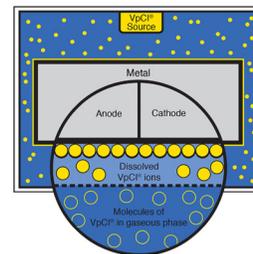


Figure 1. How VCI chemistry forms a protective molecular layer on metals inside enclosed environments. Image courtesy of Cortec Corporation.

chemistry. This allows them to address the problem of pipeline corrosion and prevent premature failure starting from the inside out.

#### Taking advantage of VCI chemistry

VCI chemistry is particularly suited to protect difficult-to-reach internal voids of pipelines, because of its ability to vaporize and diffuse throughout an enclosed space. VCIs come in many formats and can be combined with a variety of different carrier materials for easier application. Some of the best VCIs on the market are those based on salts of amine carboxylates and manufactured by Cortec Corporation in Saint Paul, Minnesota (US). These VCIs have been used in countless applications across the globe, including small and large greenfield and brownfield preservation projects for major oil and gas companies.

VCIs have enough partial vapour pressure to sublimate directly from a solid to a vapour. As the molecules vaporize, they diffuse throughout the air (similar to the action of an air freshener) until they are evenly spaced in an enclosed environment. At this point (equilibrium), their attraction to metal surfaces engages, and they ionically adsorb onto nearby metal surfaces, forming an invisible molecular layer. Under normal circumstances, a metal such as carbon steel would eventually react with oxygen and moisture to form rust on the metal surface. However, the VCI layer interrupts this reaction because the metal ions are not free to interact with the oxygen or the electrolyte. Instead, they are occupied with a temporary attachment to VCI molecules. Because VCIs can migrate throughout an enclosed space, they do not need to be applied directly to each metal surface in order to provide thorough protection, increasing their ease of use and effectiveness.

The same vapour phase action that allows VCI molecules to condition and protect an enclosed metal atmosphere also simplifies the equipment commissioning process, since VCI molecules float away of their own accord when the space no longer remains enclosed. Depending on the specific medium of VCI application, equipment protected with VCIs often can be used immediately without special cleaning or removal (although rinsing is sometimes required and compatibility with final pipeline contents should always be verified before application). This simplifies labour and reduces downtime for putting equipment into service. VCIs can be applied in many different formats and carriers – powders, fluids, gels, and variations – offering an array of options to meet specific needs from one application to another.

#### Protecting pipelines before installation

When considering corrosion prevention on pipelines, the first thing that may come to mind is protecting in-service pipelines with corrosive crude oils coursing through them. However, if one is to take a new



Figure 2. Pigging was performed prior to VCI application. Image courtesy of Cortec Middle East.

### **‘Lessons on Rust Prevention in Molds’**

*Plastics Machinery & Manufacturing*

January 2021

This article highlights EcoAir® Tool & Die Rust Preventative and the specific preservation of a large P20 injection mold. Written for a plastics manufacturing magazine, it offers much relevant advice for plastic molders looking for better ways to protect their high-dollar tooling from corrosion in transit or on standby in a storage yard. This article is of high relevance for sharing with the tooling and die users in your network. Find here: <https://www.plasticsmachinerymanufacturing.com/molds-tooling/article/21205604/lessons-on-rust-prevention-in-molds>.

### **‘Business as Usual’**

*SPRAY*

March 2021

The March issue of SPRAY magazine included its annual survey of news and developments from aerosol fillers. The article highlighted two products from Cortec® that are extremely different from each other except for the fact that they can both be packaged in EcoAir® bag-on-valve (BOV) spray cans. One is EcoLine® ELP, a “green” alternative to some all-purpose lubricants, and Boiler Gecko™, a dry layup solution for smaller boilers. Read about these unique aerosol options here: [https://www.cortecvci.com/whats\\_new/announcements/Aerosol-fillers-2021.pdf](https://www.cortecvci.com/whats_new/announcements/Aerosol-fillers-2021.pdf).

### **‘Opening the Door’**

*World Fertilizer*

March 2021

Those of you involved with MCI® Technology will be interested in this March 2021 article addressing the challenge of corrosion for concrete structures in the fertilizer industry. The article notes some specific corrosion challenges that make fertilizer structures more vulnerable to corrosion and looks into some of the MCI® admixtures and surface applied corrosion inhibitors that can be used to mitigate the problem and extend structural service life. Take a closer look at the details here: [https://www.cortecvci.com/whats\\_new/announcements/Opening-the-door-world-fertilizer.pdf](https://www.cortecvci.com/whats_new/announcements/Opening-the-door-world-fertilizer.pdf)

### **‘Extending Service Life of Höganäs County Water Tower’**

*Concrete Repair Bulletin*

March/April 2021

We were especially delighted to have one of our most recent articles featured on the cover of ICRI’s periodical! The article spotlights the repair done on the Höganäs County water tower in Sweden. Located near the coast, the tower was deteriorating in places and falling short of its 50-year service life. The least invasive option included the use of Migrating Corrosion Inhibitors to mitigate further corrosion as part of a plan to extend service life by 20 years. Find the story and photos here on page 22: <https://lsc-pagepro.mydigitalpublication.com/publication/?i=699668>.



# Tips & Ideas

## Wind Energy Market

The increasing interest in renewable energy is reflected in a growing wind energy market, where there is a broad scope for corrosion solutions. Protection against corrosion and premature failure begins at the manufacturing site and continues on to the installation site. Here are some basic ways you can help both the manufacturer and the maintenance crew.

At the manufacturing site:

- Clean metal surfaces with VpCI®-415 before packaging.
- Apply CorShield® VpCI®-368 D and CorShield® VpCI®-369 to rings, blades, etc. where a rust preventative coating is needed.
- Place Desicorr® NW VpCI® Pouches into void spaces before shipment.
- Shrink wrap metal components in VpCI®-126 HP UV Shrink Film or MilCorr® VpCI® Shrink Film.
- Package electronics in VpCI®-125 Bags.

On the field:

- Insert VpCI®-111 Emitters into control panels.
- Spray electrical panels, open wiring, etc. with ElectriCorr™ VpCI®-239.
- Apply Cortec® Coatings to vulnerable base bolts.

## Coatings Tips

No matter how good a coating is, disregarding best practices in the selection and application of a coating can lead to problems down the road. Rick Shannon, our Technical Service Manager and resident coatings expert, shared three important rules of thumb to achieve best results.

**Tip #1: Surface preparation.** This is the number one factor that makes the difference between a great coating job and a poor coating job.

**Tip #2: Choose the right coating for the job.** If it is a highly corrosive environment, choose a coating for that type of environment. If the substrate will be exposed to UV light, choose a coating designed for exterior applications.

**Tip #3: Follow the manufacturer's recommendation for the coating you have chosen.** If they recommend a shot blast profile and 5 mils (125 µm) of coating, do not skip the shot blasting to save time and money.

## Coil Processor Solutions

Do you work with coil processors or are you interested in providing corrosion solutions to this industry? If so, the following products are great options to consider sharing for the various stages of steel coil processing.

- Wet-Pickling: VpCI®-325 and VpCI®-329 D are two outstanding options for application after wet-pickling. Both products displace water rather than trapping it on the surface and also perform better than commonly used Quaker Ferrocrete 61 MAL HCL 1.
- Electrostatic Oilers: VpCI®-325 has been tested and successfully used in electrostatic oilers, a quality that can be hard to come by but opens up the benefits of better spraying, better coverage, and reduced oil use.
- Edge Sprays: BioCorr® is an excellent biobased edge spray option after wet or dry pickling. It is very clean and dries completely so as not to attract dust or debris from the plant. VpCI®-337 is another good edge spray option. It provides corrosion protection in the vapor-phase for hard-to-reach spaces in between coil layers and is water-based.
- Wet Tempering: VpCI®-344 offers outstanding corrosion protection and is a water-based replacement for mineral oils traditionally used to reduce friction and inhibit corrosion.
- Packaging: VpCI®-126 Film tubing and Cor-Pak® VpCI® Stretch Film are two Vapor phase Corrosion Inhibitor packaging options compatible with C-hook or automatic stretch-wrapping equipment, respectively, for ease of application.

## VpCI® Paper Benefits

Have you ever wondered if there are any particular advantages of using VpCI® Paper over VpCI® Film or some other rest preventative option? Here are some key points to remember:

1. Cushioning Effect. VpCI® Paper has a natural cushioning effect that is particularly good for packaging bearings with critical tolerances or sensitive surface finishes.
2. Moisture Absorption. VpCI® Paper absorbs a degree of humidity and residual moisture sometimes present in packages.
3. A "Green" Material. Another advantage is the environmental aspect. Several VpCI® Papers are USDA Certified Bio-based Products. They can typically be recycled after use.

# UPCOMING EVENTS

## Offshore Technology Conference

August 16<sup>th</sup>-19<sup>th</sup>, 2021

NRG Park  
Houston, TX  
Booth #3401

<https://www.otcnet.org>

## AWT Annual Convention & Exposition

September 22<sup>nd</sup>-25<sup>th</sup>, 2021

Rhode Island Convention Center  
Providence, Rhode Island

<https://www.awt.org>

## Coatings+

December 13<sup>th</sup>-16<sup>th</sup>, 2021

Phoenix Convention Center  
Booth #638

<http://www.sspc.org>

## Cortec® Corporation



### Quality Management System (ISO 9001 Certified)

#### World Class Product Offerings

An innovative producer of leading edge products.

#### World Class Customer Service

A positive, long-lasting impression through every link of our company.

#### World Class Environmental Commitment

Cortec® commits to continued development of processes and products that are useful, non-hazardous to the environment, and recyclable whenever possible.

#### An Ethical and Respectful Company Culture

Respect and treat our colleagues, customers, and vendors as we would our own family members.



### Environmental Management System (ISO 14001 Certified)

Cortec's strong environmental concern is demonstrated in the design and manufacturing of products that protect materials of all kinds from environmental degradation. A strong commitment to produce recyclable products made from sustainable resources has been and will be our future policy. This brochure can be recycled.



### Laboratory Accreditation (ISO/IEC 17025)

Cortec® Laboratories, Inc. is the only lab in our industry that has received ISO/IEC 17025 Certification, which ensures quality in recording and reporting data, as well as calibrating equipment within the laboratory.

## LIMITED WARRANTY

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