

## **Cortec® Laboratories Services Continue to Assist Customers During COVID-19 Pandemic**

We were pleased to be able to provide continued corrosion testing services for our customers' asset preservation needs during the recent pandemic shutdowns. Two prime examples of how this testing can be valuable to customers are seen below in regard to protective packaging evaluation.

#### Example One: Simplifying a Packaging System

The first of these tests was done in March to help a customer find a way to simplify an extremely robust packaging system while still getting the same level of corrosion protection. The customer's standing method was to vacuum-seal metal parts in a VpCI®-126 Bag filled with a desiccant, a VpCI®-143 Emitter, and nitrogen. Cortec® Laboratories tested this system in a humidity chamber and compared it against several simpler packaging setups.

While the customer's current packaging system once again was shown to provide corrosion-free parts, several simpler systems produced corrosion-free parts as well. For example, metal parts packaged with a BioPad<sup>®</sup> inside a VpCl<sup>®</sup>-126 Bag (taped shut) and parts packaged with desiccant in a VpCl<sup>®</sup>-126 Bag (taped shut) showed no corrosion. The parts packaged with a VpCl<sup>®</sup>-143 Emitter in the VpCl<sup>®</sup>-126 Bag (taped shut) were also corrosion-free except for one item that had two small corrosion spots believed to have occurred before testing. The successful testing has given the customer several simplified packaging options to choose from.



Corrosion found on parts packaged in plain polyethylene bag (control).



No corrosion seen on parts packaged in heat-sealed bags (current setup).



No corrosion seen on parts packaged with VpCI®-126 and BioPad®.

# Lab News

#### Example Two: Comparing VCI Films for Corrosion Failure.

The second test was done in April for an automotive parts manufacturer whose customers were finding corrosion on parts packaged in a competitor's VCI film and interleaved with competitor VCI paper. The manufacturer wanted to see how Cortec's VpCI<sup>®</sup>-126 Film would perform in comparison.

Cortec<sup>®</sup> Laboratories tested two crates of parts in a large humidity chamber. In one crate, the parts were wrapped in competitor VCI film with cardboard and VCI paper interleaved. The other crate used VpCI<sup>®</sup>-126 Film instead of the competitor's product. The packages were examined for any tears and corrosion prior to testing. After 96 hours in humidity testing, parts wrapped in competitor VCI film showed corrosion and severe water ingress into the package, even though no tears or holes were seen in the plastic. Parts packaged in VpCI<sup>®</sup>-126 Film, however, did not have any water ingress or corrosion problems.

The results of this test have provided the customer with important information to use in deciding which VCI film to adopt going forward in order to avoid previous packaging failure issues.



Heavy water ingress caused corrosion on parts protected by competitor VCI film.



No corrosion found on parts protected by VpCI®-126 Film.



Close up views of corrosion on parts protected by competitor VCI film.



# Lab News

## **Our Portfolio of USDA Certified Biobased Product Labels is Expanding!**

It has been exciting for Cortec<sup>®</sup> Laboratories to continue to add to its list of USDA Certified Biobased Products, now in the area of corrosion preventative packaging! Two of the latest labels awarded were special milestones because they represented some of our most popular VpCI<sup>®</sup> paper products: CorShield<sup>®</sup> VpCI<sup>®</sup>-146 Paper and EcoShield<sup>®</sup> VpCI<sup>®</sup>-144 Paper. Both of these Vapor phase Corrosion Inhibitor papers have long been sourced from renewable resources, but they now have the special added recognition of being allowed to display a unique USDA label that highlights their percentage of biobased content.

CorShield<sup>®</sup> VpCl<sup>®</sup>-146 contains 92% USDA certified biobased content and offers corrosion protection on both sides of the paper, eliminating packaging guesswork. EcoShield VpCl<sup>®</sup>-144 contains 69% USDA certified biobased content. It offers corrosion protection on one side and a recyclable moisture barrier on the other side.

Both VpCI<sup>®</sup> papers are great packaging alternatives to VCI plastic for customers who want to go the route of greater sustainability—as well as for federal agencies and their contractors who must meet minimum biobased content requirements under the mandatory federal purchasing initiative of the USDA BioPreferred<sup>®</sup> Program.\* Contact us for stock sizes (<u>https://www.cortecpackaging.</u> <u>com/contact-us/</u>), and keep your eyes on Cortec<sup>®</sup> news postings for other USDA Certified Biobased Product label announcements forthcoming!





### **Cortec® Laboratories Welcomes New Compliance Specialist**

We are pleased to welcome Bruce Washington as our new Compliance Specialist! Bruce joined Cortec<sup>®</sup> Laboratories after spending a decade and a half in the field of industrial chemical compliance and safety data sheets (SDS). He brings a wholehearted attitude with him into the job of maintaining the most accurate and up to date SDS information in an ever-changing regulatory landscape—for the good of Cortec<sup>®</sup> customers and all those who handle the material.

Bruce's goal is to provide the clearest and most up to date hazard communication on Cortec<sup>®</sup> products: "To make sure that compliance is in place for the safety of our customers in case of emergency...," explained Bruce. "I want to be available for our customers whenever a need arises as well."

Bruce has a B.Sc. in Biological Sciences with a minor in chemistry from Northern Illinois University. He also studied osteopathic medicine for five years at Midwestern University. Following that, he worked for almost 16 years in compliance as a Laboratory Manager/Formulation Chemist, building and running a wet laboratory formulating and testing water-based and solvent-based industrial cleaners. During that time, he worked with several different SDS software programs and became wellversed in GHS/EU SDS compliance. He recently moved to Minnesota and was intrigued by the opportunity to experience Minnesota winters firsthand.

Bruce is always available to answer your compliance questions. Please contact him at <u>compliance@cortecvci.com</u>.



## Lab News

#### Four New Boiler Layup Products Released This Spring!

This was an exciting spring for us in terms of new dry boiler layup solutions. Adding to our collection of water treatment "animals," we released four new products that are as convenient to use as the popular Boiler Lizard® to provide expanded protection to boilers during layup and initial re-start.

On March 10<sup>th</sup>, we released our brand-new **Boiler Egg™**, which is designed to scavenge oxygen and passivate metal during the initial filling of makeup water after seasonal or long-term dry layup of boilers. The Boiler Egg™ comes in an easy-to-handle pouch that is readily dissolved upon water contact, releasing the active ingredients as the boiler is being filled.

Next, we introduced the **Boiler Lizard<sup>®</sup> Plus**, a two-part Boiler Lizard<sup>®</sup> / Boiler Egg<sup>™</sup> complete dry layup kit providing corrosion protection all the way from shutdown through initial startup. By using Boiler Lizard® Plus, boiler operators and water treatment personnel can take advantage of the benefits that Boiler Lizard<sup>®</sup> users have come to know and love, in addition to the completely new features of the Boiler Egg<sup>™</sup>.

Third, we released the Boiler Dragon™, a ready-to-use waterborne Vapor phase Corrosion Inhibiting fogging fluid designed for use in the dry layup of large boilers and steam components (>10,000 gallons [38,000 L]). Boiler Dragon™ is a safer and/or more effective alternative to traditional boiler dry layup options such as desiccants, quicklime, or nitrogen blankets. There is no need for product removal or flushing before returning the boiler to service.

Finally, we finished out the month of March by releasing the **Boiler Gecko™**, a convenient dry layup option for the smallest boilers that are not large enough to warrant the use of our time-tested Boiler Lizard® but still need corrosion protection.

We have several more boiler "animals" lined up for future release so you can have an even wider variety of corrosion solutions at your fingertips. Stay tuned for further updates!

### New, Improved VpCI® Fogging Fluid for Void Spaces Released in June



We are pleased to introduce a new, improved VpCI<sup>®</sup> fogging fluid this June for the protection of complex and hard-to-reach internal void spaces. CorroLogic<sup>®</sup> Fogging Fluid VpCI<sup>®</sup>-339 is a ready-to-use 100% Vapor phase Corrosion Inhibitor (VpCI®) that is water and hydrocarbon soluble and leaves no solid residues. It is nonflammable and free of chrome, phosphorus, halogen, and silicon elements. It also contains no EPA or OSHA hazards or hazardous air pollutants (HAP). Learn more about the new product here: https://www.cortecvci.com/Publications/ PDS/CorroLogic-Fogging-Fluid-VpCI-339.pdf.







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