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PRESS RELEASE



New BioCortec® Brochure Underscores Cortec's Commitment to Providing Sustainable Corrosion Solutions!

Cortec's quest to discover more environmentally friendly corrosion solutions is evidenced in its freshly updated BioCortec® brochure, which presents an expanding portfolio of sustainable products. Of special note are Cortec's significant advances in developing USDA Certified Biobased Products made from renewable materials. In addition, Cortec's unique assortment of biobased, biodegradable, recyclable/repulpable packaging materials, along with environmentally friendly spray-can alternatives to traditional aerosols, make Cortec® a global leader in environmentally conscious corrosion control technology.



A prominent feature of the new BioCortec® brochure is an updated section on Cortec's wide range of USDA Certified Biobased Products. In the United States, these products are part of the USDA BioPreferred® Program Mandatory Federal Purchasing Initiative. The items contain specified amounts of

biobased content and include products for use in cleaning and surface prep, construction, bio-fuels, lubrication, metalworking, rust prevention, and water treatment. Through ongoing development of new USDA Certified Biobased Products, Cortec® is providing a wide variety of “green” corrosion control options and promoting the use of sustainable resources for any industry that faces metal corrosion.

In addition to USDA Certified Biobased Products, the BioCortec® brochure presents a variety of sustainable packaging options. These exciting options include the following:

- Eco-Corr Film®, Patented – the first biodegradable corrosion inhibiting film that protects ferrous and non-ferrous metals from corrosion and is available in an ESD version for packaging electronics
- Eco Wrap® – an extremely elastic stretch film that contains a unique compostable combination of biodegradable polyester film and cling coating
- EcoSonic® ESD Paper powered by Nano VpCI® – a fully recyclable/repulpable corrosion inhibiting paper with a static dissipative coating made from soybean oil
- EcoShield® Super Barrier Paper – an environmentally friendly, fully recyclable/repulpable alternative to polycoated and waxed papers
- Eco Film® – a series of film and bags that are certified compostable according to EN 13432 (DIN CERTCO) and ASTM D6400 (Biodegradable Products Institute)
- Many more specialized biobased packaging options



Cortec's global leadership in corrosion control is accompanied by a longstanding commitment to environmental responsibility, evidenced by its expanding portfolio of sustainable products. Cortec® is making especially rapid advances in developing USDA Certified Biobased Products made from renewable materials. In addition, Cortec's unique assortment of biobased, biodegradable, and/or recyclable packaging materials, along with environmentally friendly spray-can alternatives to traditional zero-seals, make Cortec® a leader in environmentally conscious corrosion control technology.

USDA CERTIFIED BIOBASED PRODUCTS

Cortec® offers a wide range of USDA Certified Biobased Products for use in cleaning and surface prep, construction, bio-fuels, lubrication, metalworking, rust prevention, and water treatment. These products are part of the USDA BioPreferred® Program Mandatory Federal Purchasing Initiative. Through ongoing development of new USDA Certified Biobased Products, Cortec® is providing a wide variety of “green” corrosion control options and promoting the use of sustainable resources for any industry that faces metal corrosion.

Cleaning & Surface Prep

EcoClean® Biodegradable Scale and Rust Remover Powered by Nano VpCI®
A heavy duty biodegradable scale and rust remover. One of the fastest acting products on the market for dissolving heavy scale, corrosion, and naturally occurring oxides of metals. Improves heat-transfer efficiency by creating clean surfaces on heat-exchanger equipment. Effective and safe to use on iron, carbon, stainless steel, copper, aluminum, magnesium, and their alloys. Contains 100% USDA certified biobased content.

EcoLine® Bio-based Rubber Revitalizer
A non-toxic product designed for cleaning, protecting, and improving gripping capabilities of genuine and synthetic rubber. Contains 68% USDA certified biobased content.

EcoLine® Surface Cleaner & Degreaser
A heavy-duty, water-dilutable cleaner/degreaser for tough cleaning jobs in industrial and commercial applications. Non-flammable and safer to handle than harmful or hazardous solvent cleaners. Contains 59% USDA certified biobased content.

FlashCorr® VpCI®
A highly effective environmentally friendly cleaner with a unique ability to neutralize and remove salt deposits. Contains 64% USDA certified biobased content.

VpCI® 422 Liquid Organic Rust Remover
Effectively removes rust and tarnish from steel, iron, copper, and brass without creating waste disposal difficulties. More user-friendly than traditional rust removers. Contains 92% USDA certified biobased content. Also available in air-powered spray cans as EcoAir® 422.

VpCI® 423
A water-based gel that effectively removes rust and oxides from steel, iron, brass, and copper. Works well on vertical and overhead surfaces. Contains 91% USDA certified biobased content. Also available as EcoAir® 423 (air-powered spray cans) and EcoClean® 423 Rust Remover (squeeze bottles).

Construction

MCP® 2005
A water-based, organic, corrosion inhibiting admixture for protection of metallic reinforcement in concrete structures. Earns credit towards LEED certification. Lower toxicity and environmental impact than traditional corrosion inhibiting admixtures such as calcium nitrite. Contains 67% USDA certified biobased content.

MCP® Cortecure®
A water-based, membrane-forming curing compound that enhances durability of reinforced concrete. Contains 82% USDA certified biobased content.

Fuel Additive

VpCI® 705 Bio
Multifunctional fuel additive for biodiesel and other bio-fuels. Serves as a corrosion inhibitor, fuel stabilizer, and water emulsifier for biodiesel, diesel, and gasoline. Contains 80% USDA certified biobased content.

Lubricants

EcoAir® Biobased CLP
A “green” multifunctional cleaner/lubricant/protectant packaged in a recyclable air-powered spray can. Loosens rusted parts and protects equipment components from wear and corrosion. Contains 89% USDA certified biobased content.

EcoLine® Bio-based Grease powered by Nano VpCI®
A multipurpose biobased grease with superior corrosion protection properties for harsh conditions (e.g., salt spray). Formulated from vegetable oils, lithium-based thickener, extreme pressure additives, and Vapor phase Corrosion Inhibitors. Contains 86% USDA certified biobased content.



Sustainable Packaging Options

Cortec's sustainable packaging options include a range of biobased, biodegradable, and/or recyclable materials. Each type of packaging meets a specific need such as compostability, corrosion protection, moisture and grease resistance, and even ESD protection!

Biodegradable and Biobased Films

Eco-Corr Film®, Patented
The first biodegradable corrosion inhibiting film. Eco-Corr Film® contains Cortec's proprietary VpCI® Technology and provides excellent contact, barrier, and vapor phase corrosion protection for ferrous and non-ferrous metals. Formulations containing up to 40% biobased content are available and can be designed to fit required properties ranging from highly elastic to semi-rigid structures. When placed in a commercial composting environment, Eco-Corr Film® will fully disintegrate within 2-3 months. Eco-Corr Film® is shelf stable.

Eco-Corr Film® ESD, Patented
A compostable, corrosion-inhibiting film with ESD protection to eliminate static electricity (e.g., for packaging electronics). When placed in a typical commercial composting environment, Eco-Corr Film® ESD will disintegrate within 2-3 months.



Eco Film®
A certified compostable film designed to replace traditional non-degradable films such as low density and high density polyethylene. Provides good mechanical properties and stability. Certified compostable according to EN 13432 (DIN CERTCO) and ASTM D6400 (Biodegradable Products Institute).



Among the many approaches to corrosion control, one of the simplest strategies is to insert VpCI® emitters into shipping containers, electrical cabinets, and other enclosures to protect the metal components inside. These VpCI® foam or cup emitters release corrosion inhibiting vapors that form an

invisible molecular protective layer against rust and corrosion on metal surfaces in the enclosure. For those who want to use the “greenest” versions of these emitter technologies, the BioCortec® brochure offers emitters in the form of Bio-Pad® (made from biobased non-woven material) and EcoEmitter® (biodegradable VpCI® packaged in a cup constructed from biobased resins).

Cortec’s line of EcoAir® spray technology takes the focus next. This line includes a number of Cortec’s mainstay corrosion control products and some specialized cleaners packaged in environmentally friendly air-powered bag-on-valve (BOV) spray cans that are recyclable when empty.* Several of these products are also biobased to maximize sustainability:

- EcoAir® 422 and EcoAir® 423 – environmentally-friendly biodegradable organic rust removers
- EcoAir® Biobased CLP – a multifunctional cleaner/lubricant/protectant that contains 89% USDA certified biobased content
- EcoAir® BioClean Spray – an effective but gentle cleaner derived from coco oil and corn syrup
- EcoAir® BioCorr® Corrosion Preventative – an easy-to-use biobased rust preventative that leaves a virtually undetectable dry film on metal surfaces

The BioCortec® brochure also includes other specialty biobased or biodegradable products for cleaning and surface prep, construction, lubrication, oil and gas industry needs, preservation, and water treatment. It concludes with several case histories on how various BioCortec® products have been used in the past—to replace traditional rust inhibiting oils for the protection of bearings shipments, to inhibit corrosion in a concrete pier repair, and to help implement a new composting program for food waste at a major zoo in Cortec’s home state.

Emitters

Bio-Pad®
A unique flexible corrosion inhibiting device constructed from biobased non-woven material. Provides multi-metal protection and serves as an extra-strength source of VpCI® for protection of large volumes.

EcoEmitter®
A unique biobased VpCI® emitting device constructed from biobased non-woven material. Adhesive backing allows easy-stick application inside tool boxes, electrical boxes, and other compartments where corrosion protection is needed. Each 3 in. x 1.25 in. (7.62 cm x 3.175 cm) device protects up to 1.5 ft² (0.14 m²) of space.



EcoEmitter®
Polymeric cup constructed from biobased resins contains fully biodegradable corrosion inhibiting powder that releases protective vapors through a breathable biobased membrane. Self-stick cup allows convenient application in enclosed spaces where corrosion protection of metals is required. Each EcoEmitter® protects 8.8 ft² (0.25 m²) of enclosed space.

ECOAIR®
Cortec® packages a number of its mainstay corrosion control products and some specialized cleaners in environmentally friendly air-powered bag-on-valve (BOV) spray cans. The empty cans are recyclable.*

EcoAir® VpCI®-337 Corrosion Inhibitor
Ready-to-use biodegradable waterborne Vapor Phase Corrosion Inhibitor that leaves a thin, self-healing film. Non-flammable. Protects void spaces such as pipe internals and double wall spaces.

EcoAir® VpCI®-377 Corrosion Preventative
Dilutable water-based replacement for oil-based rust preventatives. Forms clear, dry film. Non-flammable. Indoor dry storage of finished metal parts, castings, gears, pumps, equipment, sintered metals, bars, and roll stock.

EcoAir® 414 Cleaner/Degreaser
Water-based fast acting cleaner/degreaser with flash corrosion protection. Non-flammable. Removes temporary coatings, light oils, and greases.

EcoAir® Cleaner/Degreaser VpCI®-418 LM
Non-foaming, heavy-duty alkaline cleaner/degreaser with flash corrosion protection. Nitrite- and amine-free. Non-flammable. Removes hydrocarbons, greases, and difficult deposits.

EcoAir® 422 & EcoAir® 423
Environmentally friendly biodegradable organic rust removers. USDA Certified Biobased Products. Non-flammable. Removal of rust/corrosion from metal surfaces. Neutralize with EcoAir® Cleaner/Degreaser.

*Please verify local regulations before disposing.





EcoLine® Bio-based Food Machinery Lubricating Grease #1
NLGI grade 1 grease for lubrication of machinery where there is the possibility of incidental contact with food. Made from natural seed oils. Superior lubricity and wide range of operating temperatures. Contains 90% USDA certified biobased content.

EcoLine® Bio-based Food Machinery Lubricating Grease #2
NLGI grade 2 grease for lubrication of machinery where there is the possibility of incidental contact with food. Made from natural seed oils. Superior lubricity and wide range of operating temperatures. Contains 90% USDA certified biobased content.

EcoLine® CLP
Provides lubrication, penetration, cleaning, and corrosion protection. A 'green' replacement for kerosene/mineral oils and other hydrocarbon based solvents. Carrier based on canola oil and canola methyl ester. Contains 80% USDA certified biobased content. Also available in easy-to-spray version.

EcoLine® Cutting Fluid
A multifunctional concentrate for metal cutting operations. Provides excellent corrosion protection and lubrication during the cutting process. Contains 64% USDA certified biobased content.

EcoLine® Metalworking Fluid
Metalworking fluid formulated with biobased oil, additives, and emulsifiers. An excellent replacement for chlorinated products. Excellent corrosion protection. Can be used as a lubricant for heavy-duty rolling, grinding, extruding, stamping, and cutting. Contains 70% USDA certified biobased content.

Rust Preventatives

BioCorr®
A water-based, biobased, dry-film rust preventative. Protects metals during storage and transportation. An excellent environmentally sound alternative to petroleum derived products. Contains 64% USDA certified biobased content. Also available in SC (super-concentrate) version.

BioCorr® ATF Rust Preventative
An oil-in-water emulsion rust preventative for preservation of transmissions in storage and during transportation. Forms an invisible dry to touch film. Contains 54% USDA certified biobased content. Also available in SC (super-concentrate) version.

EcoLine® 3220
A ready-to-use canola-oil based rust preventative. Tenacious film clings to metal surfaces for excellent corrosion protection in storage and shipment, with long-lasting vapor phase protection. Contains 90% USDA certified biobased content.

EcoLine® 3690
A ready-to-use canola-oil based rust preventative designed for severe marine and high humidity conditions. Self-healing and moisture-displacing. Contains 72% USDA certified biobased content.

EcoLine® Long Term Rust Preventative
A soy-based long term rust preventative and lubricant. Provides excellent corrosion protection in high humidity and chloride-containing environments. Contains 85% USDA certified biobased content.

Water Treatment

M-805 PS
A corrosion inhibitor additive for deicing salts and closed loop cooling system brine solutions. Nitrite-, chromate-, and phosphate-free. Contains 98% USDA certified biobased content.

EcoClean® Biodegradable Scale and Rust Remover Powered by Nano VpCI®
A heavy-duty biodegradable scale and rust remover. One of the best selling products on the market for dissolving heavy scale, corrosion and naturally occurring oxides off metals. Improves heat-transfer efficiency by creating clean surfaces on heat-exchanger equipment. Effective and safe to use on iron, carbon, stainless steel, copper, aluminum, magnesium, and their alloys. Contains 100% USDA certified biobased content.

EcoLine® VpCI®-642
A corrosion inhibitor for offshore hydrostatic testing with seawater. Replaces nitrite-, chromate-, and hydrazine-based rust preventative products. Contains 90% USDA certified biobased content.

VpCI®-645 Marine Use Corrosion Inhibitor
A unique concentrated formulation that protects ferrous and non-ferrous metals from corrosive solutions containing chlorides. An effective replacement for nitrite- and chromate-based formulations and hydrazine-based oxygen scavengers. Contains 93% USDA certified biobased content.






Cortec® is excited to be releasing its updated BioCortec® brochure on the verge of the 11th International Conference on Bio-based Materials in Cologne, Germany, where a joint Cortec®/EcoCortec®/Bionetix® team will be presenting “green” solutions to corrosion and waste cleanup at Booth No. 18. Due to this special opportunity, the brochure has already been translated into German to provide easier access to German-speaking manufacturers in search of more sustainable solutions to corrosion problems.

To read the entire version of this brochure, please visit:

<https://www.cortecvci.com/Publications/Brochures/BioCortec.pdf>

To read the entire version of this brochure in German, please visit:

https://www.cortecvci.com/Publications/Brochures/BioCortec_Brochure_German.pdf

To learn more about BioCortec®, please visit:

<http://www.biocortec.com/>

To learn more about the 11th International Conference on Bio-based Materials, please visit:

<http://bio-based-conference.com/>

**Please verify local regulations before disposing.*

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Cortec® Corporation is the global leader in innovative, environmentally responsible VpCI® and MCI® corrosion control technologies for Packaging, Metalworking, Construction, Electronics, Water Treatment, Oil & Gas, and other industries. Our relentless dedication to sustainability, quality, service, and support is unmatched in the industry. Headquartered in St. Paul, Minnesota, Cortec® manufactures over 400 products distributed worldwide. ISO 9001, ISO 14001:2004, & ISO 17025 Certified. Cortec Website: <http://www.cortecvci.com> Phone: 1-800-426-7832 FAX: (651) 429-1122