

# ECOsonic<sup>®</sup>

ECOsonic<sup>®</sup> Line: VpCI<sup>®</sup> products for protection of electronics & electricals.



# Ecosonic®

## VpCI® Electrical & Electronic Products Value-Added Features:

### Cortec® VpCI® Emitting Systems

Cortec® offers a complete full-service line of products in convenient-to-use sizes. Cortec® products are an excellent quality assurance tool for everything from major manufacturers of electronics to do-it-yourself home-built kits. Corrosion can be stopped at any step from manufacturing to final installation. Integrate all your electronic/electrical protection needs from a single source supplier.

### Cortec® Emitting Systems Offer — Reliability, Service Life, and Cost Reduction.

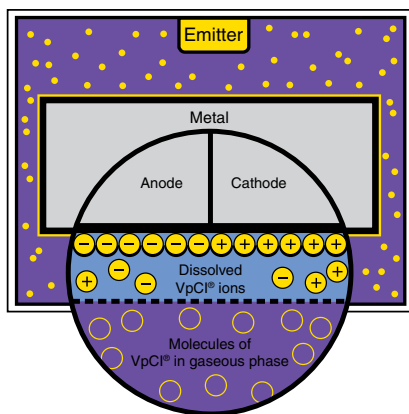
Corrosion of complex electrical and electronic equipment is an increasingly serious problem causing expensive failures. Corrosion occurs during manufacturing, shipping, storage, and field operations. It can be caused by:

- Salt, moisture, contaminants, hydrogen sulfide, sulfur dioxide, ammonia, or acid rain
- Galvanically-induced attack
- Equipment operation in non-controlled atmospheres

With Cortec® Emitting Systems, sensitive equipment is protected against corrosion, thereby extending its life and reducing the cost of expensive repairs.

### How VpCI® Emitters protect your equipment.

Emitters and tapes are designed to protect products, components, or parts against corrosion when enclosed in non-ventilated housings, control boxes or other enclosures. The VpCI® Emitter releases a vapor into the interior of the package, the vapor then deposits on the metal surfaces and forms a protective molecular layer. This layer of VpCI® provides multimetal protection and helps reduce corrosion in the enclosure.



### Cortec® products are environmentally friendly.

Cortec® products prevent corrosion while being non-toxic, safe to handle and apply, and free of nitrites and silicones. They allow manufacturers to develop environmentally friendly "green" products by using fewer toxic materials.



## EcoEarth™ Product Line

### EcoEmitter®

- EcoEmitter® constructed from OK Biobased 3-Star Rated, resin
- EcoEmitter® protects 8.8 cubic feet (0.25m<sup>3</sup>)
- One way 100% biobased breathable membrane
- Non-toxic
- Easy installation
- No residue
- Provides protection for up to twenty-four months
- No spraying, wiping, or dipping required



## Ecosonic® Product Line

### PACKAGING

### EcoDevice™

- Constructed from 100% biobased fibers
- Contains no isocyanates
- Economical to use
- Convenient to install
- Provides multimetal corrosion protection
- Effective in polluted and humid environments
- Compact and space saving
- Does not interfere with electrical, optical, or mechanical performance



### VpCI®-150 & VpCI®-170 Tape, Patented

- VpCI® impregnated foam tapes with adhesive backing
- Corrosion protection lasts up to two years
- NATO# 8030-00-244-1299, MIL-B-81075C, NSN 8030-01-208-1769
- USDA approved
- USDA approved



### Cor-Pak® Tablets

- Protect up to 0.25 cubic feet (7.1 liters) of enclosed space per tablet
- Easily inserted in packaging by manual or automated systems
- Vapor phase inhibiting action protects inaccessible and recessed surfaces
- The VpCI® layer does not interfere with the operation of most electrical and electronic components

## PACKAGING

### VpCI® Corrosorber® Paper

- Contains hydrogen sulfide scavenger and saturation indicator
- Effective against aggressive environments including humidity, SO<sub>2</sub>, H<sub>2</sub>S and galvanic corrosion from dissimilar metals
- Combines protection from tarnish and packaging into one step
- Non-toxic. Contains no nitrites, phosphates, silicones, chromates or other heavy metals

### VpCI®-125, Patented

- VpCI® impregnated film.
- Excellent corrosion protection.
- Superior dissipative qualities.
- MIL SPEC# B-22020C II.
- MIL SPEC# B-81705C II.
- MIL SPEC# PRF-817050.
- USDA approved.
- Heat Sealable.
- Static dissipative corrosion-inhibiting bags and sheeting.
- MIL SPEC# B-81705C Type II
- MIL SPEC# B-22019F.



### Cor-Pak® I MUL Pouches, Patented

- No cleaning
- Self replenishing
- Twenty-four month protection
- Multi-metal protection
- Dual properties desiccant/corrosion inhibitor

### Desicorr/ Desicorr VpCI®

- Desicorr VpCI® offers dual VpCI® protection
- Both have desiccant protection
- Non Toxic
- No degreasing or cleaning or part required.
- MIL-D-3464E Type I & Type II



## CORROSORBER®

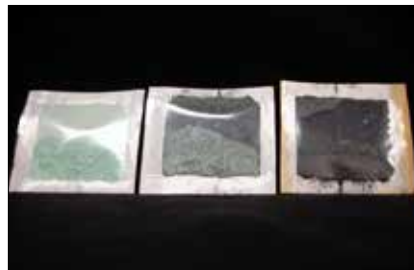
### Corrosorber®

- Absorbs corrosive gases
- Irreversible reaction
- Non-toxic
- Superior performance against H<sub>2</sub>S
- Changes color as it is used up
- Quick installation



### Corrosorber® Pouch

- Scavenges corrosive gases
- Changes color as it is used up
- Non-toxic
- Very convenient to use
- Changes color as it is used up
- Protects during operation and shutdown
- Compact, space-saving, unobtrusive device



### VpCI®-308 Pouch

- Creates inhibiting layer on metal surface
- Provides up to 24 months of continuous protection
- Does not contain nitrites, phosphates, or heavy metals



## SPRAY

### ElectriCorr® VpCI®-238

- Instant corrosion/ oxidation protection
- No CFC's
- Displaces moisture
- Anti-static
- 2 year indoor protection
- NSN# 6850-01-413-9361



### ElectriCorr® VpCI®-239

- Excellent outdoor corrosion protection.
- Designed for aggressive environments.
- Non-conductive
- Anti-static
- Perfect for exposed contacts and relays.
- UV Indicator

### ElectriCorr® VpCI®-248

- Long-term corrosion protection
- Increased corrosion protection at a lower cost than conventional rust preventives
- Minimized field service
- Non-flammable

### ElectriCorr® VpCI®-286

- Conforms to surface
- Continuous corrosion protection
- Fast drying
- No VOC's
- UV indicator
- Vibration resistant
- Extends board life

## CORWIPE®

### Corwipe® 500 Patented

- Strong Dupont Sontara® wipe
- Cleaner/Degreaser
- Anti-Stat
- Removes surface rust
- Corrosion inhibitor for multimetals
- Disposable



	Product	Description	Protection	Packaging	Applications	
Packaging	EcoEmitter®	Biobased emitting device filled with nitrite free VpCI®, for multimetal protection. Constructed from biodegradable and renewable materials. Powered by nano VpCI®.	3.0 ft <sup>2</sup> (.25 m <sup>2</sup> )	10/carton	Operating, packaged and stored electrical equipment, marine navigation and communication equipment, aerospace electrical controls, electric motors, switching equipment, fuse boxes, medical equipment, electrical wireways, terminal boxes, scientific and measuring instruments, telecommunications equipment, control panels for manufacturing and processing equipment.	
	EcoDevice®	Biobased VpCI® emitting device constructed from 100% biobased fibers providing an eco-friendly and sustainable option for corrosion protection. These devices are designed to provide corrosion protection for small enclosures.	1.5 ft <sup>2</sup> (.04 m <sup>2</sup> )	50/carton		
	VpCI®-133	Vapor phase Corrosion Inhibiting Squares with adhesive backing 1" L x 1" W x 1/4" H (2.5 cm x 2.5 cm x 0.64 cm) Conforms to MIL-PRF-26514G1T 3(CLS I)(A), NSN 6850-01-426-3539	0.33 ft <sup>2</sup> (.01 m <sup>2</sup> )	Approx. 1000/carton		
	VpCI®-150	Vapor phase Corrosion Inhibiting Foam Tape with adhesive backing 12" L x 3/4" W x 1/4" H (3.7 m x 19 mm x 6 mm) Conforms to MIL-PRF-26514G1T 3(CLS I)(A), NSN 6830-01-208-1769, NATO 8030-00-244-1299. Patented, USDA Approved (USA)	0.4 ft <sup>2</sup> /in (.005 m <sup>2</sup> /cm)	6 rolls/carton		
	VpCI®-170	Vapor phase Corrosion Inhibiting Foam Tape with adhesive backing 20" L x 2" W x 1/4" H (6.1 m x 51 mm x 6 mm) Conforms to MIL-PRF-26514G1T 3(CLS I)(A), NSN 6830-01-208-1769, NATO 8030-00-244-1299. Patented, USDA Approved (USA)	1.0 ft <sup>2</sup> /in (.03 m <sup>2</sup> /cm)	1 roll/carton		
	VpCI®-125	Static dissipative and Vapor phase Corrosion Inhibiting bags and sheeting. Conforms to MIL-B-22019C, MIL-B-22020C, MIL-B-81765C Type II, and MIL-PRF-81765D. Patented, USDA Approved (USA)	Varies	Standard and custom sizes		For storage and/or packaging of sensitive electronic equipment. For wrapping or inserting with packaging material
	Cor-Pak® 1 MUL	Multifunctional pouch with VpCI®/desiccant action 2.5" L x 2.5" W x .125" H (6.4 cm x 6.4 cm x 0.3 cm) Conforms to MIL-I-22110C, NSN 6850-01-470-2737, USA 8030-01-208-1769	1.0 ft <sup>2</sup> (.03 m <sup>2</sup> )	Pouch with VpCI® 300/carton		Small voids, electronics, parts shipping, packaging; dustless
	Cor-Pak® Tablets	provide an extremely efficient dry method of protecting metals within a package	0.25 ft <sup>2</sup> (7.1 Liters)	1,000 tablets per bottle/ four bottles per carton		Manually or automatically insert tablets into package and simply close and seal the package shortly thereafter
	Corrosorber® Paper	One side of the paper has a special coating that scavenges or seeks out H <sub>2</sub> S gas.	1 ft <sup>2</sup> (.09 m <sup>2</sup> )	1 roll/carton		Corrosorbers absorb hydrogen sulfide and other corrosive gases
	Desicorr	A specially designed pouch to protect products from moisture damage. Whether in storage or in transit, products in nearly every industry require protection from moisture. Conforms to MIL-D-3464E Type I & Type II.	1/6 = 0.1 ft <sup>2</sup> (2.8 L) 1 = 0.75 ft <sup>2</sup> (42 L) 2 = 1.5 ft <sup>2</sup> (42 L)	2.75" x 2.5" x 0.25" 7" x 4" x 0.25" 7" x 4" x 0.25"		Manually or automatically insert a Desicorr pouch in the package. This number may vary depending on shipping conditions and the nature of the products being protected
Desicorr VpCI®	A specially designed two sided pouch which contains a unique combination of desiccant and VpCI®. They are ideal for protecting packaged ferrous and non-ferrous metals from corrosion. Conforms to MIL-D-3464E, MIL-I-22110C Type I & Type II.	1/6 = 1 ft <sup>2</sup> (28 L) 1 = 5 ft <sup>2</sup> (140 L)	2.75" x 2.5" x 0.25" 1 = 5 ft <sup>2</sup> (140 L)			
Corwipe	Corwipe® 500 Lint-free Dupont Sorbara wipe for cleaning and protecting equipment, tools and all raw and coated metals. Non-hazardous, Patented.	Varies	12 wipes per re-sealable foil pouch 12 foil pouches per carton	Test equipment, computers, PC boards, aircraft and satellite components, audio and video equipment, power terminals, any sensitive raw or painted metal parts or equipment		
Spray	ElectriCorr® VpCI®-238	Multifunctional contact cleaner and multimetal corrosion inhibitor 12 oz (340 g) cans, drums. Conforms to NSN 6850-01-413-9361	50.0 ft <sup>2</sup> /can (4.65 m <sup>2</sup> /can)	6 cans/carton 5 gal (19 l) 55 gal (208 l)	Integrated circuitry, bus bars, electrical stations	
	ElectriCorr® VpCI®-239	Outdoor version of VpCI®-238 12 oz (340 g) cans, drums	50.0 ft <sup>2</sup> /can (4.65 m <sup>2</sup> /can)	6 cans/carton 5 gal (19 l) 55 gal (208 l)	Integrated circuitry, bus bars, outdoor electrical connections	
	ElectriCorr® VpCI®-248	Non-flammable contact cleaner and multimetal corrosion inhibitor 12 oz (340 g) cans, drums. Conforms to NSN 6850-01-413-9361.	50.0 ft <sup>2</sup> /can (4.65 m <sup>2</sup> /can)	6 cans/carton 5 gal (19 l) 55 gal (208 l)	Integrated circuitry, bus bars, electrical stations	
	ElectriCorr® VpCI®-286	Acrylic-based conformal coating 11 oz (312 g) aerosol cans, drums	240-320 ft <sup>2</sup> /gal @ 1 mil (6-8 µm) @ 25 microns	6 cans/carton 5 gal (19 l) 55 gal (208 l)	Manufacture and field repair of printed circuit boards	
Corrosorber	Corrosorber®	Capsule for absorption of corrosive gases 2.3" diameter x 1.27" H (58.4 mm diameter x 32.3 mm H)	10.0 ft <sup>2</sup> (.28 m <sup>2</sup> )	10/carton	Corrosorbers absorb hydrogen sulfide and other corrosive gases	
	Corrosorber® Pouch	Uniquely designed pouch containing an indicating powder that absorbs corrosive sulfurous gases such as hydrogen sulfide and volatile mercaptans	Varies	300/carton	absorbs these corrosive gases the powder will change color from green to black notifying the user when it's time to replace the pouch	
	VpCI®-308 Pouch	Contains powder for corrosion protection of ferrous metals, aluminum, copper, and bronze.	35.3 ft <sup>2</sup> (1m <sup>2</sup> )	50/carton	Determine the number of pouches required based upon the volume of space needing protection	

**Features**

- Provides continuous long-term corrosion protection
- Economical to apply
- Effective in polluted and humid atmospheres
- Non-toxic and safe to handle and apply
- Free of nitrites, silicones and phosphates
- The molecular VpCI® layer does not interfere with electrical, optical or mechanical surface properties
- Multimetal protection
- Adhesive backing allows fast, no-tool installation
- Does not require removal prior to start-up
- Protects during equipment operation
- No or surface preparation required
- Multifunctional protection: VpCI®, static dissipating and desiccant ability
- Compact space-saving design suitable for OEM applications
- Low V.O.C. values; exceeds Southern California Clean Air Act and other local environmental requirements

**Benefits**

- Cost Reduction
- Reduced consumption
- Materials
- Labor
- Time
- Value Added Product/Service
- Peace of Mind During Shipping/Storage
- Less Periodic Maintenance
- Reduced Surface Preparation

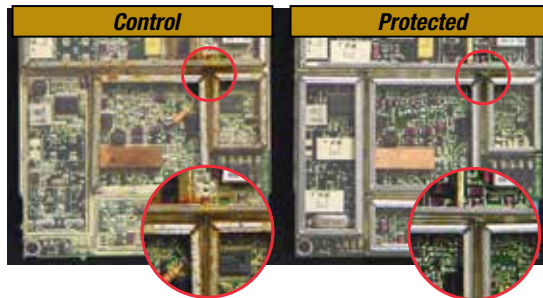


**TESTING...**

**Cortec's Vapor Corrosion Inhibitor stands up to vigorous testing.**

This accelerated test method for rust protection in a humidity cabinet is used for evaluating the rust preventative properties of metal preservatives under conditions of high humidity.

One circuit board was left untreated in an enclosure while the other was treated with Cortec's Vapor Corrosion Inhibitor protection. The criteria for passing or failing the test is the size and number of rust dots on the test surfaces.



Corroded telecommunications enclosure packed with electronics ready to collapse.

**LIMITED WARRANTY**

All statements, technical information and recommendations contained herein are based on tests Cortec Corporation believes to be reliable, but the accuracy or completeness thereof is not guaranteed. Cortec® Corporation warrants Cortec® products will be free from defects when shipped to customer. Cortec® Corporation's obligation under this warranty shall be limited to replacement of product that proves to be defective. To obtain replacement product under this warranty, the customer must notify Cortec® Corporation of the claimed defect within six months after shipment of product to customer. All freight charges for replacement product shall be paid by customer. Cortec® Corporation shall have no liability for any injury, loss or damage arising out of the use of or the inability to use the products.

BEFORE USING, USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR ITS INTENDED USE, AND USER ASSUMES ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION THEREWITH. No representation or recommendation not contained herein shall have any force or effect unless in a written document signed by an officer of Cortec Corporation. THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. IN NO CASE SHALL CORTEC® CORPORATION BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.



4119 White Bear Parkway, St. Paul, MN 55110 USA  
 Phone (651) 429-1100, Fax (651) 429-1122  
 Toll Free (800) 4-CORTEC, E-mail: info@cortecvci.com  
 www.CortecVCI.com

Distributed by:

Revised: 11/13 Supersedes: 02/13. Cortec®, VpCI®, VpCI® Film Color of Blue®, VpCI-126®, VpCI-609®, VpCI-137®, VmCI-307®, Migrating Corrosion Inhibitors®, MCI®, MCI Grenade®, EcoWorks®, EcoAir®, Eco-Corr®, EcoFilm®, EcoLine®, EcoClean®, EcoShield®, EcoWeaver®, EcoSpray®, EcoCoat®, Eco Emitter®, EcoSol®, Eco-Tie®, Eco-Card®, Eco-Shrink®, EcoWrap®, Eco Film®, Ecosonic®, Cor-Mitt®, Cor-Pak®, CorShield®, Corrosorbers®, CorWipes®, CorVertem®, Corr Seal®, CorrLam®, Cor-Fill®, CorTub®, ElectriCorr®, MilCorr®, GalvaCorr®, Super Cor®, HPRS®, Boiler Lizard®, Cooling Tower Frog®, Closed Loop Top®, Cooling Loop Gator®, Pine Tree Logo®, CR®, Metacorr®, and Rust Hunter® are trademarks of Cortec Corporation 2013. All rights reserved.