

# Safeguard Your Electronics & Electricals

Cortec<sup>®</sup> offers a full-service line of corrosion inhibiting materials in convenient-to-use sizes and formats. VpCl<sup>®</sup> emitting systems, packaging, wipes, sprays, and absorbent material combine to offer corrosion solutions for any phase of the electronic/electrical life-cycle, from manufacturing and shipping to final installation and maintenance.

# VpCI<sup>®</sup> Emitting Systems for Electricals & Electronics

VpCI<sup>®</sup> emitting systems include cups, foams, and pouches that are easy to install inside everything from electronics packages to non-ventilated electrical control cabinets and junction boxes in operation. These emitting systems release Vapor phase Corrosion Inhibitors into the enclosed space. The vapor deposits on metal surfaces and forms a non-conductive molecular layer that helps reduce corrosion in the enclosure and does not interfere with electrical, optical, or mechanical surface properties.

# Reliability, Service Life, Cost Reduction

With Cortec<sup>®</sup> emitting systems, sensitive equipment is protected against corrosion, thereby extending service life and reducing the cost of expensive repairs.

# Features and Benefits of VpCI<sup>®</sup> Emitting Systems

- •Easy installation or packaging
- •Little to no surface prep
- Continuous protection against humidity, condensation, aggressive industrial atmospheres, chlorides, and dissimilar metal corrosion
- •Up to 24 months of protection
- •Nitrite-, silicone-, and phosphate-free

# Emitter Cups

# **EcoEmitter**®

Self-adhesive VpCI<sup>®</sup> emitting cups constructed partly from biobased materials.

- Easy installation
- •No spraying, wiping, or dipping required

# VpCI®-105 Emitter & VpCI®-111 Emitter

Self-adhesive cups that emit Vapor phase Corrosion Inhibitors through a breathable  $\mathsf{Tyvek}^{\$}$  membrane.\*

- •Nitrite-, silicone-, and phosphate-free
- •Economical and long-lasting protection
- •NSN 6850-01-406-2060 (VpCl®-105)
- •NSN 6850-01-408-9025 (VpCI®-111)

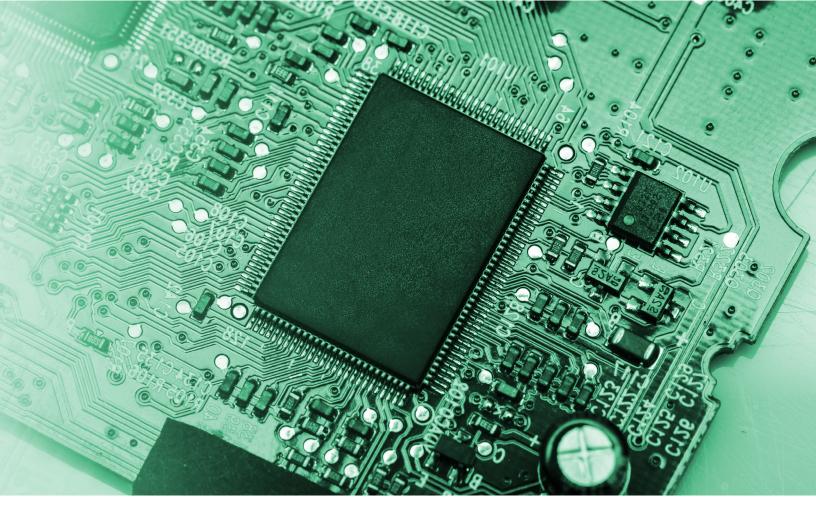
# **Emitter Foams/Non-Wovens**

## **BioPad**<sup>®</sup>

A flexible corrosion inhibiting device constructed from biobased non-woven material.

- •Extra-strength source of Vapor phase Corrosion Inhibitors
- •Contains 58% USDA certified biobased content





## BioEmitter™

Partially biobased VpCI<sup>®</sup> emitting pad packaged in vented cardboard box for easy application inside electrical cabinets.

- Includes hanging hole and four self-adhesive patches for installation
- •No nitrites, silicones, phosphates, or heavy metals
- •No adverse effects on electrical properties

### VpCI®-101 Device

 $\mathsf{VpCI}^{\circledast}$  emitting foam designed to provide corrosion protection to metal components in small non-ventilated boxes or cabinets.

- Self-adhesive backing
- •No nitrites, silicones, or phosphates
- •NSN 6850-01-338-1392

### **EcoDevice**<sup>®</sup>

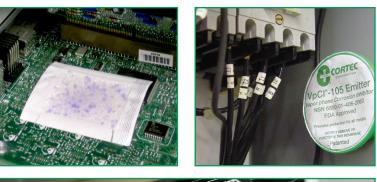
A partially biobased version of the VpCI®-101 Device.

- •Self-adhesive backing
- Protects small enclosures from corrosion

### VpCI<sup>®</sup>-130 Series Foam

Flexible VpCI<sup>®</sup> emitting foam in a variety of sizes for small or large compartments.

- Multi-metal protection
- •Nitrite- and chromate-free
- •VpCl®-133 has self-adhesive backing





## VpCI®-150, 170 Adhesive Backed Foam Tape

VpCl<sup>®</sup> emitting foam tapes that can be cut to desired size. •Flexible protection volume •NSN 8030-01-208-1769

# **Emitter Pouches**

### Cor-Pak® 1-MUL/8-MUL Pouches

Pouches that contain Vapor phase Corrosion Inhibitors released through a breathable Tyvek<sup>®</sup> membrane.\*

- •Multi-metal protection
- •NSN 6850-01-470-2737 (1-MUL).

### VpCI®-308 Pouch

A breathable pouch that releases Vapor phase Corrosion Inhibitors for the protection of ferrous metals, aluminum, copper, and bronze.

•Extra-strength source of VpCI<sup>®</sup> for large volumes

Yellow metals protection

# Features & Benefits of VpCI<sup>®</sup> Technologies for Electronics/Electricals

- ·Continuous long-term corrosion protection
- •Antistatic options
- Economical to apply
- ·Effective in polluted and humid atmospheres
- •No interference with electrical, optical, or mechanical surface properties
- •No removal required prior to startup
- •Can commonly be used during equipment operation
- •Compact space-saving designs suitable for OEM applications
- •Peace of mind during shipping/storage
- Less frequent maintenance
- Cost reduction
  - •Time
  - Labor
  - Materials

# **Packaging Films & Bags**

### EcoSonic<sup>®</sup> VpCI<sup>®</sup>-125 Static Dissipative Film & Bags/ EcoSonic<sup>®</sup> VpCI<sup>®</sup>-125 HP

Vapor phase Corrosion Inhibitor film and bags with static dissipative properties for packaging sensitive electronics.

- ESD properties conform to MIL-PRF-81705 D
- Multi-metal corrosion protection
- •High-performance (HP) version available
- Made with or without corrosion inhibitors upon request

# Eco Works<sup>®</sup> ESD

Commercially compostable film and bags for packaging electronics.<sup>†</sup>

•Available with 10% or 30% biobased content

•ESD protection only (no corrosion inhibitors)

\*Tyvek® is a registered trademark of DuPont or its affiliates. Copyright© 2021 DuPont de Nemours inc. †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.

# Wipes

# Corwipe<sup>®</sup> 500

Strong non-woven wipes for cleaning electronics.

- •Antistatic
- •Removes light rust
- Inhibits corrosion

# Sprays

## ElectriCorr™ VpCl®-238

An electronic cleaner containing Vapor phase Corrosion Inhibitors for use in sheltered applications.

- •Displaces moisture
- •Leaves behind thin protective film
- Does not alter electrical resistance or magnetic properties
- •NSN# 6850-01-413-9361

# ElectriCorr™ VpCl®-239

A multifunctional outdoor cleaner/corrosion inhibitor designed for aggressive environments.

- •Displaces moisture
- •Leaves behind thin protective film
- ·ldeal for exposed contacts and relays
- Does not alter electrical resistance or magnetic properties
- •NSN #6850-01-600-4422

# ElectriCorr™ VpCl®-248

A non-flammable version of ElectriCorr™ VpCI®-238 for cleaning and protection in sheltered environments.

- •Displaces moisture
- •Leaves behind thin protective film
- •Does not change conductivity for low-voltage circuits
- •Non-flammable

# ElectriCorr™ VpCl®-286

A corrosion inhibiting conformal coating for manufacturing and repair of circuit boards.

- Continuous corrosion protection
- Fast drying
- UV indicator
- •Extends board life

# Absorbents

# **Corrosorber**®

Plastic self-stick cup absorbs hydrogen sulfide, volatile mercaptans, and other corrosive gases through a breathable membrane. Can be used in conjunction with VpCI<sup>®</sup> Emitters.

- Quick installation
- Non-hazardous
- Irreversible reaction
- Changes color as used up

# **Corrosorber® Pouch**

A uniquely designed pouch containing powder that absorbs corrosive sulfurous gases such as hydrogen sulfide and volatile mercaptans.

- Convenient
- •Compact
- •Non-hazardous
- •Changes color as used up
- Windowed

## Desicorr® VpCI® Pouches/Desicorr NW VpCI®

Two-sided pouch containing desiccant and Vapor phase Corrosion Inhibitor Technology.

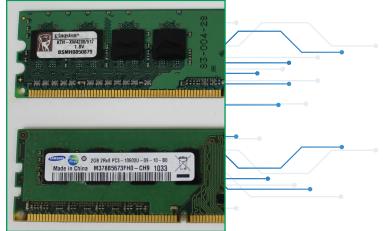
- •Dual desiccant/corrosion inhibitor action
- Easy to insert into package manually or automatically
- •No cleaning or degreasing required

# TESTING

Metals placed in a salt fog chamber used for ASTM B117 testing experience accelerated corrosion if not protected. The pictures below compare the condition of RAM sticks after 90 hours in the test chamber. The top two were unprotected. The bottom two were protected with ElectriCorr<sup>®</sup> VpCl<sup>®</sup>-239.



Control



Protected with ElectriCorr<sup>®</sup> VpCl<sup>®</sup>-239

# PRODUCT SELECTION GUIDE



		Product	Protection	Packaging/Size	Applications
Emitters	Cups	EcoEmitter®	8.8 ft <sup>3</sup> (0.25 m <sup>3</sup> )	2.25 x 1.27" (5.7 x 3.2 cm); 10 cups per unit; custom orders	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
		VpCl®-105 Emitter	5 ft³ (0.14 m³)	2.25 x 0.75" (5.7 x 1.9 cm); 20/carton	
		VpCI®-111 Emitter	11 ft³ (0.31 m³)	2.25 x 1.25" (5.7 x 3.2 cm) 10/carton	
			1.5 ft³ (42 L)	2 x 6" (5 x 15.24 cm) 250/ carton	Electronics packaging
		BioPad® USA USA BioPadP Product Product Inter-	8 ft³ (0.23 m³)	8 x 8" (20.32 x 20.32 cm) 250/carton	
			15 ft³ per ft² (4.5 m³/ m²)	Custom rolls	
		BioEmitter™	50 ft <sup>3</sup> (1.4 m <sup>3</sup> )	10.75 x 10.75 x 0.25" (27 x 27 x 8 cm) vented carton	Electrical cabinets
		EcoDevice®	1.5 ft³ (42 L)	3 x 1.25" (7.62 x 3.175 cm)	
		VpCI <sup>®</sup> -101 Device	1 ft³ (28 L)	3 x 1.25 x 0.25" (7.6 x 3.2 x 0.6 cm) 50/carton	
	Foams/Non-Wovens		VpCI®-130 Series Foam		
		VpCI®-131	1.5 ft³ (42 L)	2 x 10 x 0.25" (5.1 x 25 x 0.64 cm) 250/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
		VpCI®-132	8 ft³ (0.23 m³)	10 x 10 x 0.25" (25 x 25 x 0.64 cm) 250/carton	
		VpCl®-133	0.25 ft³ (7 L)	Adhesive backing; 1 x 1 x 0.25" (2.5 x 2.5 x 0.64 cm); 1000/carton	
		VpCl®-136	0.25 ft <sup>3</sup> (7 L)	1 x 1 x 0.25" (2.54 x 2.54 x 0.64 cm); 1000/carton	
		VpCl®-137	10 ft <sup>3</sup> (0.3 m <sup>3</sup> /m <sup>2</sup> )	132' x 54" x 0.25" (39.6 m x 1.35 m x 0.64 cm); 1 roll/ carton	
		VpCI®-150 Adhesive Backed Foam Tape	0.4 ft³/in (4.4 L/cm)	12' x 0.75" x 0.25" (3.7 m x 1.9 cm x 0.6 cm) 6 rolls/ carton	
		VpCl®-170 Adhesive Backed Foam Tape	1.0 ft³/in. (11.1 L/cm)	20' x 2" x 0.25" (6.1 m x 5.1 cm x 0.6 cm); 1 roll/carton	
	Pouches	Cor-Pak <sup>®</sup> 1-MUL Pouch	1 ft³ (28 L)	2.5 x 2.75" (6.35 x 6.99 cm) flat pouches; 300/carton	Small voids, electronics, parts shipping, packaging; dustless
		Cor-Pak <sup>®</sup> 8-MUL Pouch	8 ft³ (0.23 m³)	4.0 x 6.9" (10.16 x 17.54 cm) semi-flat pouches; 100/carton	
		VpCI®-308 Pouch	35.3 ft³ (1 m³)	6 x 10 x 0.5" (15.3 x 25.4 x 1.3 cm) pouches; 50/ carton	Large control panels, electric power supplies, shipping and layup



Packaging Films & Bags	EcoSonic <sup>®</sup> VpCI <sup>®</sup> -125 Static Dissipative Film & Bags/ EcoSonic <sup>®</sup> VpCI <sup>®</sup> -125 HP	Protects enclosed space	2-6 mils (50-150 μm), 50" (1.3 m) max. tube size; custom-size bags (heat-sealable or zipper closure), film, and tubing	For storage and/or packaging of sensitive electronic equipment in corrosive conditions; for wrapping or inserting with packaging material
	Eco Works® ESD	Protects enclosed space	1-3 mils (25-75 μm)	For storage and/or packaging of sensitive electronic equipment; for wrapping or inserting with packaging material
Wipes	Corwipe <sup>®</sup> 500	NA	5 x 5" (12.7 x 12.7 cm) towelettes; 25/flip-top container	Test equipment, computers, PC boards, aircraft and satellite components, au- dio and video equipment, power terminals, any sensitive raw or painted metal parts or equipment
	ElectriCorr™ VpCI®-238	50 ft²/can (4.65 m²/ can) (varies)	6 cans/carton; also available in 5 gal (19 L) pails, 55 gal (208 L) drums, liquid totes, and bulk	Integrated circuitry, bus bars, electrical stations, generators, junction boxes, electric motors, electrical contacts, PCBs
Sprays	ElectriCorr™ VpCl®-239	50 ft²/can (4.65 m²/ can) (varies)	6 cans/carton; also avail- able in 5 gal (19 L) pails, 55 gal (208 L) drums, liquid totes, and bulk	Outdoor integrated circuitry, bus bars, electrical connections, generators, junc- tion boxes, electrical outlets, electric motors
Sp	ElectriCorr™ VpCl®-248	50 ft²/can (4.65 m²/ can) (varies)	6 cans/carton; also available in 5 gal (19 L) pails, 55 gal (208 L) drums, liquid totes, and bulk	Integrated circuitry, bus bars, electrical stations, generators, junction boxes, electric motors, electrical contacts, PCBs where flammability is a concern
	ElectriCorr™ VpCl®-286	240-320 ft²/gal @ 1 mil (6-8 m²/L @ 25 μm) (varies)	6 cans/carton; also available in 5 gal (19 L) pails, 55 gal (208 L) drums, liquid totes, and bulk	Manufacture and field repair of printed circuit boards
	Corrosorber®	10 ft³ (283.2 L)	2.3 x 1.27" (5.8 x 3.2 cm); 10 cups/carton	Environments with $H_2S$ and corrosive gases
Absorbents	Corrosorber <sup>®</sup> Pouch	Changes color when exhausted	2.5 x 2.5" (6.35 x 6.35 cm) pouch; 300/carton	
Abso	Desicorr® VpCl® Pouches/ Desicorr NW VpCl®	Unit 1/6: 1 ft³ (28 L)	2.75 x 2.5 x 0.125" (7 x 6.4 x 0.6 cm); 300/carton	Electronics packaging
		Unit 1: 5 ft³ (140 L)	7 x 4 x 0.125" (17.8 x 10.2 x 0.6); 300/carton	
		Unit 4 (NW): 20 ft³ (560 L)	6 x 8 x 0.75" (15 cm x 20 cm x 2 cm); 300/carton	
		Unit 8 (NW): 40 ft³ (1120 L)	6 x 12 x 0.75" (15 x 30 x 2 cm); 300/carton	

# **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<sup>®</sup> 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.



SYSTEM REGIS

#### Laboratory Accreditation (ISO/IEC 17025)

Cortec<sup>®</sup> Laboratories, Inc. is the first 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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