



## CASE HISTORY

### USAF Aerospace Ground Support & Equipment Preservation

#### DATE

December 2008

#### CUSTOMER

U.S. Air Force Corrosion Prevention and Control Office

#### LOCATION

Savannah Air National Guard Combat Readiness Training Center

#### PRODUCTS

MilCorr® VpCI Shrink Film

#### PROBLEM

The Air Force is continuously looking for improved processes and procedures to save military funds, resources, and manpower. Corrosion is a natural occurring mechanism that continues to reduce aircraft and aircraft support equipment (AGE) life cycle. This project, directed by the Air Force Corrosion Prevention Control Office, was designed to investigate the benefits of a corrosion inhibiting shrink wrap film as a solution.

#### APPLICATION

Two air conditioner units were supplied by the Air National Guard unit at Travis Field in Savannah, GA. Travis Field has limited covered storage and was interested in the potential of the film wrapping material. Both units were in excellent condition, and showed no visible evidence of corrosion at the beginning of the project. Each air conditioning unit was wrapped with MilCorr shrink film and taken out of maintenance service. Air vents were installed on opposite sides of the air conditioner units, which allows the wrapped units to breathe; allowing moisture to escape from inside the wrapped units preventing water from collecting inside or condensing on the equipment. The duration of the project was one year.

#### CONCLUSION

Upon opening the sealed units there was no evidence of any standing water or other environmental elements inside the package. The two pieces remained in the same condition as when the project began the year earlier. Neither unit had visual evidence of corrosion or corrosion related issues. In addition, Travis Field personnel expressed their interest in using Cortec VpCI materials to preserve additional units.



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www.cortecvci.com  
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## Packaging products from CORTEC

All contain VpCI—corrosion inhibiting features to keep equipment rust free during storage.

### VpCI Films

- Cortec VpCI-126 Shrink Film
- Cortec VpCI-126 Stretch Film
- Cortec VpCI-126 Film
- Cortec VpCI-126 Zip lock bags
- Cortec Milcorr—UV protection



### VpCI Foams

- Cortec VpCI-emitter strips
- Cortec VpCI-emitter cups
- Cortec VpCI-emitter shields



### VpCI Cushioning

- Cortec Cor-pak VpCI Bubbles



### Compostable/Biodegradable Films

- Cortec Eco-Corr Film
- Cortec Eco-Corr ESD

Many more products are available—  
contact us (808) 676-1963 for information and pricing.



Cortec VpCI-126—Indoor film



Cortec MilCorr—Outdoor film



Standard Corrosion Protection  
Packaging: **RUSTED**



Cortec® VpCI Packaging: **NO RUST**

**Choice is up to you!**

## CORROSION COPS

### Rust & Corrosion Protection

94-463 Alapine Street, Waipahu, HI, 96797

(808) 676-1963 fax (808) 678-1677

www.corrosioncops.com

**Available Now in Hawaii!**

## Equipment Preservation

### Short and Long Term Storage with Cortec VpCI Shrink Film



Outdoor storage protection



Indoor storage protection

## Do you have?

- Back up equipment? Emergency equipment?
- Spare or idle equipment or parts that must be stored for unknown periods of time and in unknown conditions.
- Temporary Operation Shut down? Delayed Project?
- Corrosive storage environment? Humidity? Salt Water?
- Large capital equipment that must be stored for months to years in aggressive conditions before being put into service.
- Equipment being shipped to areas where WATER is not economically viable or even available and thus protective coatings cannot be used.
- Flapping, ripping, shredding blue tarps?

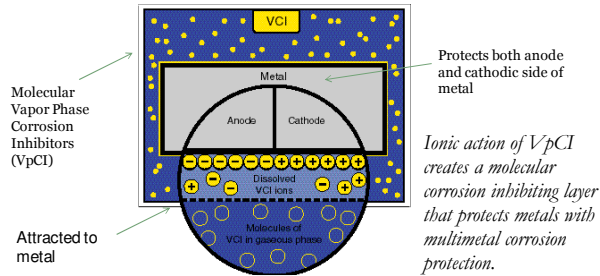
If you answered NO to any of these—please pass this brochure to someone you know who has any of the above.

**If you answered YES—read on.**

The way it goes in is the way it comes out.

## What it is

### How CORTEC VpCI Technology Works



## Advantages of Cortec VpCI Packaging

- Easy to use, non-toxic, safe to handle and use, free of nitrates, phosphates and silicones.
- Multimetal corrosion protection.
- UV Protection (MilCorr)
- Immediate use of protected object without cleaning or degreasing upon removal from film. Components are ready for installation, assembly, or service.
- Cost Effective—saves time and labor.
- Reduces raw material requirements—need for oil eliminated as well as desiccants are eliminated.
- Environmentally friendly “green” products—eliminates disposal cost as products are fully recyclable.

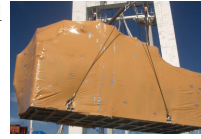


## Which product is best for me?

### Outdoor Storage: MilCorr® VpCI Shrink Film

#### PRODUCT DESCRIPTION

MilCorrVpCI Shrink Film is a 10 mil composite film featuring Cortec multimetal Vapor phase Corrosion Inhibitors (VpCI). MilCorrVpCI Shrink Film provides a top-notch universal protection system with high (UV) ultra violet light protection. This product is designed to be an alternative to expensive multi-layer laminated flexible constructions and eliminates the need for vacuum packaging and dehumidification. This film is produced in a standard military tan color.



MilCorr available in 20'x 210'.

### Indoor Storage: VpCI-126® Shrink Film

#### PRODUCT DESCRIPTION

Cortec VpCI-126 Shrink Film, combines the latest film technology with the most effective corrosion protection for all of your metal products. Sealing your product in Cortec VpCI Shrink Film will protect a wide variety of metals from rust, tarnish, stains, white rust. Metal parts packaged in Cortec VpCI-126 Shrink Film receive continuous protection against salt, excessive humidity, condensation, moisture aggressive industrial atmospheres, and dissimilar metal corrosion. VpCI-126 is transparent, making it easy to identify parts. You get complete product protection during storage as well as during domestic and overseas shipments virtually eliminating any rust claims and oxidation for up to 5 years.\*



\* Depending on film construction thickness and application.

Shrink Film is available in thicknesses ranging from 2 to 10 mils and widths from 3" to 40'.

Other storage needs: The VpCI-126 Series is the best selling anticorrosion PE film in the world today, with the highest level of corrosion protection demonstrated by standard and internal corrosion test methods.

- VpCI-126 Stretch Film
- VpCI-126 Zip Lock Bag
- VpCI-126 Film/Bags



**Call us (808) 676-1963 for information, product selection and pricing.**

## How to do it?

### Exterior Covers

#### CORTEC VpCI-126 Shrink Film/Milcorr Shrink Film Method of Application

- Inspect equipment to ensure it is in desired condition, and that nothing is missing. Pad any sharp or protruding corners.
- Measure overall length, height and diameter. Add 2 feet to diameter. Take half the height plus one foot, add this to the overall length. This is the size of the VpCI 126/Milcorr required.
- Lay out bottom of film in desired storage area. Place equipment or vehicle on film, centering lengthwise and off set side to side. (Off set so that one side of Shrink Film can be pulled part way up on one side of the unit and all the way over the top of the unit.)
- Tape the Shrink Film up to the unit on three sides of the unit. Pull the balance of the Shrink Film over the top of the unit. Completely wrap or shroud to prevent entry of moisture or air.
- Fold overlapping Shrink Film to the inside leaving 6" to 12" of overlap. Use shrink tape to hold together.
- Turn on shrink gun, carefully wave heat fan over film and melt the seam together.
- Using a Shrink Film Torch, carefully heat Shrink Film by moving torch back and forth across the Shrink Film. **KEEP TORCH MOVING!** Any holes can be patched with Shrink Film.
- Record date when equipment packaged or wrapped in CORTEC VpCI Shrink Film. Depending on storage conditions and integrity of sealing, check level of protection at 3 month intervals or as required. Repackage or re-wrap products as conditions warrant.

**Note:** For shippers of products, the easiest place for corrosive attack to occur is during shipment and storage. Climate shifts and differences guarantee corrosive attack for metal components during transit with continued damage during storage. Parts with standard protection are at high risk for aggressive corrosive attack due to basic climatic differences. Just simple humidity and temperature changes over a few hundred miles can create a sauna like humidity chamber or a moisture condensing rain forest. With multiple shipments during the course of a year, parts with ordinary protection have no chance of arriving at their destination without sustaining corrosion for some shipments. Components with rust bloom may need to be scrapped for total economic loss, reprocessed for partial loss, or cause customer claims due to product failure in use. Cortec VpCI packaging is your solution!