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## HIGH PERFORMANCE VpCI® PACKAGING

# MilCorr® FR VpCI® Shrink Film



### PRODUCT DESCRIPTION

MilCorr FR VpCI Shrink Film is a heavy duty film featuring Cortec multimetal Vapor phase Corrosion Inhibitors (VCI), flame retardant additives, and UV (ultra violet) inhibitors. MilCorr FR VpCI Shrink Film provides a top notch universal protection system to maintain the integrity of the film itself as well as the parts packaged within.

MilCorr FR VpCI Shrink Film can replace conventional rust preventatives such as oils and desiccants. Parts protected with MilCorr are ready to use with no additional cleaning and/or degreasing necessary, saving you time and money.

Metal parts packaged in MilCorr FR VpCI Shrink Film receive continuous protection against salt air and humid environments, moisture, aggressive industrial atmospheres, and dissimilar metal corrosion. The VCIs vaporize and condense on all metal surfaces within the enclosed space, and diffuse to every area of your part; protecting its exterior as well as void spaces and recessed areas. You get complete product storage protection as well as during domestic and overseas shipments, virtually eliminating any rust claims.

MilCorr FR VpCI Shrink Film, in conjunction with other Cortec products, provides a total turnkey preservation for long term outdoor storage.

### FEATURES

- Provides UV protection for outdoor storage
- Flame retardancy
- Multimetal corrosion inhibition providing contact-, barrier-, and vapor-phase protection.
- Superior mechanical properties
- Will shrink using a wide variety of shrink tools including electric and propane heat guns
- Provides a unitized, tight, and tamper-proof load
- Extra protection for outdoor storage and export shipments
- Effective in severe outdoor climates
- Immediate use of protected object upon removal

### METALS PROTECTED

MilCorr FR VpCI Shrink Film is compatible with and protects the following metals:

- Steel
- Iron
- Brass
- Copper
- Solder
- Aluminum
- Silver
- Nickel

For metals not specifically listed above, please contact Cortec for information regarding their protection.

### APPLICATION INSTRUCTIONS

1. Measure unit and determine amount of film needed, allowing at least 12" overlap at all seams.
2. Lay out film in desired preparation area, making sure it is clean and dry.
3. Place vehicle or equipment on film.
4. Pad off any sharp edges and corners.
5. Wrap or Shroud equipment with film.
6. Use shrink tape to attach loose ends onto film/equipment.
7. Carefully apply heat and shrink film to desired fit.

Typical shrink temperature range: 340°-440°F  
171°-227°C

Typical sealing temperature: 240°-320°F  
116°-160°C



## TYPICAL APPLICATIONS

- Military vehicles and equipment preservation
- Mothball preservation of industrial equipment
- Export packaging of expensive larger equipment
- Heavy equipment covers
- Recreational vehicle (boats, snowmobiles, etc.) preservation
- Pallet shrouds

## TESTING

UV Weathering Testing

- ASTM G 53-93 UV Weathering Test\*

\*Note. No corrosion or degradation of the film was observed after 3+ years of exposure.

Corrosion Testing

- Cortec VIA Test: Pass
- Cortec Razor Blade Test: Pass
- Cortec SO<sub>2</sub> Corrosion Test: Pass

Water Vapor Transmission Rate (MOCON)

- ASTM F-1249
- 100% RH, 100°F (37.8°C)

WVTR g/(100in <sup>2</sup> ·day)		WVTR g/(m <sup>2</sup> ·day)	
Sample 1	Sample 2	Sample 1	Sample 2
0.0833	0.0829	1.29	1.28

## FOR INDUSTRIAL USE ONLY

**KEEP OUT OF REACH OF CHILDREN**

**NOT FOR INTERNAL CONSUMPTION**

**CONSULT SAFETY DATA SHEET FOR MORE**

**INFORMATION**

### 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 products 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.

Flame Retardency Testing

- NFPA 701-2010 "Fire Test for Flame Propagation of Textiles and Films", Test #2-Flat Sheet Specimens :Pass

## MECHANICAL PROPERTIES

Property		Test Method	Units	MilCorr
Caliper		ASTM D6988	mil	10.00
Breaking Factor	MD	ASTM D882-02	lbs/in	26.1
	TD			25.5
Tensile Strength at Break	MD	ASTM D882-02	psi	2607.7
	TD			2553.4
Elongation at Break	MD	ASTM D882-02	%	725
	TD			789
Yield Strength	MD	ASTM D882-02	psi	896.6
	CD			1547.1
Tear Strength	MD	ASTM D1922-06a	mN	19463.0
	CD			29571.3
Dart Drop Impact Resistance		ASTM D1709-04, Test Method A	grams	1166

\*Typical properties represent average laboratory values and are not intended as specifications but as guides only.

For safe handling information, please consult the Safety Data Sheet (SDS).

## PACKAGING AND STORAGE

MilCorr FR VpCI Shrink Film is available in a standard size of 20' x 210' x 0.010" sheeting (6.1 x 64.1m x 250 microns). Contact a Cortec Representative for other sizes and constructions. The standard film color is white. Film should be stored indoors at ambient conditions, and sealed in original packaging. Under these conditions, shelf life is up to 24 months.



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