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# Evaluation of Armor Poly VCI and Laddawn Films

From: Cortec Corporation Laboratories

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**Project** #:12-156-1125

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Date:

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**Background:** Customer requested that the submitted Armor bag and a Green film, which was distributed by Laddawn be tested to determine if they provide sufficient corrosion protection.

## **Sample Received:**

- 1. Green Film, 3 mil, distributed by Laddawn, received 06-29-12, good condition
- 2. Armor Poly VCI, 2 mil, received 06-29-12, used condition

### **Method:**

- 1) VIA Test CC-027
- 2) Razor Blade Test CC-004\*
- 3) FTIR Test CC-006
- 4) Nitrite Test\*

\*Cortec Laboratory is not accredited for the test marked

### **Materials:**

- 1) VIA test kit
- 2) Razor Blade test kit
- 3) Paragon 1000 FTIR
- 4) Nitrite/Nitrate Test Strips

## **Procedure:**

- 1) The above tests were performed according to standard procedures.
- 2) The tests were performed from 7/17/12-7/24/12.

### **Results:**

## **Razor Blade Carbon Steel**

Sample	Panel 1	Panel 2	Panel 3
Armor Poly VCI Film	Pass	Pass	Pass
Green Laddawn Film	Fail	Fail	Fail
Control	Fail	-	-

**Razor Blade Copper** 

Sample	Panel 1	Panel 2	Panel 3				
Armor Poly VCI Film	Pass	Pass	Pass				
Green Laddawn Film	Pass	Pass	Pass				
Control	Fail	-	_				

# **VIA Test Results**

Sample	Plug #1	Plug #2	Plug #3	Pass/Fail
Armor Poly VCI Film	Grade 1	Grade 1	Grade 2	Fail
Green Laddawn Film	Grade 1	Grade 2	Grade 2	Fail
Control	Grade 0	-	-	

Note: The VIA grading system is attached to the end of the report

# Results relate only to the items tested

# **Interpretations:**

- Based on the corrosion testing results, the Armor Poly VCI film provided good contact-phase corrosion protection for carbon steel and copper. The VIA test results determined that it did not provide sufficient vapor-phase corrosion inhibition. The results determined that the film contained nitrite.
- 2) The results determined that the Green Laddawn film failed to provide contact-phase corrosion protection for carbon steel, but did protect copper. In addition, the VIA test results determined that the Green Laddawn film did not provide vapor-phase corrosion protection. The nitrite test determined that the film did not contain nitrite.

# VIA Test Grades (Grade 2 or 3 are passing)

Grade 0: Blind test

No corrosion inhibiting effect

Grade 1: Blind test

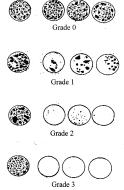
Minute corrosion inhibiting effect

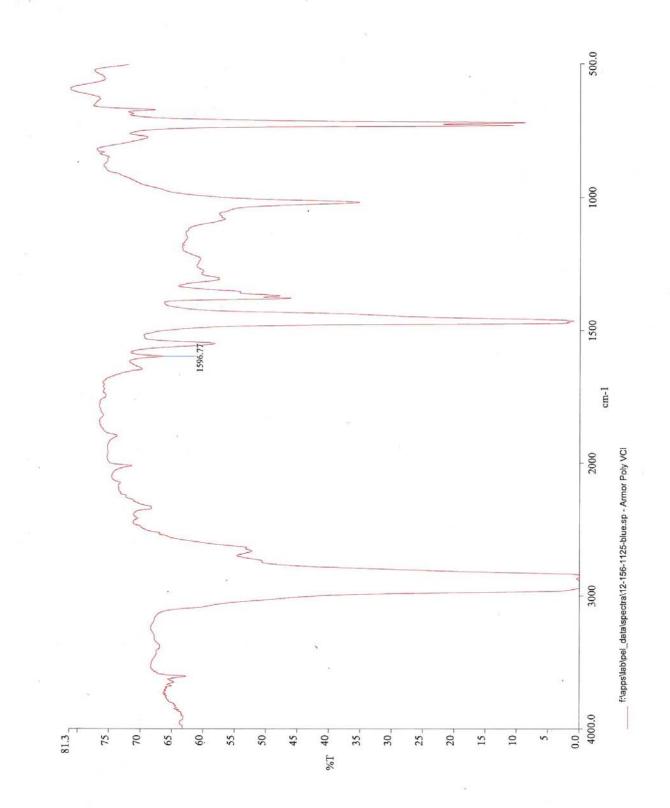
Grade 2: Blind test

Medium corrosion inhibiting effect

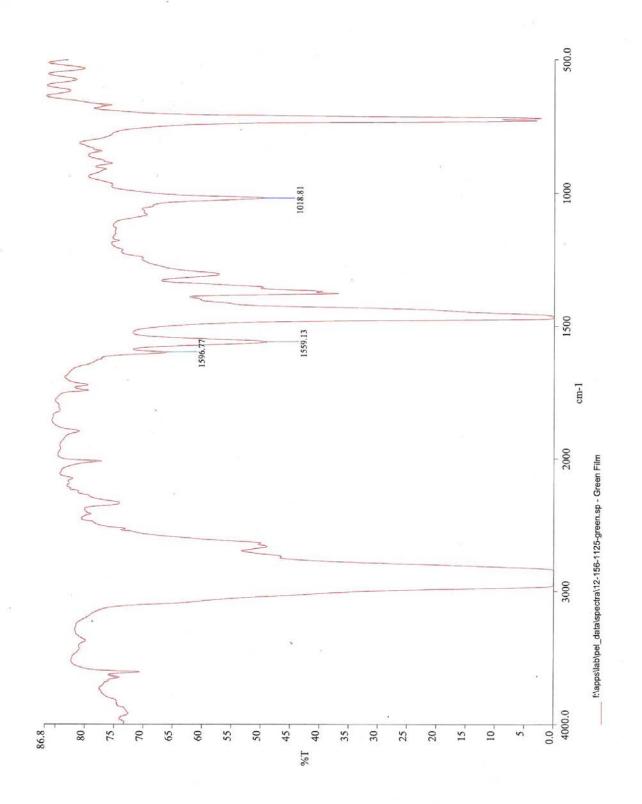
Grade 3: Blind test

Good corrosion inhibiting effect





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