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## *Polyethylene Film from Wisconsin Film & Bag Evaluation*

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**Project #:** 13-148-1125.bis

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**Date:** July 23, 2013



**Purpose:** To test the submitted green VCI bag for vapor phase and contact phase corrosion protection. This film was manufactured by Wisconsin Film & Bag.

**Sample Received:** Green Film Bag, 5mils

**Method:** 1) VIA Test CC-027  
2) Razor Blade Test CC-004\*  
3) Nitrite/Nitrate Test\*  
4) FTIR analysis  
\*Cortec Laboratory is not accredited for the test marked

**Materials:** 1) VIA test kit  
2) Razor blade test kit  
3) Nitrite/Nitrate Test Strips  
4) Mil thickness gauge  
5) Paragon 1000 FTIR

**Procedure:** The tests were conducted according to standard procedures for each test.

**Results:**

**Razor Blade Test- Copper Panels**

Sample	Panel #1	Panel #2	Panel #3	End Result
Green Film Bag	Fail	Fail	Fail	Fail
Control	Fail	-	-	-

**Razor Blade Test- Carbon Steel Panels**

Sample	Panel #1	Panel #2	Panel #3	End Result
Green Film Bag	Fail	Fail	Pass	Fail
Control	Fail	-	-	-

**VIA Test**

Sample	Plug #1	Plug #2	Plug #3	End Result
Green Film Bag	Grade 2	Grade 1	Grade 0	Fail
Control	Grade 0	-	-	-

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


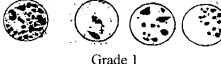
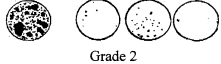
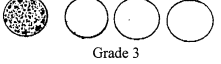
**Nitrite Test Results**

The Green Film Bag contains nitrite

**Interpretations:**

The submitted green film bag does not provide sufficient contact and vapor phase corrosion protection to pass the VIA and razor blade testing. The film contains nitrite and the FTIR analysis shows small peaks of salt of carboxylic acid and some free carboxylic acid, which probably negatively effects results on contact test (see Razor Blade results).

### 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	

## FTIR Analysis

Green Film Bag compared to Clear plain Polyethylene Film

