



4119 White Bear Parkway, St. Paul, MN 55110 USA  
Phone: (651) 429-1100, Fax: (651) 429-1122  
Toll Free: (800) 4-CORTEC, E-mail: info@cortecvci.com  
cortecvci.com • corteclaboratories.com

## Zerust Film Evaluation

**To:** Dario Dell'Orto  
**For:** Customer  
**From:** Cortec Corporation Laboratories  
4119 White Bear Parkway  
St. Paul, MN 55110  
**cc:** Boris Miksic  
Cliff Cracauer

**Project #:** 13-142-1125.bis

**Results reported by:** *Brian Benduha*  
Brian Benduha  
Lab Technician

**Approved by:** *M. Kharshan*  
Margarita Kharshan  
Vice President of R&D

**Date:** July 10, 2013



**Background:** Customer sent in a sample of Zerust film that was manufactured by Excor. Razor blade and VIA testing was conducted on this film but the results were poor. The manufacturer said the VCI does not dissolve in water and this is the reason for the bad results.

**Purpose:** To test the submitted Zerust film for vapor phase and contact phase corrosion protection, and to also determine the composition of the film.

**Sample Received:** Green Zerust Film, 3mils

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

**Materials:** 1) VIA test kit  
2) Razor blade test kit  
3) Mil thickness gauge  
4) 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 Zerust Film	Fail	Fail	Fail	Fail
Control	Fail	-	-	-

**Razor Blade Test- Carbon Steel Panels**

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

**VIA Test**

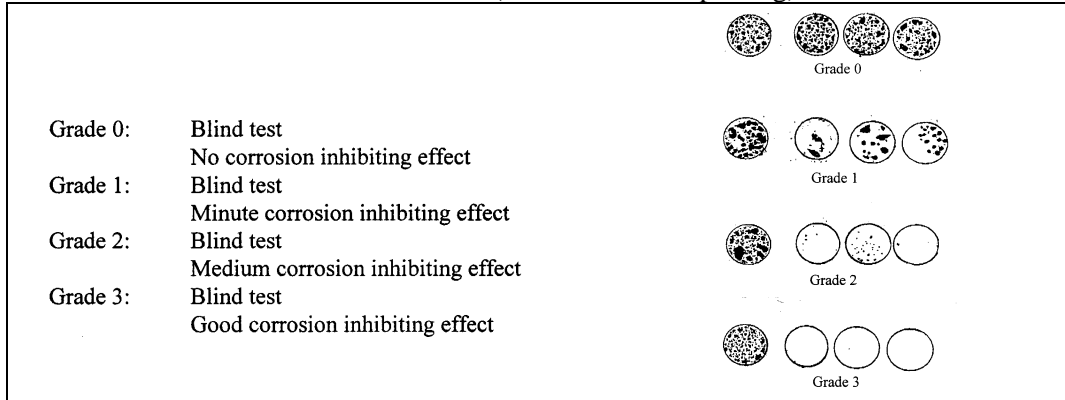
Sample	Plug #1	Plug #2	Plug #3	End Result
Green Zerust Film	Grade 0	Grade 0	Grade 1	Fail
Control	Grade 0	-	-	-

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

**Interpretations:**

The submitted green Zerust film failed the VIA and razor blade testing with poor results. The FTIR analysis shows only a small peak of carboxylic acids and no VCI products.

VIA Test Grades (Grade 2 or 3 are passing)



**FTIR Analysis**

Green Zerust Film compared to Clear plain Polyethylene Film

