



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

## Evaluation of Unknown Blue Film

**To:** Mike Gabor

**For:** Customer

**From:** Cortec Corporation Laboratories  
4119 White Bear Parkway  
St. Paul, MN 55110

**cc:** Boris Miksic  
Cliff Cracauer

**Project #:** 14-263-1125.bis

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

**Approved by:** *Eric Uutala*  
Eric Uutala  
Technical Service Manager

*M. Kharshan*  
Margarita Kharshan  
Vice President of R&D

**Date:** December 2, 2014



**Purpose:** To compare the corrosion protection properties of the submitted blue film against Cortec's VpCI-126 film. The manufacturer of the film is unknown; the color concentrate is from Ampacet.

**Samples Received:** Blue film bag, 2mils, received on 11-24-14 in good condition

**Method:** VIA Test, CC-027  
 Razor Blade Test, CC-004\*  
 FTIR analysis, CC-006  
 \*Cortec Laboratory is not accredited for the test marked

**Materials:** VIA test kit  
 Razor blade test kit  
 Paragon 1000 FTIR  
 VpCI-126 film, 2 mils  
 Plain polyethylene film, 2mils (control)

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

**Results:**

**Razor Blade Test- Carbon Steel Panels**

Film Sample	Panel #1	Panel #2	Panel #3	Pass / Fail
Submitted blue film	Fail	Fail	Pass	Fail
VpCI-126 film	Pass	Pass	Pass	Pass
Control	Fail	-	-	-

**Razor Blade Test- Copper Panels**

Film Sample	Panel #1	Panel #2	Panel #3	Pass / Fail
Submitted blue film	Fail	Fail	Fail	Fail
VpCI-126 film	Pass	Pass	Pass	Pass
Control	Fail	-	-	-

**VIA Test**

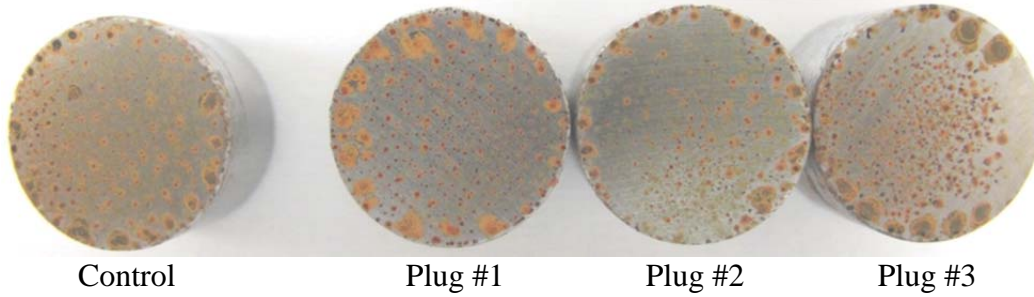
Film Sample	Plug #1	Plug #2	Plug #3	End Result
Submitted blue film	Grade 0	Grade 0	Grade 0	Fail
VpCI-126 film	Grade 3	Grade 3	Grade 2	Pass
Control	Grade 0	-	-	-

**Interpretations:** The submitted blue film does not provide corrosion protection in the vapor phase or in the contact phase. The FTIR shows that this film contains inhibitor, but the amount is not sufficient to pass the VIA or razor blade test.

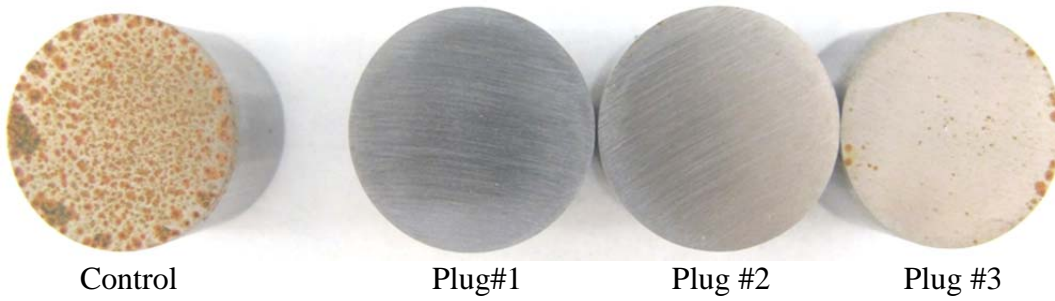
VpCI-126 film provides excellent contact and vapor phase corrosion protection.

**Photos:**



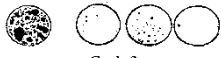
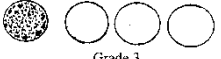
VIA Test  
Submitted Blue film, 2mils



VpCI-126 film, 2mils

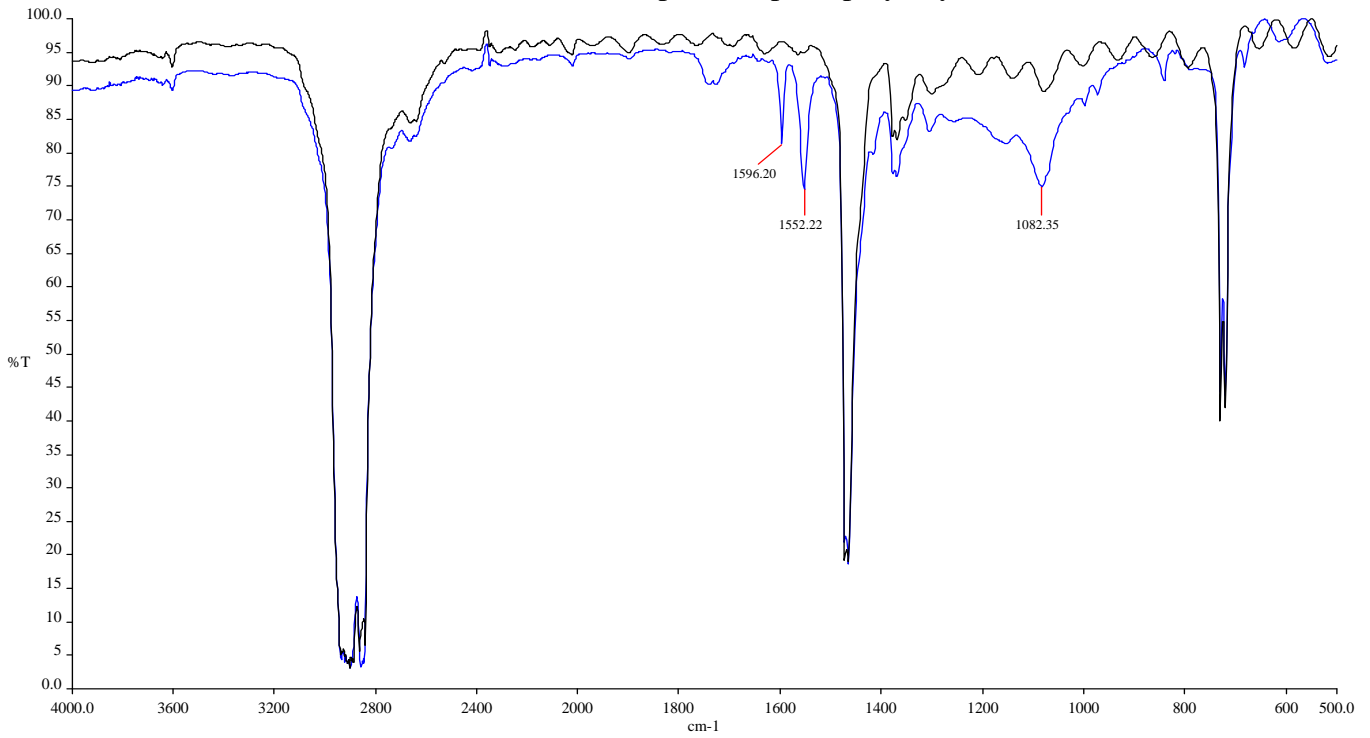


VIA Test Grades (Grade 2 or 3 are passing). All three plugs must be grade 2 or better to pass the test

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

Submitted Blue film compared to plain polyethylene film



## Submitted Blue film compared to VpCI-126 Film

Note- VpCI-126 film contains a stronger peak of inhibitor @ ~1560

