



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

## *Armor Film Evaluation*

**To:** Bob Dessauer

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

**cc:** Boris Miksic  
Cliff Cracauer

**Project #:** 13-261-1125.bis

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

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

**Date:** December 4, 2013



**Background:** Customer sent in a blue film sample for corrosion testing. This film is manufactured by Armor.

**Sample Received:** Light blue Armor film, 1.5mils, received on 11-26-13 in used condition

**Method:** 1) VIA Test CC-027  
2) Razor Blade Test CC-004\*  
3) Nitrite/Nitrate Test\*  
4) FTIR analysis CC-006  
\*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) Paragon 1000 FTIR

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

**Results:**

**Razor Blade Test- Carbon Steel Panels**

Sample	Panel #1	Panel #2	Panel #3	End Result
Light Blue Armor Film	Pass	Pass	Pass	Pass
Control	Fail	-	-	-

**VIA Test**

Sample	Plug #1	Plug #2	Plug #3	End Result
Light Blue Armor Film	Grade 2	Grade 0	Grade 0	Fail
Control	Grade 0	-	-	-

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

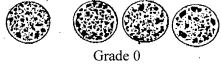
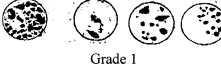
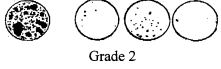
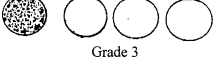
**Nitrite Test Strips**

Sample	Results
Light Blue Armor Film	Contains nitrite on both sides of the film

**Interpretations:** The submitted Armor film is nitrite based, doesn't contain any other corrosion inhibitors, and only protects against corrosion in the contact phase, but not in the vapor phase.

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 0
Grade 1:	Blind test Minute corrosion inhibiting effect	 Grade 1
Grade 2:	Blind test Medium corrosion inhibiting effect	 Grade 2
Grade 3:	Blind test Good corrosion inhibiting effect	 Grade 3

Photos:

### VIA Testing



Control

Plug#1

Plug #2

Plug #3

# FTIR Analysis

Armor film tested against plain, non VCI film

