



- 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:** Customer

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

**cc:** Boris Miksic  
Cliff Cracauer  
Robert Kean  
Jay Zhang  
Mike Gabor  
Spencer Taylor

**Project #:** 18-103-1125.bis

**Results reported by:**

*Brian Benduha*  
Brian Benduha  
Lab Technician

**Approved by:**

*John Wulterkens*  
John Wulterkens  
Technical Service Engineer



**Background:** A sample of Armor film has been submitted for corrosion testing. This film might also provide UV protection, but will need to be confirmed.

**Sample Received:** Green Armor Film, 2mil, 48W x 90L x 43in gusseted bag, received on 5-1-18 in good condition.

**Method:** VIA Test, CC-027  
Accelerated Weathering with UV Stability, ASTM G53\*  
Razor Blade Test, CC-004\*  
Nitrite/Nitrate Test\*  
\*The tests marked are not covered under Cortec Laboratories, Inc. ISO 17025 Scope of Accreditation

**Materials:** VIA test kit (testing jars and lids, steel plugs, 320grit sandpaper)  
Carbon Steel panels, SAE 1010 (for razor blade testing)  
Glycerol (lot #Q10A018)  
Methanol, ACS grade (lot #071417B)  
Nitrite/Nitrate Test Strips (lot #HC719626)  
Plain polyethylene film, 2mil (control film)  
40°C oven (oven #5)  
QUV Chamber- Accelerated Weathering Tester  
Ultraviolet Lamps, UVB-313 EL

**Procedure:** The testing was conducted according to standard procedures for each test.  
Note- the VIA test was conducted using two strips of sample per jar (1" X 6" per strip)

**Results:** The following results were found:

**Razor Blade Test- Carbon Steel Panels**

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

**VIA Test**

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

**Nitrite/Nitrate Test Strips**

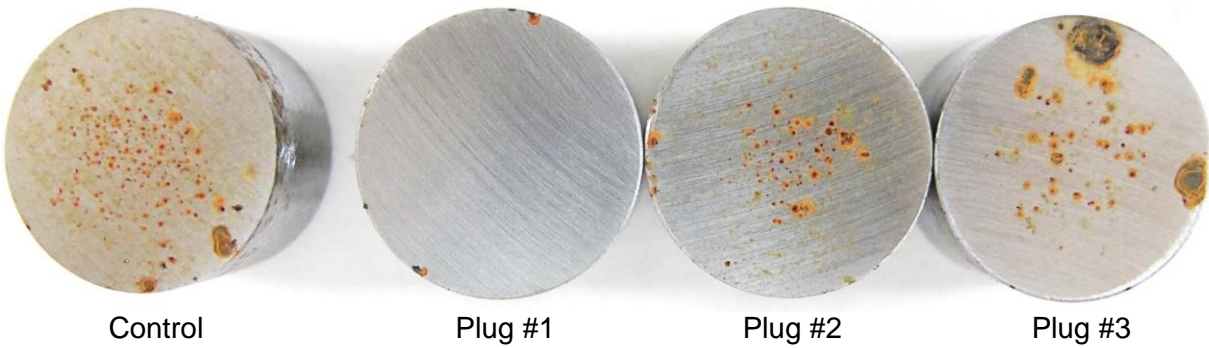
The Green Armor Film does not contain any nitrite/nitrate

**Interpretations:** The submitted Armor film does not provide sufficient contact or vapor phase corrosion protection to pass the VIA and razor blade tests.

UV testing is still in progress. A supplemental report will be issued once the testing is complete.

**Photo from the VIA test:**

Green Armor Film



Control

Plug #1

Plug #2

Plug #3

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

<p>Grade 0: Blind test                      No corrosion inhibiting effect</p> <p>Grade 1: Blind test                      Minute corrosion inhibiting effect</p> <p>Grade 2: Blind test                      Medium corrosion inhibiting effect</p> <p>Grade 3: Blind test                      Good corrosion inhibiting effect</p>	<p>Grade 0</p> <p>Grade 1</p> <p>Grade 2</p> <p>Grade 3</p>
---	---