

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
 Internet http://www.cortecvci.com

Evaluation of an Armor Produced Film

Purpose: To test the submitted film, which manufactured by Armor.

Materials: Submitted sample of blue Armor film
 Razor Blade Test Kit
 VIA Test Kit
 Perkin Elmer FT-IR 1000 Spectrometer
 EM Quant Nitrite/Nitrate Test strips (Lot # OC555062, Exp 9/08)

Method: Razor Blade Test
 VIA Test
 FT-IR Analysis
 Nitrite Test

Procedure: The above tests were performed according to the standard procedures for each

Results: Razor Blade Test (carbon steel)

Material	Panel #1	Panel #2	Panel #3
Submitted sample of blue Armor film	Fail	Fail	Fail
Typical results for VpCI-126ES film	Pass	Pass	Pass
Control	Fail	Fail	Fail

VIA Test

Material	Panel #1	Panel #2	Panel #3
Submitted sample of blue Armor film	Grade 1	Grade 1	Grade 1
Typical results for VpCI-126ES film	Grade 3	Grade 3	Grade 3
Control	Fail	Fail	Fail

Nitrite Test: The submitted film contains no nitrite

Physical Properties	Armor Film	126 Film
Mil	2	2
Breaking Factor Machine Direction (lbs/in)	6.87	9.43
Breaking Factor Cross Direction (lbs/in)	6.05	9.01
Machine Direction Tensile Strength at Break(psi)	4715	3623.92
Cross Direction Tensile Strength at Break(psi)	4527.58	3356.7
Machine Direction Elongation at Break (%)	302.4	431
Cross Direction Elongation at Break (%)	334.1	452.0
Machine Direction Tensile Strength at Peak(psi)	4797.78	3623.92
Cross Direction Tensile Strength at Peak(psi)	4602.76	3358.07
Machine Direction Tear Strength (Newtons)	14074.08	8685.12
Cross Direction Tear Strength (Newtons)	17160.96	10830.24
Puncture Strength (Joules)	1.24	0.77



Conclusion: This blue Armor film failed to pass both the VIA and razor blade test. Compared to VpCI-126ES, the Armor film has a very poor corrosion inhibiting effect.

Project #: 07-170-1125

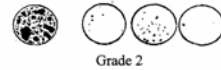
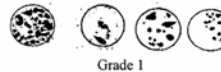
VIA Test Grades (Grade 2 or 3 are passing)

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

Blue Armor Film

