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Evaluation of Daubert Film

From: Cortec Corporation Laboratories
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Project #: 12-094-1125(bis)

Test conducted by:

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Approved by:

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Date: May 11, 2012



Background: Jessica Scott submitted the blue Daubert Cromwell bag and requested that it be tested to determine if it provides corrosion protection.

Sample Received: Daubert Cromwell blue film, labeled 12-094-1125, received 04-23-12, good condition

Method:

- 1) VIA Test CC-027
 - 2) Razor Blade Test CC-004*
 - 3) FTIR Test CC-006
- *Cortec Laboratory is not accredited for the test marked

Materials:

- 1) VIA test kit
- 2) Razor Blade test kit
- 3) Paragon 1000 FTIR

Procedure:

- 1) The above tests were performed according to standard procedures.

Results:

Razor Blade Carbon Steel

Sample	Panel 1	Panel 2	Panel 3
Daubert Cromwell blue film	Pass	Fail	Fail
Control	Fail	-	-

Razor Blade Copper

Sample	Panel 1	Panel 2	Panel 3
Daubert Cromwell Blue Film	Fail	Fail	Fail
Control	Fail	-	-

VIA*Test Results

Sample	Plug #1	Plug#2	Plug#3	Pass/Fail
Daubert Cromwell Blue Film	Grade 3	Grade 2	Grade 2	Pass
Control	Grade 0	-	-	-

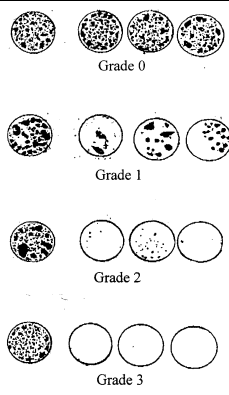
Note: The VIA grading system is attached to the end of the report
 *Test was repeated 2 times:1-failed, 2 passed

Retest 1 - Sample	Plug #1	Plug#2	Plug#3	Pass/Fail
Daubert Cromwell Blue Film	Grade 2	Grade 1	Grade 1	Fail
Control	Grade 0	-	-	-
Retest 2 - Sample	Plug #1	Plug#2	Plug#3	Pass/Fail
Daubert Cromwell Blue Film	Grade 2	Grade 2	Grade 2	Pass
Control	Grade 0	-	-	-

Interpretations:

1. Based on the razor blade test results, the blue Daubert Cromwell film did not provide contact-phase corrosion protection. It failed to protect both carbon steel and copper.
2. The results for the VIA test determined that the film does provide vapor-phase corrosion inhibition, but the results are not consistent.

VIA Test Grades (Grade 2 or 3 are passing)

<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>The visual reference shows four rows of circular test samples. Grade 0 shows four circles with heavy, dark corrosion. Grade 1 shows four circles with moderate, dark corrosion. Grade 2 shows four circles with light, sparse corrosion. Grade 3 shows four circles that are almost entirely clear, indicating good corrosion inhibition.</p>
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