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Evaluation of Yellow VCorr Packsys Pvt Ltd Film

From: Cortec Corporation Laboratories
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Project #: 13-001-1125.bis

Results reported by:

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Background: Customer requested that the yellow film he submitted be evaluated to determine if it provides sufficient corrosion protection.

Sample Received:

- 1) Yellow film manufactured by VCorr Packsys Pvt Ltd, from Mumbai. Ok condition, received 12-20-12
- 2) VpCI-126, good condition, batch 31957, received 03-19-12

Method:

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

Materials:

- 1. VIA Test Kit
- 2. Laboratory Grade Methanol
- 3. Carbon Steel Panels
- 4. Control Film, Plain Polyethylene Film
- 5. Deionized Water
- 6. Paragon 1000 FTIR
- 7. Nitrate/Nitrite Test Strips, EM Quant

Procedure:

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

Results:

Razor Blade Test – Carbon Steel

Sample	Panel 1	Panel 2	Panel 3
Yellow VCorr Packsys Pvt Ltd Film	Fail	Fail	Fail
VpCI-126	Pass	Pass	Pass
Control	Fail	-	-

VIA Test

Sample	Plug # 1	Plug # 2	Plug # 3	Pass / Fail
Yellow VCorr Packsys Pvt Ltd Film	Grade 0	Grade 0	Grade 0	Fail
VpCI-126	Grade 2	Grade 3	Grade 3	Pass
Control	Grade 0	N/A	N/A	Fail



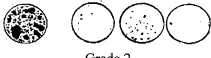
Note: Grades 0 and 1 are considered failing. See below for grading scale example.

Results relate only to the items tested

Interpretations:

- 1) Based on the test results, the yellow film manufactured by VCorr Packsys Pvt Ltd failed to provide sufficient contact-phase corrosion protection to protect carbon steel.
- 2) The yellow film was found to provide sufficient contact-phase corrosion protection for copper.
- 3) The failing VIA test results for the yellow film determined that it did not provide vapor-phase corrosion inhibition.
- 4) The yellow film was found to contain nitrite and some salt of carboxylic acid, most likely sodium benzoate.
- 5) The test results determined that VpCI-126 provided good contact and vapor-phase corrosion inhibition.

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	