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LABORATORY ACCREDITATION BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2267 Testing

Evaluating VCI Properties of Film Sample from Customer

From: Cortec Corporation Laboratories
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Background: A blue film sample, used by customer, was sent to Cortec for evaluation. Customer has had corrosion issues recently, and they would like the corrosion inhibiting properties of their film to be tested.

Sample Received: Blue polyethylene film (4-mil), made by Poly Films, Inc.

Method: VIA Test (CC-027)
Razor Blade Test (CC-004)*
FTIR Test (CC-006)
*Cortec Laboratory is not accredited for the test marked

Materials: Blue film sample
VIA Test kit
1010 carbon steel panels
Copper panels
Laboratory grade methanol
Paragon 1000 FTIR

Procedure: VIA, FTIR, and Razor Blade testing were performed according to their respective work instructions.

Results: The following results were found:

VIA Test

Sample	Plug #1	Plug#2	Plug#3	Pass/Fail
Poly Films Inc. blue film	Grade 0	Grade 0	Grade 0	Fail
Control (plain polyethylene film)	Grade 0	N/A	N/A	Fail

Note: Grades 0 and 1 are considered failing.

Razor Blade Test – Copper

Sample	Panel 1	Panel 2	Panel 3
Poly Films Inc. blue film	Fail	Fail	Fail

Razor Blade Test – Steel

Sample	Panel 1	Panel 2	Panel 3
Poly Films Inc. blue film	Fail	Fail	Fail

Interpretations: The blue plastic film used by customer, made by Poly Films Inc, does not contain any corrosion inhibitors, according to the tests conducted. Tests were run on contact and vapor phase corrosion protection, and no protection was given in either test. Infrared spectroscopy was also run on the film, to determine the chemical content within the plastic. The results confirmed there is no presence of corrosion inhibitors in the film.

A single corroded part in Poly Films bag was also sent for evaluation. The visible corrosion on this part was consistent with that of fingerprint induced corrosion. If proper steps are not taken in handling, corrosion will continue to happen, even if Cortec packaging is implemented.

FTIR Test Result