

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@cortecval.com cortecval.com • cortedaboratories.com

Evaluation of Haver Plastics Film

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

Project #: 17-203-1125.bis

Results reported by: Brian Benduly

Brian Benduha Lab Technician

Approved by:

John Wulterkens

Technical Service Engineer

John Wullenkens



.

Background: A sample of film produced by Haver Plastics Company has been submitted

for testing to determine the contact and vapor phase corrosion protection. This film is used to package connecting rods which are then shipped to

various customer locations.

Sample Received: Yellow Haver Film, 1.5mil, received in ok condition on 10/16/17

Method: VIA Test, CC-027

Razor Blade Test, CC-004*

Nitrite/Nitrate Test*

*Cortec Laboratories, Inc. is not accredited for the test(s) marked.

Materials: VIA test kit

Razor blade test kit Glycerol (lot #Q10A018)

Methanol, ACS grade (lot #032916C)

Oven set for 40°C (oven #10)

Nitrite/Nitrate Test Strips (lot #HC553793)

Plain polyethylene film (control film)

Procedure: The testing was conducted according to standard procedures for each test.

Results:

Razor Blade Test- Carbon Steel Panels

Sample	Panel #1	Panel #2	Panel #3	End Result
Haver Film	Fail	Fail	Pass	Fail
Control	Fail	-	-	Fail

Razor Blade Test- Copper Panels

Sample	Panel #1	Panel #2	Panel #3	End Result
Haver Film	Pass	Pass	Pass	Pass
Control	Fail	-	-	Fail

VIA Test

Sample	Plug #1	Plug #2	Plug #3	End Result
Haver Film	Grade 1	Grade 1	Grade 1	Fail
Control	Grade 0	-	-	Fail

Nitrite/Nitrate Test Strips

Sample	Test Results
Haver Film	Does not contain any nitrite or nitrate

Photos from VIA Testing:



Interpretations:

The submitted Haver Film does not provide sufficient vapor phase corrosion protection to pass the VIA test. For contact corrosion protection, the results were passing for copper, but failing for carbon steel.