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Evaluation of Rotek Film

To: Customer

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Project #: 14-170-1125.bis

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Background: Packaging material with Rotek label on it has been sent in for corrosion testing to determine VCI content.

Samples Received: Rotek film, received on 7-31-14 in good condition

Method: VIA Test, CC-027
Razor Blade Test, CC-004*
FTIR analysis, CC-006
Nitrite/Nitrate Test*
*Cortec Laboratory is not accredited for the test marked

Materials: VIA test kit
Razor blade test kit
Paragon 1000 FTIR
Nitrite/Nitrate Test Strips
Plain polyethylene film, 2mils (control)

Procedure: The tests were conducted according to standard procedures for each test.

Results:

Razor Blade Test- Carbon Steel Panels

Film Sample	Panel #1	Panel #2	Panel #3	Pass / Fail
Rotek film	Fail	Fail	Pass	Fail
Control	Fail	-	-	-

Razor Blade Test- Copper Panels

Film Sample	Panel #1	Panel #2	Panel #3	Pass / Fail
Rotek film	Fail	Fail	Pass	Fail
Control	Fail	-	-	-

VIA Test

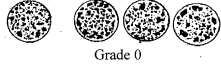
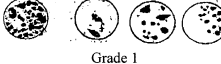
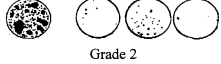
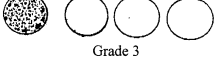
Film Sample	Plug #1	Plug #2	Plug #3	End Result
Rotek film	Grade 1	Grade 1	Grade 0	Fail
Control	Grade 0	-	-	-

Interpretations: The submitted film sample from Rotek does not provide sufficient corrosion protection to pass the razor blade test or the VIA test.

This means that the film doesn't provide contact and vapor phase protection to metals.

This film contains nitrite, no other corrosion inhibitors were found according to the FTIR analysis.

VIA Test Grades (Grade 2 or 3 are passing). All three plugs must be grade 2 or better to pass the test

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

Rotek film compared to plain polyethylene film

