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***Evaluation of Film Used by Magna Power Train,
Manufactured by Coverttech Fabricating, Inc.***

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From: Cortec Laboratories, Inc.
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Project #: 17-107-1125

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Eric Uutala
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Background: Magna Power Train in Vaughan, Ontario sent a sample of film they are currently using for packaging. The film is made by Covertech Fabricating, Inc. It is claimed to be VCI film. The corrosion inhibiting properties of this film will be evaluated.

Sample Received: Blue 3.5mil Supreme Packaging Film Bag (24.5" x 15"), received on 6-2-17 in good condition.

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 tests were conducted according to standard procedures for each test. (Note- VIA test was conducted using 12 square inches of film per quart size jar)

Results:

Razor Blade Test- Carbon Steel Panels

Sample	Panel #1	Panel #2	Panel #3	End Result
Supreme Packaging Film	Fail	Fail	Fail	Fail
Control	Fail	-	-	Fail

Razor Blade Test- Copper Panels

Sample	Panel #1	Panel #2	Panel #3	End Result
Supreme Packaging Film	Fail	Fail	Fail	Fail
Control	Fail	-	-	Fail

VIA Test

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

Nitrite/Nitrate Test Strips

Sample	Results
Supreme Packaging Film	Does not contain any nitrite or nitrates

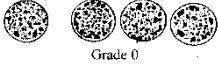
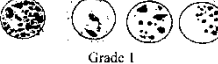
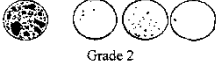
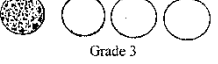
Interpretations: The film made by Covertech Fabricating does not appear to have any active VCI chemistry, based on test results. The film failed to protect from corrosion in vapor phase, per VIA results, and contact (on steel and copper), per razor blade test results.

Photos from VIA Testing:

Coverttech Packaging Film



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

		 <p>Grade 0</p>
Grade 0:	Blind test No corrosion inhibiting effect	 <p>Grade 1</p>
Grade 1:	Blind test Minute corrosion inhibiting effect	
Grade 2:	Blind test Medium corrosion inhibiting effect	 <p>Grade 2</p>
Grade 3:	Blind test Good corrosion inhibiting effect	 <p>Grade 3</p>