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VIA Test for Our Customer

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Background:
Our customer processes a variety of metal gears. Processed parts are coated with a rust preventative then packaged in VCI bags prior to shipping. They have experienced several corrosion issues, potentially based on their current rust preventative or process. Our customer has several options for VCI bags, and asked Cortec Laboratories to test VpCI-126 against the competitor products. One film is a yellow Zerust-Excor bag, the second is a blue VCI bag made by General Plastic Extrusions, Inc. and the third bag is marked as “VCI 2000.”

Sample Received:
4 VCI bag samples:
VpCI-126 provided by the customer, lot# unknown
Zerust-Excor film
General Plastics film
“VCI 2000” film

All samples appeared in good condition, with no dirt/grease on the films

Method:
NACE VIA Test, TM0208-2008

Materials:
VIA test kit (jars/apparatus, steel plugs, sandpaper)
Lab grade methanol
Glycerol

Procedure:
The standard NACE VIA test was conducted as outlined in NACE Standard TM0208-2008

Results:
The table below outlines how VIA results are graded. Full results can be seen on the table in the following page.

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

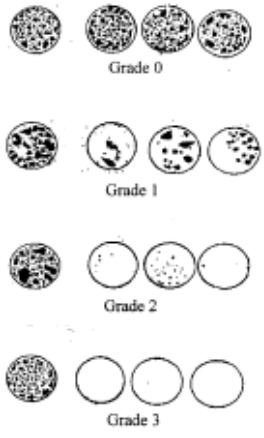

Table 1: VIA Test Results

Sample	Plug #1	Plug #2	Plug #3	End Result
Control	Grade 0	Grade 0	--	Fail
VpCI-126	Grade 3	Grade 2	Grade 3	Pass
Zerust Film	Grade 3	Grade 1	Grade 3	Fail
General Plastic Film	Grade 1	Grade 3	Grade 1	Fail
VCI 2000	Grade 1	Grade 1	Grade 1	Fail

Photos:

Figure 1: Control Plugs

Figure 2: VpCI-126 plugs

Figure 3: Zerust plugs

Figure 4: General Plastic plugs

Figure 5: VCI 2000 plugs

Interpretations:

The VpCI-126 showed excellent corrosion protection and achieved passing results on the NACE VIA test. There was very minor corrosion occurring on the middle plug tested on VpCI-126 that was not easily seen in the picture. The other three films, from Zerust, General Plastic, and VCI 2000 film showed minor to moderate corrosion protection as they performed better than the control plugs, but did not achieve passing results on the test.