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### *Evaluation of NTI VCI Films*

**Background:** Cortec performs regular tests on competitive VCI films. These are done to not only track the quality of the competition, but also to make sure that our packaging products continue to perform at the highest standards. This document is a brief compilation of recent testing data on NTI VCI films.

**Method:** Razor Blade Test  
 VIA Test

**Materials:** Submitted samples of NTI VCI films  
 VIA Test Kit  
 Carbon steel (1010 cold rolled) test panels  
 Copper test panels

**Procedure:** All test methods were performed according to their respective work instructions.

**Results:** The following results have been found. Descriptions of all tests are below.

Product	VIA Grades	Razor Blade (Carbon Steel)	Razor Blade (Copper)
2-mil film	2,2,1	Pass, Pass, Pass	Fail, Fail, Fail
3-mil film	0,0,3	Pass, Pass, Pass	Fail, Fail, Fail
Excorr	0,0,1	Pass, Pass, Pass	Fail, Fail, Fail
Yellow film	2,1,0	Pass, Pass, Fail	Fail, Fail, Fail
Green film	2,2,2	Pass, Pass, Fail	Pass, Pass, Fail
Yellow film	2,2,2	Pass, Pass, Pass	Fail, Fail, Fail
Blue film	0,0,0	Fail, Fail, Fail	Fail, Fail, Fail
Green film	0,0,0	Pass, Fail, Fail	Fail, Fail, Fail
Green film	0,0,2	Pass, Pass, Fail	Fail, Fail, Fail

**Test Notes:** 1) VIA is a vapor inhibiting ability test used to determine if a corrosion inhibitor will protect when not in direct contact with a metal surface.



2) Razor blade testing evaluates the ability of a corrosion inhibitor to protect metal when in direct contact, in the presence of moisture.

**Conclusion:**

Testing on NTI VCI film shows large amounts of inconsistency. There have been failures in every type of corrosion testing performed, including razor blade testing, which indicates a lack of corrosion protection from the metal when in direct contact.

VIA test results have improved over time, but a large amount of failure has been seen in this test, indicating a lack of vapor phase corrosion protection.

Overall, the corrosion protection from NTI VCI films has been inconsistent in all testing.

**From:**

Cortec Corporation Laboratories

**Date:**

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