

## *Evaluating Aicello Boselon 205 film*

**Background:** Boris Miksic submitted Aicello Boselon 205 film for a corrosion inhibition evaluation.

**Purpose:** Evaluate corrosion inhibition and mechanical strength offered by Aicello Boselon 205 film.

**Method:** Razor Blade Test  
 VIA Test  
 SO<sub>2</sub> Test  
 Nitrite Test  
 Tensile Strength @ Break , ASTM D882,  
 % Elongation @ Break, ASTM D 882A,  
 Tensile Strength, ASTM D 882-91,  
 Tear Test, ASTM D 1922-94A,  
 Impact Puncture, ASTM D 3420-95-B

**Materials:** Razor Blade Test kit  
 VIA Test kit  
 SO<sub>2</sub> Test kit  
 EM Quant Nitrite/Nitrate Test Strips (Lot # OC130397, Exp Oct 04)  
 Tensile Strength @ Break , ASTM D882, Test kit  
 % Elongation @ Break, ASTM D 882A, Test kit  
 Tensile Strength, ASTM D 882-91, Test kit  
 Tear Test, ASTM D 1922-94A, Test kit  
 Impact Puncture, ASTM D 3420-95-B Test kit

**Procedure:** The above tests were performed according to standard procedures.

**Results:**

Razor Blade Test

Material	Panel #1	Panel #2	Panel #3
Aicello Boselon 205 film	Fail	Fail	Fail
Cortec VpCI-126 Blue film*	Pass	Pass	Pass
Control	Fail	Fail	Fail

VIA Test

Material	Plug #1	Plug #2	Plug #3
Aicello Boselon 205 film	Grade 1	Grade 2	Grade 1
Cortec VpCI-126 Blue film*	Grade 3	Grade 3	Grade 3
Control	Fail	Fail	Fail

\*Typical results for Cortec VpCI-126 Blue film



Nitrite Test: Aicello Boselon 205 film is a nitrite based film.


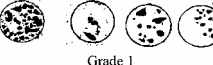
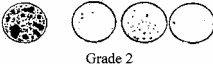
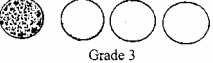
Mechanical strength Testing

	Cortec VpCI-126 Blue film (2 mil)	Aicello Boselon 205 film (2 mil)
Tensile Strength @ Break , ASTM D882, (lbs)	6.56/6.87	4.30/4.07
% Elongation @ Break, ASTM D 882A, (%)	14.38/16.07	6.67/10.71
Tensile Strength, ASTM D 882-91, (lbs)	6.56/6.88	4.98/4.60
Tear Test, ASTM D 1922-94A, (GF)	656.00/885.33	592.00/448.00
Impact Puncture, ASTM D 3420-95-B (J)	0.72	0.98

Note: Machine Direction/Cross Direction

**Conclusion:** Aicello Boselon 205 film does not provide sufficient corrosion protection. Aicello Boselon 205 film, has a lower tensile strength @break, % elongation @ break, Tensile Strength and Tear test values compared to Cortec VpCI-126 Blue film.

VIA Test Grades (Grade 2 or 3 are passing)

		
		Grade 0
Grade 0:	Blind test	
	No corrosion inhibiting effect	
Grade 1:	Blind test	
	Minute corrosion inhibiting effect	Grade 1
Grade 2:	Blind test	
	Medium corrosion inhibiting effect	Grade 2
Grade 3:	Blind test	
	Good corrosion inhibiting effect	Grade 3

SO<sub>2</sub> Grades (Grade 3 and 4 are passing):

- Grade 0- Extensive corrosion covering 25% or more of panel surface
- Grade 1- Moderate corrosion covering 10-25% of panel surface
- Grade 2- Slight corrosion covering 5-10% of panel surface
- Grade 3- Very slight corrosion covering 0-5% of panel surface
- Grade 4- No visible corrosion on panel surface

**Project #:** 03-039-1125

**Estimated Cost of Project:** 3 hours

**To:** Boris Miksic

**From:** Bob Berg

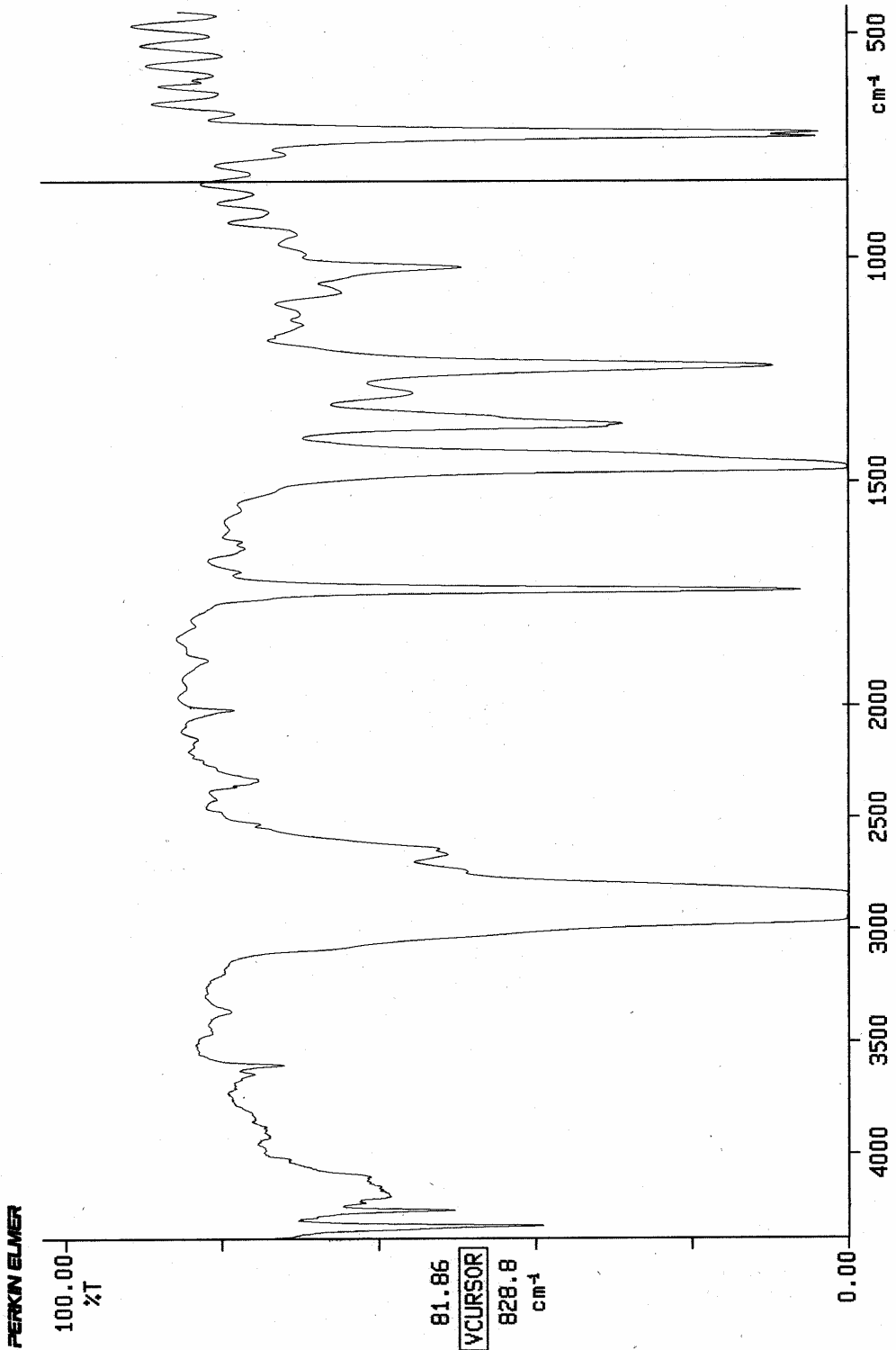
**Date:** 4/1/03

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3 mil, aicello boselon 205, 03-039-1125