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Evaluating unknown blue colored film and Corotex corrosion inhibiting paper

Background:	Brian Coles/Lake Chemicals and Minerals, submitted an unknown blue colored film and Corotex paper to Cortec Corporation.
Purpose:	Evaluate the corrosion inhibition performance of submitted film and paper
Method:	Razor Blade Test VIA Test FT-IR Analysis Nitrite Test
Materials:	Razor Blade Test Kit VIA Test Kit Perkin Elmer Paragon 1000 FT-IR Spectrometer Unknown blue colored film (4 mil) Cortec VpCI-126 film (4 mil) Cortec VpCI-144 paper Corotex corrosion inhibiting paper EM Quant Nitrite/Nitrate Test strips (Lot #OC555062, Exp 9/08)
Procedure:	The above tests were performed according to standard procedures for

Results:

each.

Razor Blade Test				
Material	Panel #1	Panel #2	Panel #3	
Submitted	Pass	Pass	Pass	
unknown blue				
colored film				
Corotex Paper	Pass	Pass	Pass	
Cortec VpCI-126	Pass	Pass	Pass	
film				
Cortec VpCI-144	Pass	Pass	Pass	
paper				
Control	Fail	Fail	Fail	





Kazol Blade Test (copper)					
Material	Panel #1	Panel #2	Panel #3		
Corotex Paper	Fail	Fail	Fail		
Cortec VpCI-126	Pass	Pass	Pass		
film					
Cortec VpCI-144	Pass	Pass	Pass		
paper					
Control	Fail	Fail	Fail		

Razor Blade Test (copper)

VIA Test

Material	Plug #1	Plug #2	Plug #3		
Submitted	Grade 1	Grade 1	Grade 1		
unknown blue					
colored film					
Corotex Paper	Grade 3	Grade 3	Grade 3		
Cortec VpCI-126	Grade 3	Grade 3	Grade 3		
film					
Cortec VpCI-144	Grade 3	Grade 3	Grade 3		
paper					
Control	Fail	Fail	Fail		

Nitrite Test: Submitted unknown blue colored film and Corotex paper, are both heavily nitrite based. Cortec VpCI-126 and Cortec VpCI-144 are non nitrite based products.

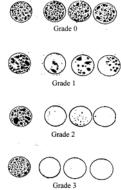
Conclusion:

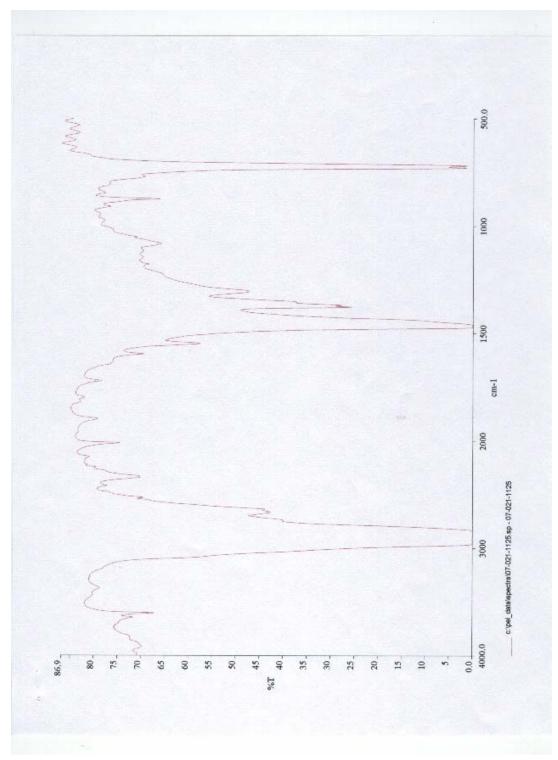
- (1) Submitted unknown blue colored film is heavily nitrite based and does not offer adequate vapor phase corrosion inhibition.
- (2) From FT-IR analysis, the spectrum of submitted unknown blue colored film has the appearance of containing a small amount of benzoates.
- (3) Submitted Corotex paper is heavily nitrite based and fails to provide protection to non ferrous copper.
- (4) Cortec VpCI-126 film and Cortec VpCI-144 paper provide excellent corrosion inhibition.

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VIA Test Grades (Grade 2 or 3 are passing)

Grade 0:	Blind test	é
	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	G
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