

- 4119 White Bear Parkway, St. Paul, MN 55110 USA
- Phone (651) 429-1100, Fax (651) 429-1122
- Toll Free (800) 4-CORTEC, E-mail info@cortecvci.com
- Internet http://www.cortecvci.com

## *Evaluating films submitted by Cortec Russia*

**Background:** Sergey Budnitsky/Cortec Russia, submitted films to Cortec Corporation. Two of the films are manufactured by Zerust, (clear and yellow) and another two films are blue in color. One blue colored film has the markings, HET PETF, and the other blue film, has no markings and is slightly rigid.

**Purpose:** Evaluate the corrosion inhibition performance of submitted films

**Method:** Razor Blade Test  
 VIA Test  
 SO<sub>2</sub> Test  
 Nitrite Test  
 FT-IR Spectroscopy

**Materials:** Razor Blade Test Kit  
 VIA Test Kit  
 SO<sub>2</sub> Test Kit  
 EM Quant Nitrite/Nitrate test (Lot # OC405590, Exp 9/07)  
 Perkin Elmer FT-IR Spectrometer Paragon 1000

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

**Results:**

Razor Blade Test

Material	Panel #1	Panel #2	Panel #3
Film with labeling of HET PETF (blue), 2 mil	Pass	Pass	Pass
Submitted rigid film (blue), 2.5 mil	Pass	Pass	Pass
Control	Fail	Fail	Fail

VIA Test

Material	Plug #1	Plug #2	Plug #3
Film with labeling of HET PETF (blue), 2 mil	Grade 3	Grade 3	Grade 3
Submitted rigid film (blue), 2.5 mil*	Grade 3	Grade 2	Grade 3
Control	Fail	Fail	Fail

\* Unable to prevent film from curling during testing.



SO<sub>2</sub> Test

Material	Panel #1	Panel #2	Panel #3
Film with labeling of HET PETF (blue), 2 mil	Grade 4	Grade 4	Grade 4
Submitted rigid film (blue), 2.5 mil	Grade 4	Grade 4	Grade 4
Control	Fail	Fail	Fail

Nitrite Test: The two blue colored films are non-nitrite based films.

**Conclusion:** Blue colored film with labeling of HET PETF (blue), provided excellent vapor phase, barrier phase and contact phase corrosion inhibition. The highest scores were attained with this film. From FT-IR analysis, HET PETF labeled blue colored film, is a LDPE film containing Cortec M-126 masterbatch.

**Project #:** 05-242-1125

**Estimated Cost of Project:** 3 hours


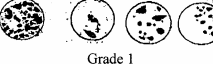
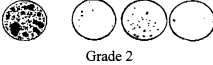
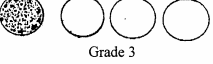
**To:** Sergey Budnitsky/Cortec Russia

**From:** Bob Berg

**Date:** 12/07/05

**cc:** Boris Miksic  
 Anna Vignetti  
 Art Ahlbrecht  
 Margarita Kharshan  
 Cliff Cracauer  
 Bob Boyle  
 Cindy Johnson

**VIA Test Grades (Grade 2 or 3 are passing)**

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	

*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

