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## *Evaluation of SafePack Packaging Products*

**Purpose:** To test VCI properties of the submitted SafePack packaging products.

**Materials:** Submitted SafePack Packaging Products  
 Razor Blade Test Kit  
 VIA Test Kit  
 Perkin Elmer FT-IR 1000 Spectrometer  
 EM Quant Nitrite/Nitrate Test strips

**Method:** Razor Blade Test  
 VIA Test  
 Nitrite Test  
 FT-IR Analysis

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

**Results:** Razor Blade Test (carbon steel)

Submitted SafePack Packaging Product	Panel #1	Panel #2	Panel #3
VCI paper, SP-FE-70	Fail	Fail	Fail
SP-Steelwrap-150-WF	Pass	Pass	Pass
SP-Galvwrap-WF	Pass	Pass	Pass
SP-M-Safeweave-100	Pass	Pass	Pass
VCI plastic film	Fail	Fail	Fail
VCI polyester aluminum foil	Pass	Pass	Pass
VCI Kraft paper, SP-ELP-0200	Pass	Pass	Pass
VCI Polycoated unbleached kraft paper w/srim reinforcement, SP-ELP-ARM1	Pass	Pass	Pass
Control	Fail	Fail	Fail

Razor Blade Test (copper)

Submitted SafePack Packaging Product	Panel #1	Panel #2	Panel #3
VCI paper, SP-FE-70	Fail	Fail	Fail
SP-Steelwrap-150-WF	Pass	Pass	Pass
SP-Galvwrap-WF	Pass	Pass	Pass
SP-M-Safeweave-100	Pass	Pass	Pass
VCI plastic film	Fail	Fail	Fail
VCI polyester aluminum foil	Pass	Pass	Pass
VCI Kraft paper, SP-ELP-0200	Pass	Pass	Pass
VCI Polycoated unbleached kraft paper w/srim reinforcement, SP-ELP-ARM1	Pass	Pass	Pass
Control	Fail	Fail	Fail



### VIA Test

Submitted SafePack Packaging Product	Plug #1	Plug #2	Plug #3
VCI paper, SP-FE-70	Grade 1	Grade 1	Grade 1
SP-Steelwrap-150-WF	Grade 3	Grade 2	Grade 2
SP-Galvwrap-WF	Grade 2	Grade 2	Grade 2
SP-M-Safeweave-100	Grade 1	Grade 1	Grade 1
VCI plastic film	Grade 3	Grade 2	Grade 2
Safefoil, SP-BF-12990	Grade 1	Grade 1	Grade 1
VCI Anti Corrosion Foam	Grade 3	Grade 2	Grade 2
VCI Anti Corrosion Tablet	Grade 2	N.A.	N.A.
VCI Anti Corrosion Powder Bags/Pouches	Grade 3	N.A.	N.A.
VCI Desiccant - Desisafe	Grade 2	N.A.	N.A.
VCI Condensed Water Absorber Sorball	Grade 2	N.A.	N.A.
VCI polyester aluminum foil	Grade 2	Grade 2	Grade 2
VCI Kraft paper, SP-ELP-0200	Grade 2	Grade 2	Grade 2
VCI Polycoated unbleached kraft paper w/srim reinforcement, SP-ELP-ARM1	Grade 2	Grade 2	Grade 2
Control	Fail	Fail	Fail

### Nitrite Test

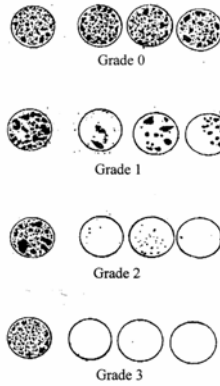
Submitted SafePack Packaging Product	Nitrite
VCI paper, SP-FE-70	present
SP-Steelwrap-150-WF	present
SP-Galvwrap-WF	not present
SP-M-Safeweave-100	present
VCI plastic film	not present
Safefoil, SP-BF-12990	not present
VCI Anti Corrosion Foam	present
VCI Anti Corrosion Tablet	present
VCI Anti Corrosion Powder Bags/Pouches	N.A.
VCI Desiccant - Desisafe	not present
VCI Condensed Water Absorber Sorball	not present
VCI polyester aluminum foil	not present
VCI Kraft paper, SP-ELP-0200	present
VCI Polycoated unbleached kraft paper w/srim reinforcement, SP-ELP-ARM1	present

**Conclusion:** See results.

**Project #:** 08-236-1125

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



## FTIR Analysis VCI Plastic Film

