



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 cortecvci.com • corteclaboratories.com

Evaluation of Bianchi Blue Film

To: Spencer Taylor

For: Customer

From: Cortec Corporation Laboratories

4119 White Bear Parkway

St. Paul, MN 55110

cc: Boris Miksic

Bob Boyle Eric Uutala

Project #: 13-146-1125.bis

Results reported by:

Brian Benduha Lab Technician

Approved by:

Margarita Kharshan

II. Phaishan

Vice President of R&D

Date: July 17, 2013





Background: A blue bag was sent in for standard film testing.

Sample Received: Bianchi Blue film bag (14.5in X 8in X 6mils thick)

Method: 1) VIA Test CC-027

2) Razor Blade Test CC-004*

3) Nitrite/Nitrate Test*

4) FTIR analysis

*Cortec Laboratory is not accredited for the test marked

Materials: 1) VIA test kit

2) Razor blade test kit

3) Nitrite/Nitrate Test Strips

4) Mil thickness gauge

5) Paragon 1000 FTIR

Procedure: The tests were conducted according to standard procedures for each test.

Results:

Razor Blade Test- Copper Panels

Sample	Panel #1	Panel #2	Panel #3	End Result
Bianchi Blue film bag	Fail	Fail	Fail	Fail
Control	Fail	-	-	-

Razor Blade Test- Carbon Steel Panels

Sample	Panel #1	Panel #2	Panel #3	End Result
Bianchi Blue film bag	Fail	Fail	Pass	Fail
Control	Fail	-	-	-

VIA Test

Sample	Plug #1	Plug #2	Plug #3	End Result
Bianchi Blue film bag	Grade 2	Grade 1	Grade 0	Fail
Control	Grade 0	-	-	-

The VIA grading system is attached to the end of the report

Nitrite Test Results

Nitrite is present on the inside of the bag, which indicates that the film was co-extruded

Interpretations: The submitted Bianchi Blue film bag does not provide adequate

vapor phase and contact phase corrosion protection to pass the VIA

and razor blade testing.

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 Blind test Grade 2: Medium corrosion inhibiting effect Grade 3: Blind test Good corrosion inhibiting effect

Grade 3

 $\underline{FTIR\ Analysis}$ Bianchi Blue film bag compared to Clear plain Polyethylene Film 100.0 95 90 85 80 75 70 65 60 55 848.72 50 %T 45 40 35 30 25 20 15 10 5 0.0 3200 2400 2000 1200 3600 2800 1800 1600 1400 1000 800 600 500.0 4000.0 cm-1