

ISO/IEC 17025:2017 Accredited 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 Met-Pak Film

To: Jessica Carpenter

Cortec Corporation

For: Ken Groeneveld

Metals Preservation Group

From: Cortec Laboratories, Inc.

4119 White Bear Parkway

St. Paul, MN 55110

cc: Boris Miksic

Cliff Cracauer Jessi Meyer Scott Bryan

Ivana Radic Borsic

Eric Uutala Bob Boyle Caleb Pheneger

Project #: 24-128-1125

Results reported by:

Brian Benduha Lab Technician II

Brian Bendula

Results approved by:

Pavlo Solntsev, Ph.D. Laboratory Manager



Background:

A film sample made by Met-Pak was submitted for testing to determine the level of corrosion protection they offer for the end user.

Sample Received:

1. Blue Met-Pak Film, 2mils (52" x 45" x 88")

Method:

- NACE Standard VIA Test, TM 0208-2024
- Razor Blade Test, CC-004*

*The test marked is not covered under Cortec Laboratories, Inc. ISO 17025 Scope of Accreditation

Materials:

- 1. VIA test kit (testing jars with lid apparatus, steel plugs, 400grit sandpaper)
- 2. Buehler Plug Grinder, Ecomet V Polisher (manual turn table plug grinder)
- 3. Steel panels, SAE 1008/1010 (Q-Panel, S-35 DG, 3"x5"x0.032")
- 4. Copper panels
- 5. Glycerin (lot: Z01l006)
- 6. Methanol, ACS grade (CAS #67-56-1)
- 7. Scale I (0.0g)
- 8. Lint-free cotton wipes
- 9. DI water
- 10. Plain Polyethylene film
- 11. Calibrated thermometer (QA-CHQ-165)
- 12. Calibrated calipers (S/N: 221778312)

Procedure:

All testing was conducted according to standard procedure.

Results:

Razor Blade Test- Steel Panels

Sample	Panel #1	Panel #2	Panel #3	End Result
Blue Met-Pak Film	Pass	Pass	Fail	Pass
Control	Fail	-	-	Fail

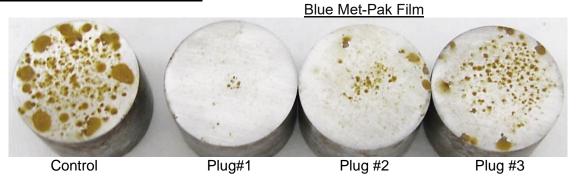
Razor Blade Test- Copper Panels

Sample	Panel #1	Panel #2	Panel #3	End Result
Blue Met-Pak Film	Fail	Fail	Fail	Fail
Control	Fail	-	-	Fail

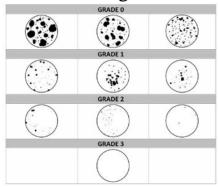
NACE VIA Test

Sample	Plug #1	Plug #2	Plug #3	End Result	Pass / Fail
Blue Met-Pak Film	Grade 2	Grade 1	Grade 1	Slight corrosion protective effect	Fail
Control	Grade 0	-	-	No corrosion protective effect	Fail

Photo of VIA plugs after testing:



VIA Rating Grades



Interpretations:

The submitted Met-Pak film provides sufficient contact corrosion protection to pass the razor blade test for steel but failed to provide contact protection for copper. For vapor phase corrosion protection, this film only provides a slight corrosion protective effect but overall, the protection was not sufficient to pass the NACE VIA test.