



# SUPERIOR PRODUCTS INTERNATIONAL II, INC.

## RUST GRIP®

### SALT SPRAY TESTING (2 testing programs)

Test #1. ASTM B 117 testing at 500 hours with scribe.

Conclusions: Did not exhibit any significant blistering or rusting in the overall areas. All RUST GRIP coated panels did not exhibit any blistering at the scribe line which would eventually lead to film undercutting or delamination at the scribe.

Test Plate Picture:



Shows no sign of undercutting and bubbles along scribe.  
RUST GRIP penetrates and becomes part of the metal surface to prevent the undercutting and deterioration from corrosion development.

**Following is the results of the same ASTM B 117, 500 hour testing on competing products: Taken from the Rust Bullet® Website.**



**500 Hour Accelerated Weathering Test**  
*Rust Bullet® was scientifically tested against the six main ingredients that virtually all rust/corrosion products contain, using the market leaders as comparisons.*

**Tested according to the American Society for Testing Materials (ASTM) Standards and the more stringent specifications of the United States Navy .**



**Rust-oleum® Rusty Metal Primer**  
Topcoated with  
**Rust-oleum® Gloss Enamel**



**Rust-oleum® Rust Reformer**  
Topcoated with  
**Rust-oleum® Gloss Enamel**



**Naval Jelly® Rust Neutralizer**  
Topcoated with  
**Napa Ruf-Nek HD Spray Paint**



**Rust Bullet®**  
No Topcoat



**Zinc-Chromate Primer**  
Topcoated with  
**Zynolyte Urethane**



**POR-15® System**  
Topcoated with  
**Napa Ruf-Nek HD Spray Paint**



**Control Panel**  
(Unprotected Metal)



**Rust-oleum®**  
**Cold Galvanizing Compound**



**Hammerite® Rust Cap**



**Wasser® Brand System**

**Rust Bullet® has been Awarded an Unprecedented Two United States Patents.**



## 500 Hour Accelerated Weathering Test Comparison of the Individual Panels

### Panel 3



PLAY VIDEO



PLAY VIDEO



"The Rust Bullet® panel has slight blistering and undercutting along the scribe lines and none around the hole or the edges. There is slight discoloration and some loss of gloss retention." -- as written from the Rust Bullet® website. ".....Rust-oleum® Rust Reformer panel is approximate 85% failure".

**Additional notes from the testing results from the Rust Bullet® site:**

**Panel #8: POR-15®**, a four step system. It is the third best test panel in the testing series. As you can see, significant blistering and undercutting are proceeding from the scribe lines and there is moderate undercutting round the hole and the edges.

**Panel #6: Wasser® Brand System** panel is the second best test panel in the series and represents the peek of old technology. A significant rusting and undercutting is taking place at the hole and the edges, which indicates the difficulty of the system in covering sharp edges and corners. The scribe lines are undercutting as well. Like test panel #5 (Rust-oleum® Cold Galvanizing Compound), the three step Wasser® process utilizes a zinc rich under coat that provides a degree of galvanic protection, which is what allows the Wasser® System to do as well as it has done. Keep in mind that the use of a zinc metal undercoat brings along most of the problems of a zinc rich primer system, including environmental issues.

**Panel #5: Rust-oleum® Cold Galvanizing Compound** provides a higher degree of protection than the other coatings. Zinc particles are providing a degree of galvanic protection, but as you can see on the corners and the bottom of this panel, it has almost no abrasion resistance. The resin wash out will accelerate the process of decay.

4 October 2012 ---Added a new coating from Japan listed as new Called PaintFlex.

[http://www.mitsuko.com.tr/p\\_06\\_mt\\_PaintFlex.htm](http://www.mitsuko.com.tr/p_06_mt_PaintFlex.htm)

The picture of the scribe is for only 360 hours and not the required 500 hours. The scribe is bleeding and bubbles along cut edge which is failure.

Their bend test is hardly a 60° bend which is a normal curve of a pipe and proves nothing.





## **Test #2: ASTM B 117 Accelerated salt/UV testing.**

RUST GRIP has passed 15,000 hours with 6 plates with 6 mils of single applied coating.

**Result / conclusions: Perfect 10 score, no blemishes, no rust, no bubbles.**

**No other competing products has performed to this level.**

**Picture of one of the test plates:**





SUPERIOR PRODUCTS  
INTERNATIONAL II INC  
USA

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# Report Copies:



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Independent Testing and Consulting Laboratory Serving the Coatings, Sealant,  
Waterproofing and Building Materials Industries Since 1932

January 12, 2011

Superior Products International II, Inc.  
10835 W. 78<sup>th</sup> Street  
Shawnee, KS 66214

Att: Mr. Craig R. Smith  
Technical Director

Re: DL-16254  
Via E-mail: [crsmith@spicoatings.com](mailto:crsmith@spicoatings.com)

**OBJECTIVE**

To evaluate the salt spray resistance of coated steel panels.

**PRODUCT TESTED**

Three sets of coated panels, each containing three replicates were submitted for testing by Superior Products II, Inc. The coated sets were identified as:

*Rust Grip 4.3, 6.3 and 9.3 mils*

**TEST PROCEDURE**

The coated panels were exposed in a Salt Fog Chamber maintained in accordance with ASTM B 117, for 500 hours. The panels were evaluated periodically for blistering in accordance with ASTM D 714 and rusting in accordance with ASTM D 610.

**TEST RESULTS**

The test results can be found in the Appendix.

**ASTM D 714, Degree of Blistering**

**Blister Size**

10 - None  
8 - Pinpoint size  
6 - 1/16-inch diameter approx.  
4 - 1/8-inch diameter approx.  
2 - 1/4-inch diameter approx.

**Frequency of Occurrence**

F - Few  
M - Medium  
MD - Medium Dense  
D - Dense

**ASTM D 610, Degree of Rusting**

**Rust Grade**

10  
9  
8  
6  
4  
2  
0

**Description**

No rusting  
Minute rusting, less than 0.03% of surface area  
Few isolated areas, less than 0.1% of surface area  
Extensive rust areas, less than 1% of surface area  
Rusting to the extent of 10% of surface area  
Approximately 33% of surface rusted  
Approximately 100% of surface rusted



Superior Products International II, Inc.  
Re: DL-16254  
January 12, 2011



### CONCLUSIONS

The following conclusions can be derived from this evaluation.

1. The *Rust Grip* coated panels at film thicknesses 4.3 and 6.3 did not exhibit any significant blistering or rusting in the overall areas. *Rust Grip 9.3* exhibit minute blistering.
2. All *Rust Grip I* coated panels did not exhibit any blistering at the scribe line which would eventually lead to film undercutting or delamination at the scribe. All the panels exhibited very slight rusting or rust staining at the scribe line.

DL Labs, Inc.

A handwritten signature in black ink, appearing to read 'Mario Lazaro, Jr.'.

Mario Lazaro, Jr.  
Assistant Technical Director





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January 11, 2011

Superior Products International II, Inc.  
10835 W. 78<sup>th</sup> Street  
Shawnee, KS 66214

Att: Mr. Craig R. Smith  
Technical Director

Re: DL-15881C

**OBJECTIVE**

To test a coating for compliance to the salt spray requirements as outlined in the Florida Department of Transportation specification.

**PRODUCT TESTED**

Coated panels were submitted by Superior Products II, Inc. and identified as:

*Rust Grip NS 1, 6-mils through Rust Grip NS 3, 6-mils*

**TEST PROCEDURE**

The coated panels were exposed in a Salt Fog Chamber maintained in accordance with ASTM B 117, for 15,000 hours. The panels were evaluated periodically for overall blistering in accordance with ASTM D 714 and rust staining in accordance with ASTM D 610.

**TEST RESULTS**

The test results can be found in the Appendix.

**ASTM D 714, Degree of Blistering**

**Blister Size**

- 10 - None
- 8 - Pinpoint size
- 6 - 1/16-inch diameter approx.
- 4 - 1/8-inch diameter approx.
- 2 - 1/4-inch diameter approx.

**Frequency of Occurrence**

- F - Few
- M - Medium
- MD - Medium Dense
- D - Dense



Superior Products International II, Inc.  
Re: DL-15881C  
January 11, 2011



**TEST RESULTS (cont.)**

**ASTM D 610, Degree of Rusting**

<u>Rust Grade</u>	<u>Description</u>
10	No rusting
9	Minute rusting, less than 0.03% of surface area
8	Few isolated areas, less than 0.1% of surface area
6	Extensive rust areas, less than 1% of surface area
4	Rusting to the extent of 10% of surface area
2	Approximately 33% of surface rusted
0	Approximately 100% of surface rusted

DL Labs, Inc.

Mario Lazaro, Jr.  
Assistant Technical Director



APPENDIX

TEST RESULTS

**ASTM B 117 SALT SPRAY (FOG) CORROSION RESISTANCE**

The three coated panels of *Rust Grip NS, 6-mils* exhibit the following:

	<u>Blistering</u>	<u>Rust Staining</u>
250 Hours Exposure	10	10
500 Hours Exposure	10	10
750 Hours Exposure	10	10
1,000 Hours Exposure	10	10
1,250 Hours Exposure	10	10
1,500 Hours Exposure	10	10
1,750 Hours Exposure	10	10
2,000 Hours Exposure	10	10
2,250 Hours Exposure	10	10
2,500 Hours Exposure	10	10
2,750 Hours Exposure	10	10
3,000 Hours Exposure	10	10
3,250 Hours Exposure	10	10
3,500 Hours Exposure	10	10
3,750 Hours Exposure	10	10
4,000 Hours Exposure	10	10
4,250 Hours Exposure	10	10
4,500 Hours Exposure	10	10
4,750 Hours Exposure	10	10
5,000 Hours Exposure	10	10
5,250 Hours Exposure	10	10
5,500 Hours Exposure	10	10
5,750 Hours Exposure	10	10
6,000 Hours Exposure	10	10
6,250 Hours Exposure	10	10
6,500 Hours Exposure	10	10
6,750 Hours Exposure	10	10
7,000 Hours Exposure	10	10
7,250 Hours Exposure	10	10
7,500 Hours Exposure	10	10
7,750 Hours Exposure	10	10
8,000 Hours Exposure	10	10



APPENDIX (cont.)

TEST RESULTS

**ASTM B 117 SALT SPRAY (FOG) CORROSION RESISTANCE**

The three coated panels of *Rust Grip NS, 6-mils* exhibit the following:

	<u>Blistering</u>	<u>Rust Staining</u>
8,250 Hours Exposure	10	10
8,500 Hours Exposure	10	10
8,750 Hours Exposure	10	10
9,000 Hours Exposure	10	10
9,250 Hours Exposure	10	10
9,500 Hours Exposure	10	10
9,750 Hours Exposure	10	10
10,000 Hours Exposure	10	10
10,250 Hours Exposure	10	10
10,500 Hours Exposure	10	10
10,750 Hours Exposure	10	10
11,000 Hours Exposure	10	10
11,250 Hours Exposure	10	10
11,500 Hours Exposure	10	10
11,750 Hours Exposure	10	10
12,000 Hours Exposure	10	10
12,250 Hours Exposure	10	10
12,500 Hours Exposure	10	10
12,750 Hours Exposure	10	10
13,000 Hours Exposure	10	10
13,250 Hours Exposure	10	10
13,500 Hours Exposure	10	10
13,750 Hours Exposure	10	10
14,000 Hours Exposure	10	10
14,250 Hours Exposure	10	10
14,500 Hours Exposure	10	10
14,750 Hours Exposure	10	10
15,000 Hours Exposure	10	10