



MIAMI-DADE COUNTY PERFORMANCE TEST REPORT

Rendered to:

AMARR GARAGE DOORS

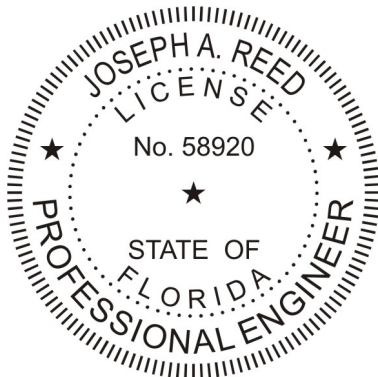
PRODUCT: Coated Steel Door Skin Panels

This report contains in its entirety:

Cover page: 1 Page

Body: 4 Pages

Photographs: 5 Pages



Joseph A. Reed

Digitally Signed by: Joseph A. Reed

2017.06.15 11:53:13 -04'00'

Report No: C5463.01-106-18

Report Date: 04/03/13

Test Record Retention Period: 04/03/23

Miami-Dade Notification No.: ATI-13001

Revision 1: 06/15/17



MIAMI-DADE COUNTY PERFORMANCE TEST REPORT

Rendered to:

AMARR GARAGE DOORS
165 Carriage Court
Winston Salem, North Carolina 27105

Report No: C5463.01-106-18
Test Dates: 01/29/13
Through: 03/25/13
Report Date: 04/03/13
Test Record Retention Period: 04/03/23
Miami-Dade Notification No.: ATI-13001
Revision 1: 06/15/17

Product: Coated Steel Door Skin Panels

Project Summary: Architectural Testing, Inc. was contracted by Amarr Garage Doors to evaluate the following steel door skin panels: G-40 galvanized with polyester top coat and G-30 galvanized with polyester top coat (received designated as coil NCNGFJ [white coat backing] and coil NCNDVP [green coat backing], respectively) and a G-90 galvanized control panel series for degrees of rusting after 1000 hours of salt spray exposure. The test procedure and test results are reported herein. The coated steel door skin panels exhibited mean corrosion creepage ratings of 3 (G-40) and 1 (G-30) while the G-90 coated steel control samples displayed rust creepage ratings of 0.

Test Methods: The test specimens were evaluated in accordance with the following methods:

Miami Dade County Checklist #0220, *For the Approval of Garage Doors.*

ASTM D 1654-08, *Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.*

ASTM B 117-11, *Standard Practice for Operating Salt Spray (Fog) Apparatus.*

Test Procedure: The test was performed in an Englehard exposure chamber (005575). The chamber operated with continuous fog at $35 \pm 2^{\circ}\text{C}$ ($95 \pm 3^{\circ}\text{F}$) utilizing a 5% salt solution consisting of five parts reagent grade sodium chloride and 95 parts de-ionized water by mass. The coated steel door skin panels were scribed with a carbide-tipped tool on a 45° angle through the coating then sealed on the cut edges. Three specimens per submitted coating were then placed into sample racks and into the exposure chamber for the requisite 1000 hour duration of testing. At the conclusion of the exposure period, all samples were rinsed under warm water then photographed to evaluate the occurrence and degree of rusting. Resultant coating blisters were removed by scraping prior to final evaluation of corrosion creepage distance from scribe.

Test Results: The individual results are reported in the following table. Refer to Appendix A for photographs of the product samples after salt spray exposure.

Results after 1000 Hours

Specimen Details		Scribe Creepage		Unscribed Area Blister Rating and Observations
Identification	No.	Observations	Rating ¹	
G-40 Galvanized with Polyester Topcoat (NCNGFJ: white coat backing)	A-1	Coating blistered away from scribe no red rust present	7 1/32" to 1/16"	Coating blistered away from scribe, no other blisters present
	A-2		0 5/8" or more	Coating blistered away from scribe, one other blister present
	A-3		3 1/4" to 3/8"	Coating blistered away from scribe, few other blisters present
G-30 Galvanized with Polyester Topcoat (NCNDVP: green coat backing)	B-1	Coating blistered away from scribe, no red rust present	0 5/8" or more	Coating blistered away from scribe, few other blisters present
	B-2		1 1/2" to 5/8"	Coating blistered away from scribe, no other blisters present
	B-3		2 3/8" to 1/2"	Coating blistered away from scribe, one other blister present
G-90 Galvanized Control Samples	C-1	Heavy corrosion over entire specimen face (Scribe no longer visible)	0 5/8" or more	No top coat to evaluate
	C-2		0 5/8" or more	
	C-3		0 5/8" or more	

¹ Scribe Rating as per ASTM D 1654, Table 1 - Rating Failure at Scribe (Procedure A)

List of Official Observers:

Name

Gary Hartman, P.E.
Scott D. Scallorn

Company

Architectural Testing, Inc.
Architectural Testing, Inc.

Architectural Testing will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Architectural Testing, Inc. for the entire test record retention period.

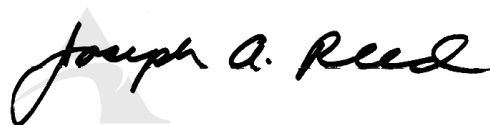
Results obtained are tested values and were secured by using the designated tested methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to specimens tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.:



Digitally Signed by: Scott Scallorn

Scott D. Scallorn - Project Engineer
Components / Materials Testing



Digitally Signed by: Joseph A. Reed

Joseph A. Reed, P.E.
Senior Director

SDS:sds/kf

Attachments (pages) This report is complete only when all attachments listed are included.
Appendix A - Photographs (5)

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	04/03/13	N/A	Original report issue.
1	06/15/17	1, 2	Product description clarified within project summary and test results sections.



C5463.01-106-18

APPENDIX A

Photographs

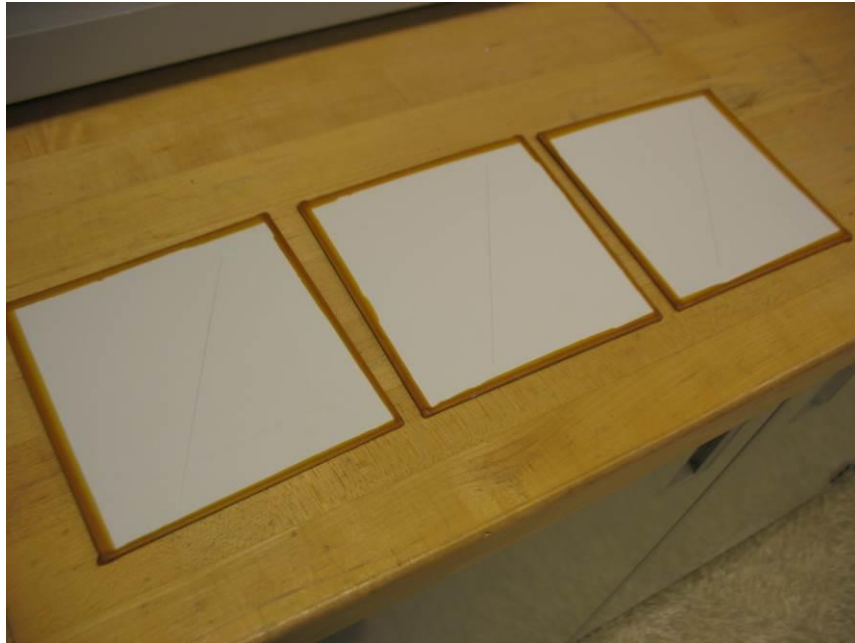


Photo No. 1
Sample Group A (G-40 [NCNGFJ])

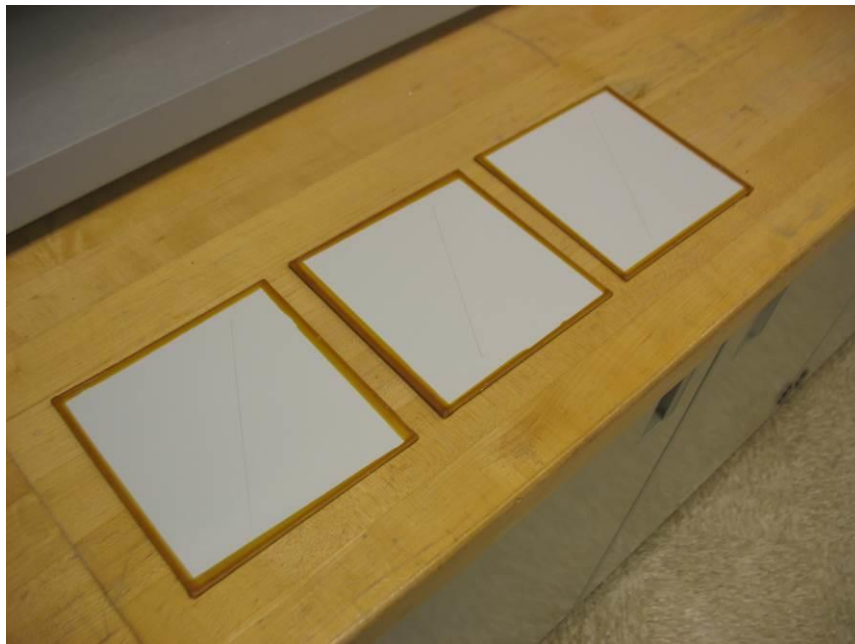


Photo No. 2
Sample Group B (G-30 [NCNDVP])



Photo No. 3
G-90 Control Sample Group

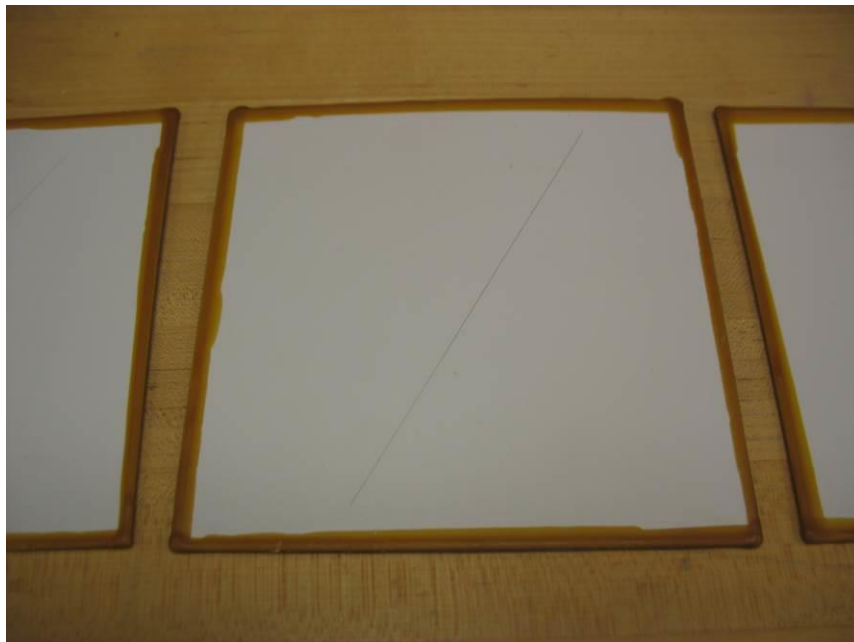


Photo No. 4
Typical Test Specimen Scribing Detail

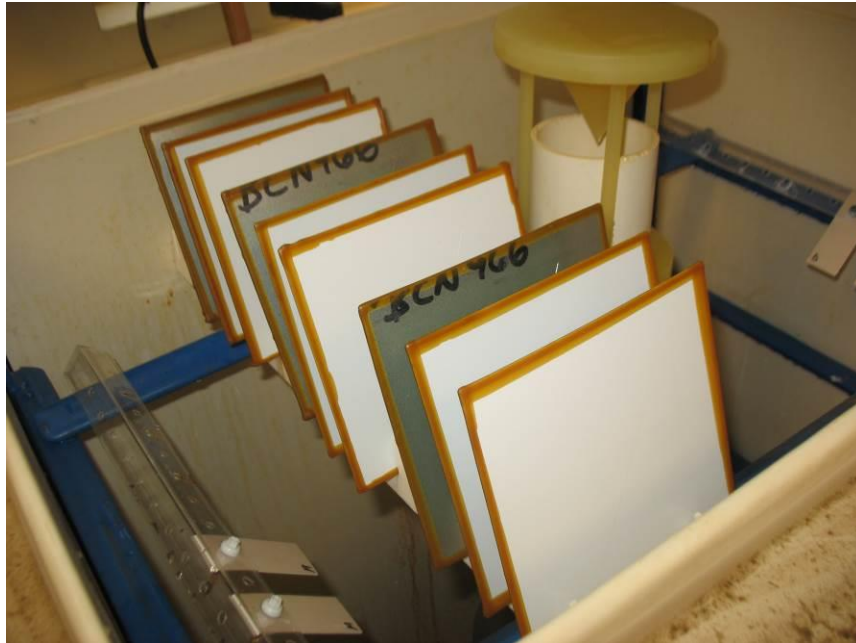


Photo No. 5
Sample Racked Specimen Exposure Location Detail



Photo No. 6
Sample Group A (G-40 [NCNGFJ]) - After 1000 Hours Exposure



Photo No. 7
Sample Group B (G-30 [NCNDVP]) - After 1000 Hours Exposure

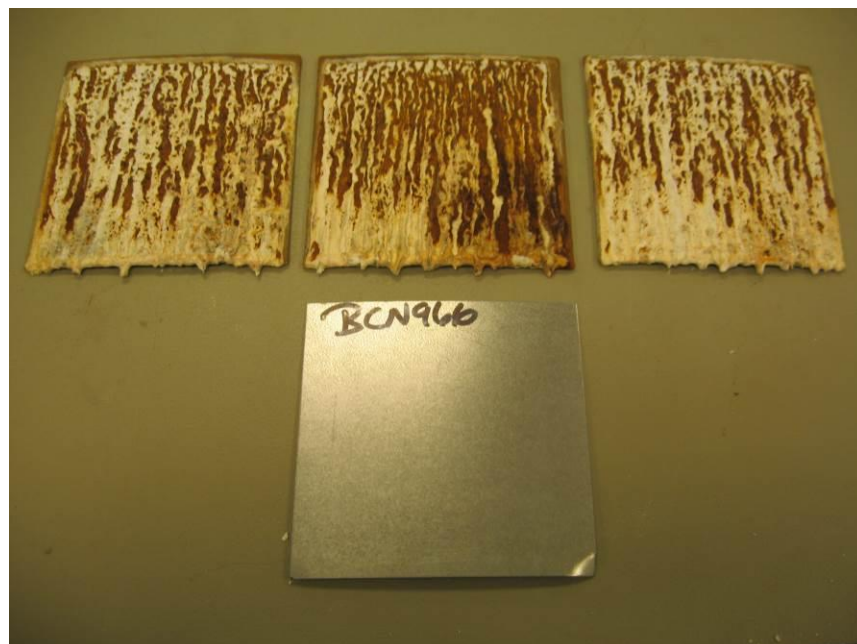


Photo No. 8
G90 Control Group Samples - After 1000 Hours Exposure

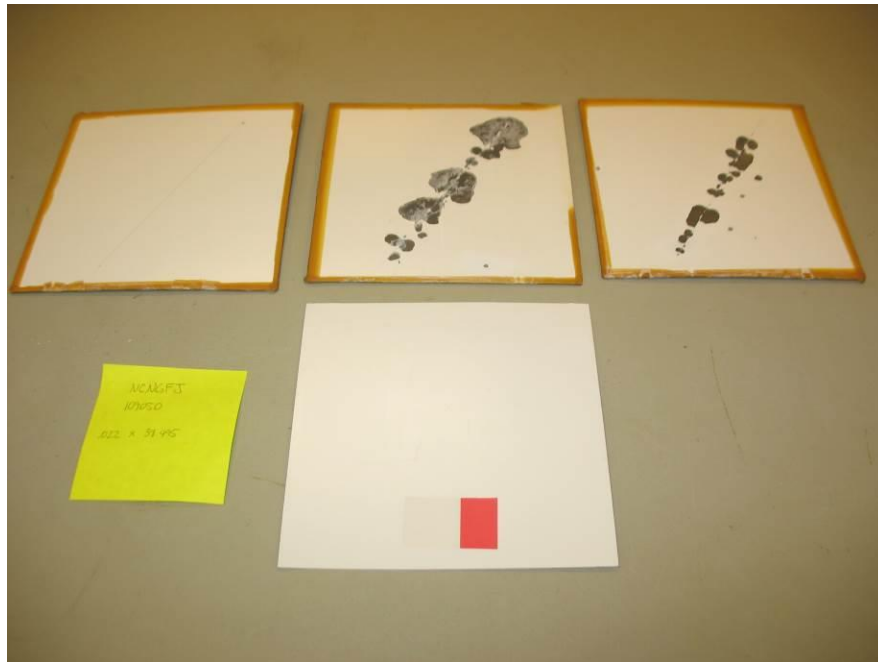


Photo No. 9
Sample Group A (G-40 [NCNGFJ]) - Post-Blister Removal



Photo No. 10
Sample Group B (G-30 [NCNDVP]) - Post-Blister Removal