

AIR, WATER AND STRUCTURAL TEST REPORT

Rendered to:

GAMCO CORPORATION
131 - 10 Maple Avenue
Flushing, New York 11355

Report No: 01-33607.01

Project Summary: Architectural Testing, Inc. (ATI) was contracted to perform tests on a Series/Model D-350, aluminum entrance door. Test specimen description and results are reported herein.

Test Methods: The test specimen was evaluated in accordance with the following:

AAMA/NWWDA 101/I.S.2-97, *Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors*, Appendix A, Corner Weld Test, with the exception that the panel corners tested were constructed of aluminum and were mechanically fastened.

ASTM E 283-91, *Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen*.

ASTM E 330-97, *Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference*.

ASTM E 331-96, *Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference*.

Test Specimen Description:

Series/Model: D-350

Type: Aluminum Entrance Door

Overall Size: 3' 3-1/2" wide by 7' 1-3/4" high

Panel Size: 2' 11-3/4" wide by 6' 10-1/2" high

Test Specimen Description: (Continued)

Finish: All aluminum was unpainted.

Glazing Details: The panel utilized one lite of 1/4" laminated glass fabricated from two sheets of 0.110" thick clear annealed glass with a 0.030" laminant in between. The unit was glazed with extruded aluminum snap-in glaze beads to both the interior and exterior. A hollow vinyl bulb was utilized in the glazing beads.

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.400" high by 0.120" backed polypile	2 Rows	Top and bottom rail
0.400" high by 0.270" backed polypile	1 Row	Interior frame perimeter

Frame Construction: The frame was constructed of extruded aluminum members and the corners were straight cut, sealed and fastened with three screws per corner. The threshold was attached with two screws per end. An extruded aluminum snap-in member was utilized around the interior perimeter as a panel stop and was sealed in place.

Panel Construction: The panel was constructed of extruded aluminum members and the corners were straight cut, sealed and fastened with two screws per corner. Threaded rods spanned both rails and were fastened with nuts on the ends.

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Metal lock with keeper slot	1	Midspan of lock stile with keeper slot aligned on jamb
Aluminum handles	2	36" o.c. from bottom, both interior and exterior on lock stile
Metal hinges	3	7-1/2" from ends and midspan of hinge stile

Test Specimen Description: (Continued)

Drainage:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Sloped threshold	1	Bottom of frame

Installation: The test unit was secured to the wood 2" x 8" test frame with wood blind stops to both interior and exterior of the unit. The exterior perimeter was sealed with silicone.

Test Results:

The results are tabulated as follows:

<u>Title of Test - Test Method</u>	<u>Results</u>
Air Infiltration per ASTM E 283 @ 1.57 psf (25 mph) @ 6.24 psf (50 mph)	0.80 cfm/ft ² 2.00 cfm/ft ²
Water Resistance per ASTM E 331 WTP = 1.57 psf	No leakage
Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the lock stile) @ 82.50 psf (exterior) @ 82.50 psf (interior)	0.010" 0.005"

Corner Weld Test: The supplied specimens were then individually secured into a fixed test fixture mounted to a SATEC Model 50UD Universal Test Machine, where a pre-specified load was applied. At that time the maximum load was recorded and a visual inspection was done with a protractor to determine the degree of rotation.

Test sample #1 (Shear Block System) consisting of two 5" long extruded aluminum members fastened with one bolt and a shear block. The shear block was fastened to the stile with eight screws.

Test sample #2 (Tie Rod & Welded System) consisting of 12" long extruded aluminum stile and a 6" long rail were fastened with a tie rod and a spot weld

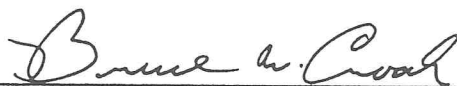
For results see the attached two test data sheets.

Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product which may only be granted by the certification program administrator.

For ARCHITECTURAL TESTING, INC:



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