6.00 PSF Water Performance was obtained with the Standard 1.875" Sill.
9.00 PSF Water Performance was obtained with the High Water Sill.

TESTED FOR

Fleetwood Aluminum
2485 Railroad
Corona, CA 91720

Report No. : A97D-142
Date : September 22, 1997

1.0 PURPOSE

The purpose of this report is to present the testing methods employed and test results obtained during the performance testing of one (1) **Aluminum Sliding Glass Door** described in paragraph 4.0 of this report.

2.0 TEST REFERENCES

2.1 Voluntary Specifications for Aluminum, Vinyl (PVC) Wood Windows and Glass Doors: AAMA/NWWDA 101/I.S.2 - 97 **SGD - HC 50** 181 x 96

2.2 CAWM 300 - 96 Forced Entry Resistance Tests for Sliding Glass Doors.

3.0 SUMMARY

The test results in paragraphs 5.0 and 6.0 indicate that the test sample described in paragraph 4.0 of this report complied with the performance requirements of the above referenced specifications.

4.0 SAMPLE SUBMITTED

SERIES: **Norwood 3000 Sliding Glass Door**

CONFIGURATION: OXO Inside Slide

FRAME SIZE: 181.00” x 95.90”

SLIDING PANEL: 61.63” x 93.50”

FIXED PANEL: 59.75” x 93.75” Right Panel
58.75” x 93.75” Left Panel

GLASS: All panels contained a single lite of 1/4” tempered glass.

GLAZING: All panels were channel glazed with vinyl gasket and all of the glazing corners were sealed from the interior and exterior with silicone.

WEEPAGE: None.

WEATHERING: Amesbury 0.290" overall high pile with center fin was used as follows:

a) Full length on sill facing out.

b) Full length on head sliding track facing in and out.

c) Head over fixed panels only facing in and out.

Both fixed jambs and the intermediate jamb on both the fixed and sliding panel sides contained two strips of Q-Lon vinyl.

Both interlocks contained a strip of Amesbury 0.300" overall high pile and a full length slide on PVC air barrier that contained a 0.290" overall high pile with center fin.

Bottom rail of sliding panel on the underside contained sweep vinyl.

HARDWARE: The sliding bottom rail contained an adjustable tandem steel roller at each end and the leadstile contained an Adams-Rite lock mechanism.

CONSTRUCTION: All frame and panel corners were mechanically joined with screws.

Intermediate jamb and fixed interlock were clipped to the frame at each end with an aluminum angle clip. Each clip leg was fastened with a pair of #10 x 3/4" screws.

From the inside, the fixed panels were fastened to the frame jambs and intermediate jamb with one (1) #8 screw at the lower end. The intermediate jamb was joined to the fixed panel with an additional #8 screw at midspan.

The fixed panel with interlock was fastened to a threshold block with one (1) screw which in turn was fastened to the threshold with one (1) screw.

CAULKING: Frame to rough opening full perimeter in and out. All corners were caulked with seam seal, intermediate jamb was caulked full profile, top and bottom to frame.

ANCHORING: The frame was fastened into the 2" x 8" wood rough opening with screws equally spaced across the four sides every 20".

5.0 TEST PROCEDURES AND RESULTS

5.1 All testing procedures were performed in accordance with the performance requirements of the test specifications referenced in paragraph 2.0 of this report.

5.2 TEST RESULTS

PARAGRAPH	TEST DESCRIPTION	MEASURED	ALLOWED
2.2.19.5.1	Operating Force		
	Breakaway	15 lbs.	40 lbf.
	Motion	10 lbs.	25 lbf.
2.1.2	Air Infiltration (ASTM E 283)		
	6.24 PSF	0.30 CFM/Ft^2	0.3 CFM/Ft^2
	The tested specimen meets the performance requirements specified in AAMA/NWWDA 101/I.S.2 -97 for Air Infiltration.		
2.1.3	Water Penetration (ASTM E 547 & ASTM E 331)		
	6.00 PSF	No Leakage	No Leakage
2.1.4	Uniform Load Structural (ASTM E 330)		
	60.0 PSF POS	0.200”	.375” Set
	60.0 PSF NEG	0.210”	.375” Set
2.2.19.5.2	Deglazing (ASTM E 987)		
	70 lbs. Stiles	10%	Less than 100%
	50 lbs. Rails	9%	Less than 100%

5.3 OPTIONAL PERFORMANCE GRADES

4.3	Water Penetration (ASTM E 547 & ASTM E 331)		
	9.00 PSF	No Leakage	No Leakage
4.4.2	Uniform Load Structural (ASTM E 330)		
	75.0 PSF POS	0.250”	0.375” Set
	75.0 PSF NEG	0.290”	0.375” Set

6.0 2.1.8 CAWM 300 - 89 -- FORCED ENTRY RESISTANCE

2.3.2 Type II Door

6.1.3 Operable Panel

TEST	RESULTS	DESCRIPTION
6.1.3.1 **A - II**	Passed	800# at the locking stile of operable panel parallel to the plane of the glass and 800# at the intermediate jamb parallel to the plane of the glass and opposite the first force.

FORCED ENTRY RESISTANCE TEST RESULTS (cont'd)

	TEST	RESULTS	DESCRIPTION
6.1.3.2	**B - II**	Passed	Test "A - II" and applying 200# to same area of the same lock stile in direction perpendicular to the plane of glass toward the interior.
6.1.3.3	**C - II**	Passed	Test "A - II" and applying 200# to same area of the same lock stile in direction perpendicular to the plane of glass toward the exterior.
6.1.3.4	**G**	Passed	Hand and Tool Manipulation.
6.1.3.5	**D - II**	Passed	Test "A - II" with operable panel lifted upward and applying 50# load at bottom rail near meeting stiles toward interior for inside sliding panels.
6.1.3.6	**G**	Passed	Hand and Tool Manipulation.

6.1.5 Fixed Panels

	TEST	RESULTS	
6.1.5.1	**A**	Passed	300# at the midspan of the fixed jambstile parallel to the plane of the glass that tends to remove the fixed panel from the frame jamb pocket.
6.1.5.2	**B**	Passed	300# at the midspan of the fixed jambstile parallel to the plane of the glass that tends to remove the fixed panel from the frame jamb pocket and 150# at the midspan of the fixed panel interlock stile in the direction perpendicular to the plane of the glass which would tend to disengage the meeting stiles.
6.1.5.3	**C**	Passed	Test "A" with the fixed panel lifted upward to its full limit.
6.1.5.4	**G**	Passed	Hand and Tool Manipulation

For a complete description of the tested sample refer to the attached cross section drawings.

Assembly and die drawings of frame members are on file and have been compared to the sample submitted. Test sample sections, drawings, and a copy of this report will be retained at the test laboratory for four years.

The above and preceding test results were obtained by using the applicable ASTM and CAWM Test Methods. This report does not constitute Certification of this product. Certification can only be granted by an approved Administrator/Validator.

Testing Completed: September 22, 1997
Report Completed: September 22, 1997

Pete Cruz
Test Engineer

Jim Cruz
Test Technician