NCTL

NATIONAL CERTIFIED TESTING LABORATORIES

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STRUCTURAL PERFORMANCE TEST REPORT

REPORT NO: NCTL-210-1752-1S,2S,3S
TEST DATE: 08-14-95
REPORT DATE: 08-28-95
EXPIRATION DATE: 08-31-98

CLIENT: Therma-Tru
108 Mutzfeld Road
Butler, IN. 46721

TEST SPECIMENS: Three (3) Therma-Tru Model "Fiber-Classic" Outswing Fiberglass Panel Patio Door Systems. (6080)

TEST SPECIFICATION: Dade County Building Code Compliance Office Protocol PA 202-94 Criteria for Testing Impact and Non Impact Resistant Building Envelope Components using Uniform Static Air Pressure.

TEST SPECIMEN DESCRIPTION

Series/Model: Fiber-Classic Outswing

Type: Outswinging Fiberglass Cladded Entrance Door/Wood Frame/Aluminum Threshold (XX)

Overall Size: 6'2-3/16" wide by 8'1/2" high

Configuration: Double Outswing (XX)

Number and Size of Slabs: Two slabs, each measuring 35-13/16" wide x 95-9/32" long x 1-11/16" thick

Material Characteristics:

Frame Material: Wood Frame, Extruded Aluminum Threshold, Combination Wood/Extruded Aluminum Astragal

Glazing:

Material: 1/2" sealed insulated glass fabricated from two 1/8" clear tempered sheets and a 1/4" aluminum spacer.

Method: The insulated glass unit was mechanically captured between interior and exterior plastic (lite frame) glazing stops. The glass bite on the lite frames was 1/2". Eighteen (18) (# 6 x 1-3/4") screws were used to capture the plastic stops, six (6) at each three (3) at the top and three (3) at the bottom.

Daylight Opening: The daylight opening was 19" wide x 79" long.

Frame Construction: Jambs and head were constructed from 4-5/8" wide by 1-1/4" thick wood sections. The threshold was extruded aluminum, with integral wood substrate and weatherseal. The sill measured 0.850" high. The head/jamb corners were coped, butted and fastened using three 2-1/2" staples per corner. The sill/jamb corners were butted and sealed using two 2-1/2" staples per corner through the jamb into integral wood block in the sill. The astragal was assembled using four #7 x 1-1/2" screws into the inactive slab. An extruded aluminum strip was affixed to the lock edge of the active slab with four #10 x 1" screws.

Door Slab Construction: The door slabs were constructed from 0.125" thick fiberglass cladding. The perimeter of each door employed wood blocking. The interior cavity of each door was filled with rigid polyurethane.

Weatherstripping: One row of thermoplastic compression weatherstrip was used at the head, jamb and astragal. The sill had an integral thermoplastic compression seal built in. Caulk was used to backbed the weatherstrip. Foam filled weatherstrip was adhesively affixed to the top exterior edges of each door slab. A single leaf plastic strip was affixed to the exterior bottom edge of each slab. A single strip of vinyl wrapped foam compression weatherstrip was located at the astragal security cover and one centerfin dust pad was located at the aluminum threshold directly under the astragal.

Hardware:

Description	Quantity	Location
4" butt type	8	5-1/4", 30-3/4", 56-1/4" and 81-3/4" from top of each door slab
Lockset Kwikset 200 Serie	1	60" from door slab top
Dead Bolt Kwikset 660 Series	1	54-1/2" from door slab top
Stanley or American Hardware Heavy Duty 6" Surface Mounted Cylindrical Slide Bolt	4	Mounted vertically 1" from lock side door slab edge and 1" from top and bottom edge
Astragal Integral Slide Bolt	2	12" from each end of left slab steel keepers at head and drilled a 7/16" hole at threshold

Sealant: A small-joint sealant was applied to the jamb/sill corners. An adhesive caulk was used to seal the plastic glazing surrounds to the slab skins.

Installation: The unit was mounted into a wood 2 x 8 surround using #10 x 2-1/2" wood screws located as follows: 8 screws per side jamb starting 6" from the top of the unit on 12" centers, 7 screws centered along the head jamb on 12" centers and 4 through the sill at 4" and 30" from each end of the unit.

TEST RESULTS SPECIMEN NO. 1S

PARAGRAPH NO.	TITLE OF TEST	MEASURED	ALLOWED
*2.1.2/5.2.7	Air Infiltration (ASTM E-283)		
	0.57 psf (15 mph)	0.02 CFM/FT	----------
	1.57 psf (25 mph)	0.07 CFM/FT	0.37" CFM/FT
	(75 mph basic wind zone)		
*2.1.4/5.2.4	Uniform Static Loads (30 seconds)		
	1/2 of Full Load secondary locks disengaged		
	21 psf Exterior	0.026"	0.384"
*2.1.4/5.2.4	Design Loads (30 Seconds)		
	28 psf Exterior design pressure	0.022"	0.384"
*5.2.6	Water Penetration (5.0 GPH/FT^2)		
	WTP = 4.20 psf (15 min)	No Entry	No Entry
	(110 mph basic wind zone)		
2.1.4/5.2.4	Uniform Static Loads (30 seconds)		
	1/2 of Full Load Secondary Locks Engaged		
	37.0 psf Exterior	0.024"	0.384"
2.1.4/5.2.4	Design Loads (30 Seconds)		
	49.2 psf Exterior	0.030"	0.384"
3.3/5.2.6	Water Penetration (5.0 GPH/FT^2)		
	WTP = 7.40 psf (15 min)	No Entry	No Entry
3.4/5.2.5	Uniform Static Loads		
	Full Loads (30 seconds)		
	73.8 psf Exterior	0.149"	0.384"
	* 42.0 psf Interior (75 mph design)	0.113"	0.384"
	65.6 psf Interior (110 mph design load)	0.045"	0.384"
	98.4 psf Interior	0.056"	0.384"

TEST RESULTS SPECIMEN NO. 2

PARAGRAPH NO.	TITLE OF TEST	MEASURED	ALLOWED
*2.1.2/5.2.7	Air Infiltration (ASTM E-283)		
	0.57 psf (15 mph)	0.04 CFM/FT	----------
	1.57 psf (25 mph)	0.10 CFM/FT	0.37" CFM/FT
	(75 mph basic wind zone)		
*2.1.4/5.2.4	Uniform Static Loads (30 seconds)		
	1/2 of Full Load secondary locks disengaged		
	21 psf Exterior	0.003"	0.384"
*2.1.4/5.2.4	Design Loads (30 Seconds)		
	28 psf Exterior design pressure	0.014"	0.384"
*5.2.6	Water Penetration (5.0 GPH/FT^2)		
	WTP = 4.20 psf (15 min)	No Entry	No Entry
	(110 mph basic wind zone)		
2.1.4/5.2.4	Uniform Static Loads		
	1/2 of Full Load (30 seconds)		
	37.8 psf Exterior	0.035"	0.384"
2.1.4/5.2.4	Design Loads (30 Seconds)		
	49.2 psf Exterior	0.052"	0.384"
3.3/5.2.6	Water Penetration (5.0 GPH/FT^2)		
	WTP = 7.40 psf (15 min)	No Entry	No Entry
3.4/5.2.5	Uniform Static Loads		
	Full Loads (30 seconds)		
	73.8 psf Exterior	0.168"	0.384"
	* 42.0 psf Interior (75 mph design Load)	0.004"	0.384"
	65.6 psf Interior (110 mph design load)	0.200"	0.384"
	98.4 psf Interior	0.148"	0.384"

TEST RESULTS SPECIMEN NO. 3S

PARAGRAPH NO.	TITLE OF TEST	MEASURED	ALLOWED
*2.1.2/5.2.7	Air Infiltration (ASTM E-283)		
	0.57 psf (15 mph)	0.02 CFM/FT	----------
	1.57 psf (25 mph)	0.09 CFM/FT	0.37" CFM/FT
	(75 mph basic wind zone)		
*2.1.4/5.2.4	Uniform Static Loads (30 seconds)		
	1/2 of Full Load secondary locks disengaged		
	21 psf Exterior	0.013"	0.384"
*2.1.4/5.2.4	Design Loads (30 Seconds)		
	28 psf Exterior design pressure	0.021"	0.384"
*5.2.6	Water Penetration (5.0 GPH/FT^2)		
	WTP = 4.20 psf (15 min)	No Entry	No Entry
	(110 mph basic wind zone)		
2.1.4/5.2.4	Uniform Static Loads		
	1/2 of Full Load (30 seconds)		
	37.8 psf Exterior	0.017"	0.384"
2.1.4/5.2.4	Design Loads (30 Seconds)		
	49.2 psf Exterior	0.048"	0.384"
3.3/5.2.6	Water Penetration (5.0 GPH/FT^2)		
	WTP = 9.00 psf (15 min)	No Entry	No Entry
3.4/5.2.5	Uniform Static Loads		
	Full Loads (30 seconds)		
	73.8 psf Exterior	0.086"	0.384"
	* 42.0 psf Interior (75 mph design)	0.148"	0.384"
	65.6 psf Interior (110 mph design load)	0.187"	0.384"
	98.4 psf Interior	0.072"	0.384"

ALL TESTS COMPLETED: 08-15-95

*Test performed with secondary locks not engaged.

Permanent set measured readings recorded using a shaft encoder-digital deflection measurer, and were taken at midspan of the astragal.

NOTE: At the conclusion of the testing no damage to the specimen was observed.

Two (2) mill visqueen was used for uniform static loads and did not effect the specimen performance.

The products tested meets the criteria for Chapter 2309 of the South Florida Building Code and Protocol PA 202-94.

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. A copy of this report along with representative sections of the test specimen will be retained by NCTL for a period of four (4) years. The results obtained apply only to the specimen tested.

Testing witnessed by: Mr. Barry Portnoy (NCTL)
Mr. Michael Lane (NCTL)
Mr. John Williams (NCTL)
Mr. Pat Miller (Therma-Tru)

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