

ALUMINUM DOOR

Manufacturer: ALUTECH CORPORATION

8548 N.W. 64 Street, Miami, Florida-33166

DOOR SIZE: 36" wide x 84" height

MODEL NO: Series 2001 Aluminum.

PRODUCT DESCRIPTION: Entry door Aluminum outer skin with rigid foam core.

Frame Size : 0.122 " thick x 5-3/4" wide

Swing Type : Out side

Anchors : 1/4" x 4" Tapcon screws @ 18" o.c on each jamb

Hinges : Three 4-1/2" x 4-1/2" full template steel hinges with four
#12 x 24 F H S.M.S per hinge.

Lock : Cylindrical lever lock installed at midspan.

TEST REPORT:

Maximum Wind Pressure : 143 psf + ve or - ve

Water Infiltration : None at 14.7 psf

Air Infiltration : Air Leakage rate 0.0102 cfm/ft
at 1.57 psf pressure

Forced Entry : Satisfactory upto 300 pounds
concentrated load.

Impact Resistance : Satisfactory

TEST REQUIREMENTS MEETS DADE COUNTY ,FLORIDA AND
STANDARD BUILDING CODES.

K. Harlester
12/04/96

GUINDY ENGINEERING INC

P.O.BOX 772052

Coral Springs, Fl-33077

HURRICANE ENGINEERING & TESTING INC.

Computer Controlled Product Testing & Design.

.....Wind Load Analysis

Air and Water Infiltration & Uniform Static Air Pressure Test

Date: Nov 30, 1995

REPORT NUMBER: HETI-95-1046

MANUFACTURER: Alutech Corporation
8548 N.W. 64 Street Miami, FL 33166

TEST LOCATION: Hurricane Engineering & Testing Inc.
8532 N.W. 64 Street Miami, FL 33166

LAB. CERTIFICATION NUMBER: 95-0118.02

PRODUCT: Entry Door

PRODUCT DESCRIPTION: Aluminum w/rigid foam core (Ref: Tensile Test Report # HETI-95-T112)

PRODUCT SIZE: 36"w x 84"h

MODEL: Series 2001 Aluminum

DESIGN LOADS (psf): +95, -95

DRAWING NUMBER: A95214, Alutech Corp. 12/13/95


NOTE: HETI stamped drawing is an integral part of this report.

TEST WITNESSED BY: (Full or Partial)

Dr. Wakar Ali (HETI)
Mr. Leonardo Savini E.I.T. (HETI)
Mr. Terry C. Agee E.I.T. (HETI)
Mr. Adolfo Perez (Alutech)

WITNESSING ENGINEER:

Mr. Hector M. Medina, P.E. (HETI)


4 / 25 / 96

UNIFORM STATIC AIR PRESSURE TEST RESULTS

| | Load (psf) | Deflection (in) | Set (in) | Recovery (%) | Duration (sec) |
|---------------|---------------|--------------------|-------------|-----------------|-------------------|
| 1/2 Test Load | +72 | 0.69 | 0.11 | 84.0 | 30 |
| Design Load | +95 | 1.04 | 0.02 | 98 | 30 |
| 1/2 Test Load | -72 | 0.29 | 0.03 | 94.4 | 30 |
| Design Load | -95 | 0.41 | 0.01 | 98.4 | 30 |

OBSERVATION:

The test was performed in accordance with ASTM E 330-90. There was no visible structural damage at the conclusion of the test and the unit recovered better than the minimum of 80%.

WATER INFILTRATION TEST

| | |
|--------------------------------|-------|
| Test Pressure (psf) | +14.0 |
| Test Duration, One Cycle (min) | 15.0 |
| Water Leakage | None |

OBSERVATION:

The Water Infiltration Test was conducted in accordance with ASTM E-331-86. A uniform water spray was applied to the exterior surface of the door at a rate of 5.0 gal/ft²/hr for one cycle at a duration of 15 minutes. The sample was tested separately at +9.75 psf and +11.5 psf. There was no water leakage or structural damage to the door at the conclusion of each 15.0 minute cycle.

UNIFORM STATIC AIR PRESSURE TEST RESULTS

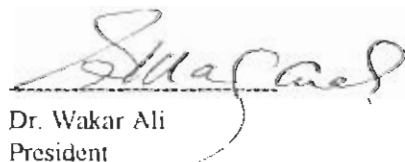
| | Load (psf) | Deflection (in) | Set (in) | Recovery (%) | Duration (sec) |
|-----------|---------------|--------------------|-------------|-----------------|-------------------|
| Test Load | +143 | 0.86 | 0.06 | 93 | 30 |
| Test Load | -143 | 0.65 | 0.01 | 98 | 30 |

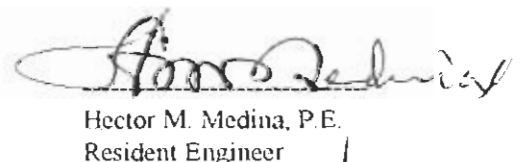
OBSERVATION:

The test was performed in accordance with ASTM E 330-90. There was no visible structural damage at the conclusion of the test.

CONCLUSION:

The sample was tested in compliance with Dade County protocol PA 202-94. There was no structural damage to the door at the conclusion of the test.


Dr. Wakar Ali
President


Hector M. Medina, P.E.
Resident Engineer

4/25/96

INSTALLATION DETAIL:

The aluminum frame (0.112" thick, 5-13/16"w) was anchored to the wood jamb on each side with five 1/4"x 4" Tapcons at 18" o.c.. The out-swinging door was reinforced with a rigid foam core. Three 4-1/2"x4-1/2" full template steel hinges (spaced at 32" o.c.) were used to attach the door to the frame. The hinges were bolted to the door and frame with four 12-24 F.H. machine screws. A cylindrical lever lock was installed at the midspan of the door and a bulb (*) threshold with a bumper was also installed.

WEATHERSTRIPPING / SEALANTS:

| Description | Quantity | Location |
|-----------------|----------|--|
| 1/2" Bulb vinyl | Single | Around the inside perimeter of the frame |

TEST RESULTS

The door was initially opened and closed five times with an operating force of 5 lbs.


AIR INFILTRATION TEST RESULTS

| | |
|--|---------|
| Test Pressure Differences (psf) | 1.57 |
| Air Flow Through Chamber (cfm) | 7.2 |
| Total Air Flow (cfm) | 7.4 |
| Specimen Air Leakage (cfm) | 0.2 |
| Operable Crack Length (ft) | 19.5 |
| Air Leakage Rate (ft ³ /min-ft) | 0.01026 |

OBSERVATION:

The Air Infiltration Test was conducted as per ASTM E-283-91. The equipment used to measure the flow rate was calibrated with equipment which meets NIST specification. The flow meter was temperature compensated and also meets MIL-STD-45662A. The flow rate was computed using standard air velocity corresponding to 70°F and 14.7 psia. The air leakage did not exceed the 6.63 cfm limit which pertains to 19.5 ft of operable crack length. (Allowable leakage— 0.34 cfm/ft. of operating crack length).

(*) This threshold consisted of a 1/2"x1/2" channel bar across the width of the door, which prevented the water leaking thru the bottom of the door from spilling over the sill.


4/25/96