

NATIONAL CERTIFIED TESTING LABORATORIES

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STRUCTURAL PERFORMANCE TEST REPORT

Report No: NCTL-210-2700-1
Test Date: 8/28/01
Report Date: 9/17/01

Client: Kinco, Ltd
5425 Old King Rd.
Jacksonville, FL 32205

Test Specimen: Kinco Ltd.'s "Series TW Picture" Fixed Prime Window
(F-LC90).

Test Method: AAMA/NWWDA 101/I.S. 2-97, "Voluntary Specifications for Aluminum,
Vinyl (PVC), and Wood Windows and Glass Doors."

TEST SPECIMEN DESCRIPTION

General: The test specimen was a fixed lite prime window measuring 73" wide by 61" high overall. The fixed lite was glazed to the frame members, providing a viewing area of 70" wide by 58" high. The frame was of double screw butt-type corner construction. Frame members were not thermally broken.

Glazing: The fixed lite was interior glazed using 0.375" thick annealed glass with a silicone back-bedding and an extruded aluminum glazing bead.

Weatherseals: No weatherseals employed.

Weeps: No apparent weeps employed.

Interior & Exterior Surface Finish: White painted aluminum.

Sealant: The frame corners were sealed with a silicone sealant

Danyel Perkins
12/11/01

TEST RESULTS

<u>Par. No.</u>	<u>Title Of Test</u>	<u>Measured</u>	<u>Allowed</u>
2.1.2	Air Infiltration - ASTM E283 1.57 psf (25 mph)	<0.01 cfm/ft ²	0.3 cfm/ft
2.1.3	Water Resistance - ASTM E547 & ASTM E331 5.0 gph/ft ² WTP = 4.5 psf	No Leakage	No Leakage
2.1.4.2 **	Uniform Load Structural - ASTM E330 75.0 psf Exterior 75.0 psf Interior	0.020" 0.015"	0.240" 0.240"
2.1.8	Forced Entry Resistance - ASTM F588 Level 10 - (See Appendix A for test results)	Meets as Stated	

OPTIONAL PERFORMANCE

4.3	Water Resistance - ASTM E547 & ASTM E331 5.0 gph/ft ² WTP = 12.0 psf	No Leakage	No Leakage
4.4.2 **	Uniform Load Structural - ASTM E330 135.0 psf Exterior 135.0 psf Interior	0.050" 0.040"	0.240" 0.240"

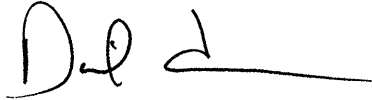
TEST COMPLETED 8/28/01

This test specimen meets (or exceeds) the performance levels specified in Table 2.1 of AAMA/NWWDA 101/I.S. 2-97 for air infiltration. The listed results were secured by using the designated test methods and indicate compliance with the performance requirements of the referenced specification paragraphs for the F-C 90 product designation.

*Barbara
12/11/01*

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. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen may be drawn from this test. This report does not constitute certification of the product which may only be granted by a certification program validator.

NATIONAL CERTIFIED TESTING LABORATORIES



DAN CONYERS
Laboratory Manager

Danny Parker
12/11/01

APPENDIX A
Forced Entry Resistance Test Results

Test Method: *ASTM F588-85 (94), "Standard Test Method for Resistance of Window Assemblies to Forced Entry, Excluding Glazing."*

TEST RESULTS

<u>Paragraph No.</u>	<u>Loads</u>	<u>Duration</u>	<u>Measured</u>	<u>Allowed</u>
7.0 - Hand Manipulation		5 Minutes	No Entry	No Entry
8.0 - Hand Manipulation		5 Minutes	No Entry	No Entry
9.4.1 - Test 19	150 lbf	2 Minutes	No Entry	No Entry
9.1.1.8				
7.0 - Hand Manipulation		5 Minutes	No Entry	No Entry
8.0 - Tool Manipulation		5 Minutes	No Entry	No Entry

Barbara
12/11/01

ASSOCIATED LABORATORIES, INC.

Consultants and Technologists / Quality Control Engineers / Consumer Certification Programs
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July 9, 2001

Kinco, Ltd.
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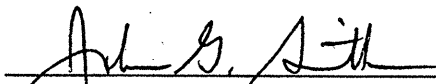
Attn: Jay Wyrick

Dear Jay:

Based on the structural and anchoring analysis done by Dr. Humayoun Farooq, P.E., testing of the monolithic glazed flange frame Series TW-IV fixed window will also qualify the fin frame TW-IV fixed window and the insulating glass flange and fin frame TW-I versions of the fixed window.

Sincerely,

ASSOCIATED LABORATORIES, INC.



John G. Smith, President

JGS:td

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