

QUALITY TESTING INC.

Report No. S92-184

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REPORT TO: Custom Designed Systems
18315 SE Portland Ave
Suite B
Gladstone, OR 97027

DATE OF TEST: 5/30/92

TEST METHOD: ASTM E 547-86, Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential.

ASTM E 331-86, Water Penetration of Exterior Windows, Curtain Walls, and Doors of Uniform Static Air Pressure Differential.

DESCRIPTION OF SAMPLE TESTED

MODEL/TYPE: 3100 Skywall.

CONFIGURATION: 00

FRAME SIZE: 72" wide by 80" high.

FRAME TYPE AND FINISH: Beige-painted aluminum.

CORNER CONSTRUCTION: Mitered, sealed, screw-connected. The mullion was fitted and screw-connected to the head and sill members.

GLAZING COMPONENTS:

OVERALL THICKNESS: 1"
GLASS THICKNESS: 5 mm tempered.
SPACER TYPE & SIZE: Two 5/16" steel with desiccant.
COATINGS USED: "Heat Mirror 66" film suspended between the spacers.

Thermal Performance Test Report (continued)

GLAZING SYSTEM:

Outside glazed system; glass set on blocks, bedded against pre-installed Santoprene gasket, retained on exterior side with an exterior aluminum cap with two pre-installed Santoprene gaskets. The interior glass-to-frame joint was sealed over the gasket with a structural silicone sealant. The exterior glass-to-frame joint was sealed with the same silicone prior to installation of the retaining cap.

WEEP SLOTS:

No water drainage system was provided in test sample.

ADDITIONAL DESCRIPTION: The sample was constructed as a two light unit with one vertical center mullion. All main frame members were part #3100 tube. The exterior cap which retained the glass was a two-piece unit; a press cap base which was screw-connected to the main tubes every 10" and a press cap top which was snap-fit to the exterior face of the press cap base. A 7/16" thick by 1 5/16" deep pressboard strip was installed around the entire perimeter of the test sample as a spacer for the even compression of the glass units. The wood members were sealed to the inside face of the exterior cap with a structural silicone sealant.

DESCRIPTION OF TESTS

A uniform water spray equal to an 8" per hour rainfall was applied to the exterior face of the unit and was maintained for the entire duration of the testing. A static air pressure differential of +6.24 psf was applied and maintained for 5 minutes. The pressure was then released for 1 minute. This cycle was repeated for a total of 4 cycles (ASTM E 547). The static air pressure of +6.24 psf was also applied for 1 cycle of 15 minutes (ASTM E 331).

The above tests were repeated using a positive static air pressure of +10.0 psf.

RESULTS OF TEST

No water penetration of any kind was noted during the above tests.

CONCLUSIONS

The sample exceeds the general industry standard for curtain wall systems of no water penetration at +6.24 psf.

Detailed assembly drawings of all members, corner construction and hardware application have been compared to the sample submitted and are on file at the laboratory.

The results were secured by using the designated test methods and they indicate compliance with the performance requirements of the referenced specification. This report does not constitute certification of this product.

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