

## Condensed Report of Product Evaluation

### Conducted on Eclipse E2 1L3R Door System

Report prepared by Intertek Testing Services NA LTD. Warnock Hersey, Coquitlam, BC, Canada

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#### INTRODUCTION

Testing was conducted in general accordance with CAN/CGSB 82.1-M89 "Sliding Doors", CSA A440-98 "Windows", and in general accordance with AAMA/NWWDA 101/I.S.2-97, "Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors". Neither of the aforementioned standards makes reference to folding door systems. However, the system was evaluated, where applicable, as a Sliding Door for CAN/CGSB 82.1-M89, CSA A440-98 as a Hinged Glass Door for AAMA/NWWDA 101/I.S.2-97.

#### DESCRIPTION

**Designation:** Eclipse E2™ "1L3R"

**Type (general):** Double-glazed 4mm tempered four panel folding door. Each door 36" x 96"

**Frame:** The frame was made of solid, clear, tight-grained Douglas fir lumber. The exterior portion of the sill was made of extruded aluminum.

**Doors:** The door slabs were made of solid, clear, tight-grained Douglas fir lumber. The stiles and rails were joined using mortise and tennon joint and glued.

#### TEST RESULTS

##### 1. Air Tightness Test

Test	Pressure differential Pa/psf	Crack length m / ft	Area m <sup>2</sup> / ft <sup>2</sup>	Result m <sup>3</sup> / hr*m / cfm / ft <sup>2</sup>	Maximum allowable CSA A440-98 / CGSB 82.1-M89/ AAMA 101 m <sup>3</sup> /hr*m / cfm / ft	Pass / Fail
Infiltration	75 / 1.57	19.506 / 64.00	9.442 / 101.64	0.04 / 0.005	0.55 / 1.00 / 0.3	A3 / A3 / Pass
Exfiltration	5 / 1.57	19.506 / 64.00	9.442 / 101.64	0.05 / 0.006	0.55 / 1.00 / 0.3	A3 / A3 / Pass

##### 2. Water Tightness Test

A calibrated water spray assembly was used to deliver the water on the test sample. The test was performed using a pressure differential of 300 Pa (6.24 psf) and a water spray rate of at least 204 L/m<sup>2</sup> per hour (5.0 US gal/ft<sup>2</sup> · h). The period consisted of four cycles of five minutes with the pressure applied and one minute with the pressure released. During the 24-minute test period, no water leakage was observed. The test sample met a level B-3 rating as per CSA A440-98 and CAN/CGSB 82.1-M89.

### 3. Wind Load Resistance

A test was conducted using a test pressure of 750 Pa (15.6 psf). The maximum deflection recorded from positive and negative pressure tests on the stile of a door was 11.518 mm (0.453"); the maximum allowable was 13.43 mm (0.529") (based L/175). As per section 2.1.4.1 and 2.1.4.2 of AAMA/NWWDA 101/I.S. 2-97 allowable deflection of any framing member is L/175 and HC class products shall have no permanent deformation in excess of 0.4% of the span. The maximum residual deflection of the door stile was 0.00 mm (0.000"); the maximum allowable was 9.398 mm (0.370"). The test sample was subjected to a Structural Test Pressure using positive and negative pressures of 2000 Pa (41.6 psf). There was no breakage or permanent deformation, which would impair the operation of the doors. The sample met a **C-2** Wind Load Resistance rating as per CSA A440-98 and CAN/CGSB 82.1-M89.

### 4. Water Tightness Test

An additional water test was performed. The height of the sill was increased 1-1/8" (28.6 mm). During the 24-minute test period, no water leakage was observed. The test sample met a level **B-4** rating as per CSA A440-98 and CAN/CGSB 82.1-M89.

## CONCLUSION

The Eclipse E2™ 1L3R Folding Door system described herein met the performance criteria as per **CAN/CGSB 82.1-M89** and **CSA A440-98** for Air Tightness (**A-3**), Water Tightness by Static Pressure (**B-3**) with standard sill, Water Tightness by Static Pressure (**B-4**) with modified sill riser, and Structural Performance (**C-2**). The system received an equivalent **AAMA/NWWDA 101/I.S.2-97** performance criteria **146" x 100" HGD-LC25** rating. For configurations with additional panels of the same height, Air Tightness and Water Tightness ratings are applicable.

These results evaluate a product based on area. Construction details must be the same as the tested sample. Site water testing of the product may be desired in cases where detailing has been altered.

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#### Head Office & Manufacturing Centre - Vancouver, Canada

7470 Buller Avenue, Burnaby, B.C. V5J 4S5 Canada

Ph: (604) 451-1080 • Fax: (604) 451-1140 • info@theDSgroup.com • Outside Vancouver, BC, please use our toll free numbers: Ph: 1-888-520-9009 Fax: 1-800-567-2887

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