

**Title: On-site watertightness testing at
Sawmills Road, DISS, Norfolk,
IP22 4RG**

Certificate of Test Number: 24737

Customer's Name & Address:

Glazing Vision Ltd
Sawmills Road
Diss
Norfolk
IP22 4RG

Our Ref: N950/TR0066

VTC Job No: 3UA8

Your Ref: Rooflight, Norfolk

Date: 15th August 2016

Date sample(s) received: N/A

Sample(s) received from: N/A

Sample No(s): S5976

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N. McDonald (position: Principal Engineer)

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1. INTRODUCTION

This certificate of test describes on site watertightness tests carried out at the request of Glazing Vision on 6th July 2016 at Sawmills Road, DISS, Norfolk, IP22 4RG

The test was carried out in accordance with the CWCT Standard Test Methods for Building Envelopes 2005, 9 - Hose Test and with BS EN 13051: 2001 Curtain Walling – watertightness – site test.

2. TEST PROCEDURE – CWCT HOSE TEST

Working from the exterior, the wall test section was selectively wetted progressing from the lowest horizontal joint, then the intersecting vertical joints, then the next horizontal joint above, etc. The water was applied using a brass nozzle that produced a solid cone of water droplets with a nominal spread of 30°. The nozzle was used with a 19 mm hose and provided with a control valve and a pressure gauge between the valve and nozzle. The water flow to the nozzle was adjusted to produce 22 ±2 litres per minute when the water pressure at the nozzle inlet was 220 ±20 kPa.

With the water directed at the joint and perpendicular to the face of the wall, the nozzle was moved slowly, (approximately 30 seconds to cover 1.5 m), back and forth above the joint at a distance of 0.3 m from it, for a period of five minutes for 1.5 m of joint. Shorter or slightly longer joint lengths were tested pro rata. An observer on the indoor side of the wall, using a torch if necessary, checked for any leakage and noted where it occurred.

If no leakage occurred during the five minute test, the next 1.5 m of joint was wetted for five minutes and testing continued until the entire test area was covered.

After completion of the test, inspection for water leakage continued for 30 minutes.

3. TEST PROCEDURE – BS EN 13051 SPRAY BAR

3.1 Water spray test method

The spray bar with nozzles at 400 mm centres was set up so that the nozzles were 250 mm from the outside face of the curtain walling and level with the top of the area to be tested. The axes of the water sprays were perpendicular to the face of the curtain walling.

The order in which different areas were tested progressed from ground level towards the top of the building.

The water supply was turned on and adjusted to provide a constant flow for 30 minutes equivalent to 5 litres per minute per metre length of spray bar, within an accuracy of ±10%.

The inside face of the curtain walling/window was inspected and the position and time since spraying began noted of any water leakage.

After completion of the test, inspection for water leakage continued for 30 minutes.

3.2 Water leakage path identification

If any water leakage was observed the procedure below was followed:

- a) If the source of water leakage could be positively identified at the time it occurred then the framing members near the source were dried and the joint taped over to prevent further water ingress. Testing then continued as described above.
- b) If the source of water leakage could not be positively identified then the water supply was turned off after 15 minutes.
The spray bar was repositioned level with the transom at or immediately below that from which water leakage was observed and re-tested as described above. If the water leakage did not re-occur the spray bar was repositioned at the next highest transom and again re-tested. This process was repeated until the water leakage re-occurred.

When water leakage occurred, the spraying was stopped and all the joints that were only exposed for the last re-test were dried and sealed with tape to prevent water ingress. The spraying was re-started and lengths of tape progressively removed at 15 minute intervals until the observed water leakage re-occurred. When this process identified a point of water ingress, the last length of joint to be exposed was re-sealed and the testing continued.

4. TEST AREAS AND RESULTS

Test date: 6th July 2016

4.1 Sample 1 - Free Standing Roof Light Box

Hose Test:

Area: Rear Mastic Joints and Base of Unit.

Observations: No water penetration observed throughout the test.

Test result: Pass

Spray Bar:

Area: Front and Roof of Unit

Observations: No water penetration observed throughout the test.

Test result: Pass

4.2 Sample 2 – Three Wall Fitting System

Spray Bar Test:

Area: Front & Roof of Unit.

Observations: No water penetration observed throughout the test.

Test result: Pass