



# Test Report



Report No	2370/7534095	This Report consists of 9 pages
Licence/Certificate No	KM 542954	
Client	Windowbuild 55/56 Lewis Road Cardiff CF24 5EB DE56 2JJ	
Authority & date	Service Management Order No 7534095 Dated 12 May 2010 - Equipment Record No 10116757	
Items tested	2 off PVC-U windows, Profile 22 Internally Glazed Tilt/Turn Window System	
Specification	BS 7950:1997 Specification for enhanced security performance of windows for domestic applications incorporating Amendments 14289 and 15666 type testing for product certification	
Results	Pass	
Prepared by	D Kirsop 	(Technician)
Authorized by	M Manito 	(Senior Engineer)
Issue Date	24 June 2010	
Conditions of issue	This Test Report is issued subject to the conditions stated in current issue of CPO322 'General conditions relating to acceptance of testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the Managing Director, BSI, who reserves the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought.	



## **TEST AND EXAMINATION OF TWO PVC-U WINDOWS SUBMITTED FOR TYPE ASSESSMENT, PROFILE 22 INTERNALLY GLAZED TILT/TURN WINDOW SYSTEM**

### **INTRODUCTION**

At the request of BSI the PVC-U window submitted by Windowbuild, detailed below and described on page 4, was tested and assessed to the requirements of BS 7950:1997 Specification for enhanced security performance of windows for domestic applications incorporating Amendments 14289 and 15666, as indicated on the following pages of this Report. This request was made on Service Management Order No 7534095 dated 12 May 2010.

It is emphasized that assessments have not been made against the other Clauses of the Specification.

### **TEST SAMPLES**

2 off tilt/turn windows

(Equipment Record No 10116757)

Date samples received: 27 May 2010

### **SUMMARY OF RESULTS**

- |    |                    |   |
|----|--------------------|---|
| 1. | Manipulation       | The test samples met the requirements of the Specification in respect of Clause 7 Annex A.6 |
| 2. | Glazing removal    | The test samples met the requirements of the Specification in respect of Clause 7 Annex A.6 |
| 3. | Mechanical loading | The test samples met the requirements of the Specification in respect of Clause 7 Annex A.6 |
| 4. | Manual check test  | The test samples met the requirements of the Specification in respect of Clause 7 Annex A.6 |

#### **CLAUSE 4 SAMPLE SELECTION**

The sample submitted for tests was selected by the Client on behalf of BSI.

#### **CLAUSE 5.2 ASSESSMENT**

The assessment of the test sample followed the sequence detailed in Figure 1 of the Specification.

#### **CLAUSE 6 TEST APPARATUS AND SAMPLE MOUNTING**

The test apparatus used for the manual and mechanical tests is shown in Appendix A of this Report. This apparatus meets the requirements of the Specification.

The test sample was submitted for test mounted in a 50 x 100mm timber subframe in accordance with the manufacturer's installation requirements.

**DESCRIPTION OF SAMPLE**

<b>Sample type -</b>	Tilt/turn
<b>Material -</b>	PVC-U
<b>Construction -</b>	Mitred, welded and grooved
<b>Fittings -</b>	Locking: SI Aubi tilt/turn key locking gearing with five run up blocks and one anti lift block.
<b>Glass -</b>	Double glazed, 4-16-4mm toughened glass sealed unit
<b>Glazing system -</b>	Internal beads and gaskets
<b>Sample dimensions -</b>	For information only (nominal sizes)  Overall size Length: 1000mm    Height: 1340mm  Sash size Length: 920mm    Height: 1260mm

**EXAMINATION AND TEST**

Sample type - Tilt/turn

Date of test – 10 June 2010

Laboratory temperature – 19.9°C

**CLAUSE 7 PERFORMANCE REQUIREMENTS****Annex A.4 Manipulation test**

The sample was mounted vertically in the test rig as described in Annex A.2. The test was carried out in accordance with the given objective of this Annex using the implements described in Annex A.3.

The key for the lockable hardware was fully removable.  
No entry could be effected within 3 minutes.

Pass

**Annex A.5 Glazing removal test****Annex A.5.1 Manual test**

The sample was mounted vertically in the test rig as described in Annex A.2. The sample was assessed using a selection of tools as described in Annex A.3.

No entry could be effected within 3 minutes

Pass

**Annex A.5.2 Mechanical test**

The sample was mounted vertically in the test rig as described in Annex A.2. A perpendicular to plane load of 2.0kN was applied to each corner of the glazing in turn as specified in Annex A.5.2.

No evidence of bead failure  
No entry could be effected

Pass

## EXAMINATION AND TEST (CONTINUED)

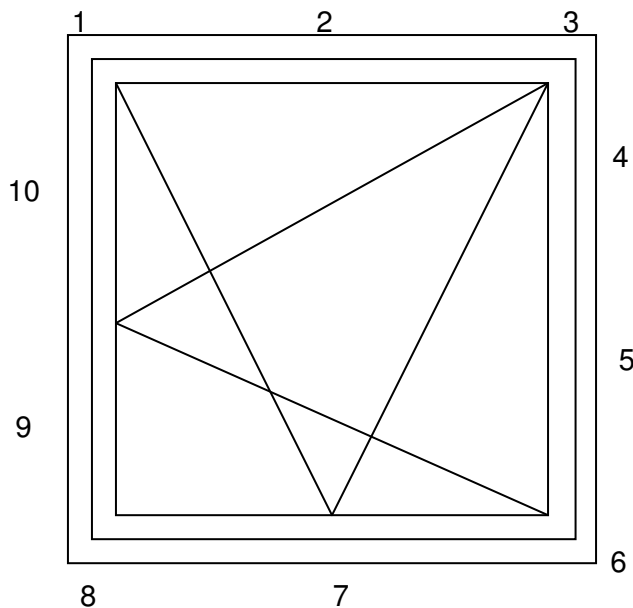
### CLAUSE 7 PERFORMANCE REQUIREMENTS

#### Annex A.6 Mechanical loading test

The sample was mounted vertically in the test rig as described in Annex A.2.

The test was carried out in accordance with the procedures detailed in Annex A.6 and Figure 1 using the test apparatus detailed in Appendix A of this test report.

Diagram of points of application of loads



#### Annex A.6.2 Loading procedure

#### ASSESSMENT

Point of application of load

##### First sequence

1 - Corner/Mushroom bolt (left head)

Standard loading case used: 3/4

Load applied in plane: 1.0kN along edge in direction to disengage bolt

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN at right angles to edge and towards opposite edge

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

2 - Roller cam (centre head)

Standard loading case used: 4

Load applied in plane: 1.0kN along edge in direction to disengage cam

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN at right angles to edge and towards opposite edge

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

**EXAMINATION AND TEST (CONTINUED)****Annex A.6.2 Loading procedure (continued)****ASSESSMENT**

Point of application of load

3 - Corner/Mushroom bolt/Mushroom bolt (right head)

Standard loading case used: 3/4

Load applied in plane: 1.0kN along edge in direction to disengage bolt

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN along edge in direction to disengage bolt

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN at right angles to edge and towards opposite edge

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

4 - Mushroom bolt (right jamb)

Standard loading case used: 4

Load applied in plane: 1.0kN along edge in direction to disengage bolt

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN at right angles to edge and towards opposite edge

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

5 - Mushroom bolt (right jamb)

Standard loading case used: 4

Load applied in plane: 1.0kN along edge in direction to disengage bolt

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN at right angles to edge and towards opposite edge

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

6 - Corner (right sill)

Standard loading case used: 3

Load applied in plane: 1.0kN in direction to disengage nearest locking point

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN at right angles to edge and towards opposite edge

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

7 - Mushroom bolt (centre sill)

Standard loading case used: 4

Load applied in plane: 1.0kN along edge in direction to disengage cam

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN at right angles to edge and towards opposite edge

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

**EXAMINATION AND TEST (CONTINUED)****Annex A.6.2 Loading procedure (continued)****ASSESSMENT**

Point of application of load

## 8 - Corner (left sill)

Standard loading case used: 3

Load applied in plane: 1.0kN in direction to disengage nearest locking point

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN at right angles to edge and towards opposite edge

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

## 9 - Mushroom bolt (lower left jamb)

Standard loading case used: 4

Load applied in plane: 1.0kN along edge in direction to disengage bolt

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN at right angles to edge and towards opposite edge

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

## 10 - Roller cam/Mushroom bolt (upper left jamb)

Standard loading case used: 4

Load applied in plane: 1.0kN along edge in direction to disengage bolts

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN at right angles to edge and towards opposite edge

Load applied perpendicular to plane: 3.0kN applied for 10 seconds

No entry effected

Pass

**Annex A.7 Manual check test**

The sample was mounted vertically in the test rig as described in Annex A.2.

The test was carried out using the tools described in Annex A.7.2 in

Accordance with the procedures detailed in Annex A.7.3

No alternative method of entry could be effected

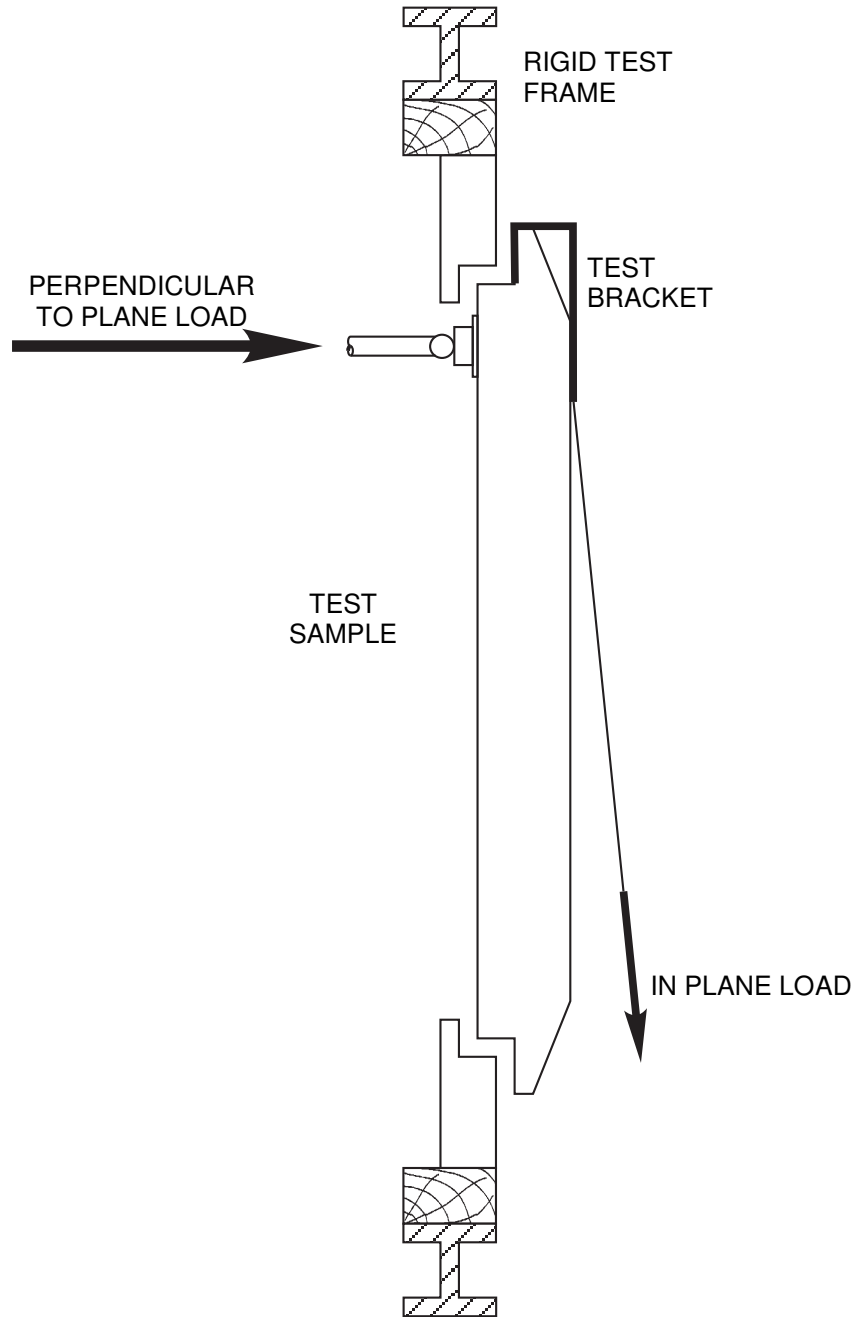
Pass

**Annex A.8 Additional mechanical loading test**

Not applicable as an alternative method of entry was not identified under Annex A.7



**APENDIX A**



**END OF REPORT**