

Report No: 179389

Test of:
Single Top Hung Casement
Window

Tested to:

PAS 7950:1997 Enhanced security
Performance Requirements of
Windows for domestics
Applications- incorporating
amendments N°1,2,3

For:
AM Profiles Limited
Hardwick view road
Holmewood Industrial Estate
Holmewood
Chesterfield
Derbyshire
S42 5SA

TEST OF DOOR ASSEMBLIES
 TESTED TO PAS 7950:1997 INCORPORATING AMENDMENTS N°1,2,3

TEST CONCLUSIONS

Samples of:

Manufacturer AM Profiles Limited
 Product Single Top Hung Casement Window
 Model Design 5

have been tested in accordance with: PAS 7950:1997 INCORPORATING AMENDMENTS N°1,2,3
 By Bodycote Warrington apt [A UKAS accredited Testing Laboratory (No. 0621) and EC Notified
 Body number 1104]

At Key Industrial Park, Fernside Rd., Willenhall. West Midlands. WV13 3YA.

Results and comments as detailed below:

Clause No.	Description	Compliance
7	Performance requirements	Yes
A.4	Manipulation test	Yes
A.5	Glazing removal test	Yes
A.6	Mechanical loading test	Yes
A.7	Manual Check Test	Yes
A.8	Additional mechanical loading test	N/a

Tests marked " NA" are not applicable to the type of device under test.

Tests marked "NT" cannot be applied to the type of device under test

TEST OF DOOR ASSEMBLIES
TESTED TO PAS 7950:1997 INCORPORATING AMENDMENTS N°1,2,3

AUTHORISATION

Tests performed by: Mark Garfield, Laboratory Technician

Report issued by: Mark Garfield, Laboratory Technician

Signed 

Date 15 January 2009

Report authorised by: Ian Keeling, Laboratory Manager

Signed 

Date 15 January 2009

Report issued: 15 January 2009



0621

NOTE.

These tests are covered by the Laboratory UKAS accreditation schedule.

Tests marked NT were not tested

Tests marked NA are not applicable to the product on test.

The laboratory has tested the product supplied by the client as sampled in accordance with their own requirements

Bodycote Warringtonapt is an EC Notified Body Number 1104

This report shall not be reproduced except in full, (and then only as permitted by copyright laws), without written approval from Bodycote warringtonapt

CONTENTS

TEST CONCLUSIONS	2
AUTHORISATION	3
TEST DETAILS	5
INITIAL OBSERVATIONS	6
TEST SPECIMEN DRAWINGS	7
SCHEDULE OF COMPONENTS	10
PERFORMANCE CRITEREA AND RESULTS	13
LIMITATIONS	16
OBSERVATIONS AND COMMENTS	17

TEST OF DOOR ASSEMBLIES
TESTED TO PAS 7950:1997 INCORPORATING AMENDMENTS N°1,2,3

TEST DETAILS

<u>CLIENT DETAILS</u>		
Company name	AM Profiles Limited	
Address	Hardwick view road Holmewood Industrial Estate Holmewood Chesterfield Derbyshire	
Post code	S42 5SA	
Contact	Norman Berrill	
<u>ORDER DETAILS</u>		
Order number	Pro forma PF-1671	
Dated	15/12/08	
<u>SAMPLE DETAILS</u>		
Product	Single Top Hung Casement Window	
Model	Design 5	
Manufacturer	AM Profiles Limited	
Sample Dimensions	1315mm x 1200mm	
Material	Aluminium/timber	
Details of Hardware fitted		
Hinges	PN3937 Top Hung Hinges	
Handles	Maxim 3 Locking Handle	
Lock	Roto TSL 4 Point Locking Espagnolette	
Seals	Linear	
Markings	None	
Date of Manufacture	December 2008	
Other information	None	
<u>TEST DETAILS</u>		
Test specification	PAS 7950:1997 INCORPORATING AMENDMENTS N°1,2,3	
Date sample received	10/12/08	
Date test started	16/12/08	
Date test completed	17/12/08	
Laboratory Storage and Testing conditions	Maximum Temperature 30 °C, Minimum Temperature 10 °C, Maximum Humidity 75 %RH, Minimum Humidity 25%RH	
Special Test requirements	None	
Other reports to be used in conjunction with this report	None	

INITIAL OBSERVATIONS

Test Photographs

The internal face
of the sample

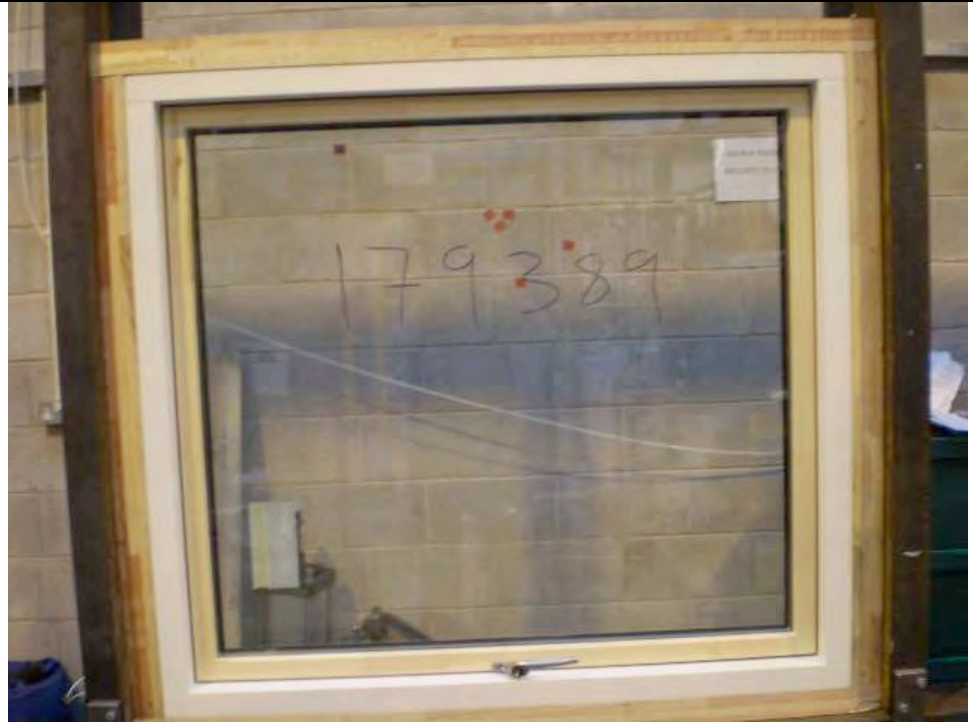
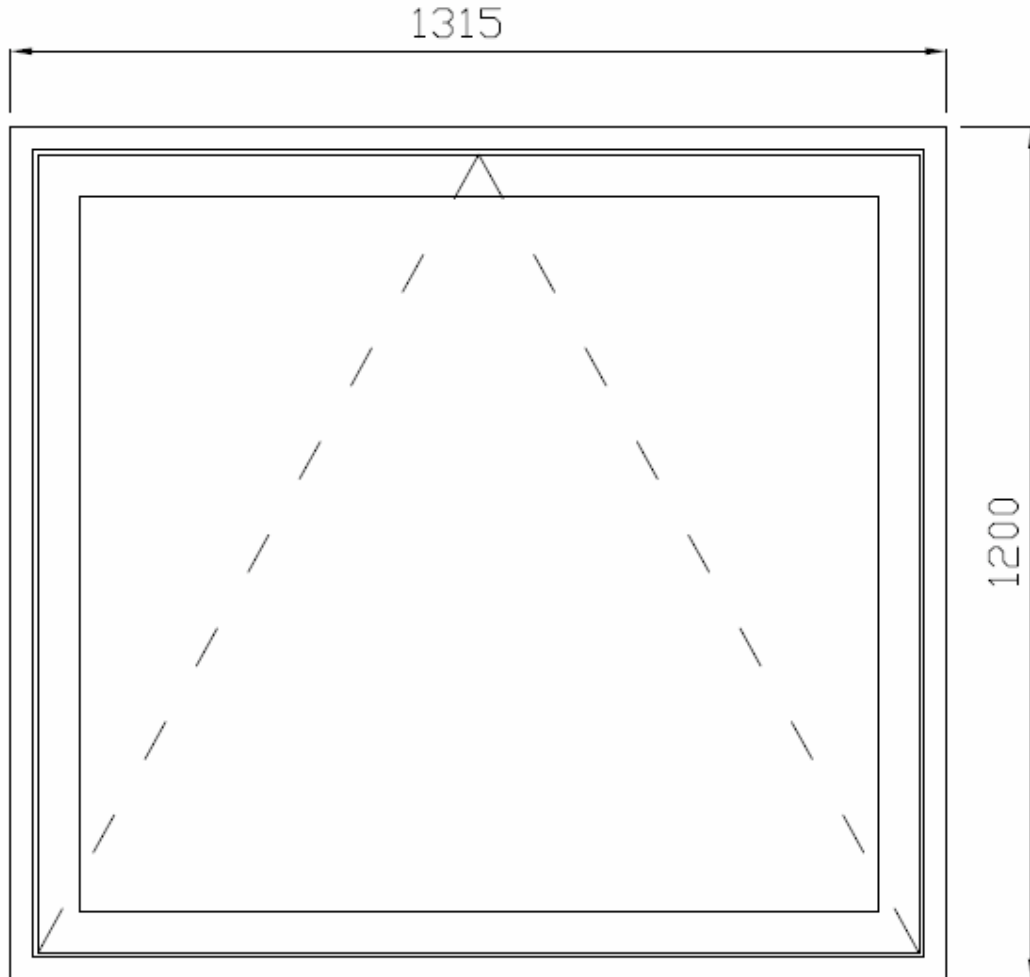


Figure 1- General Elevation of Test Specimen

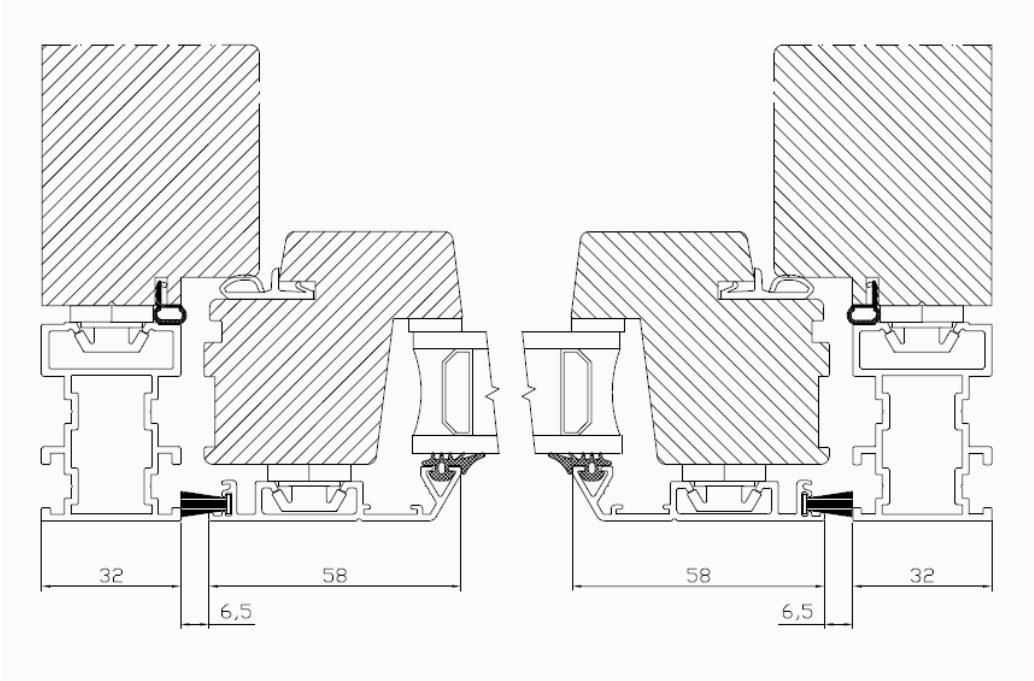


Do not scale. All dimensions are in mm

TEST OF DOOR ASSEMBLIES

TESTED TO PAS 7950:1997 INCORPORATING AMENDMENTS N°1,2,3

Figure 2 – Horizontal section

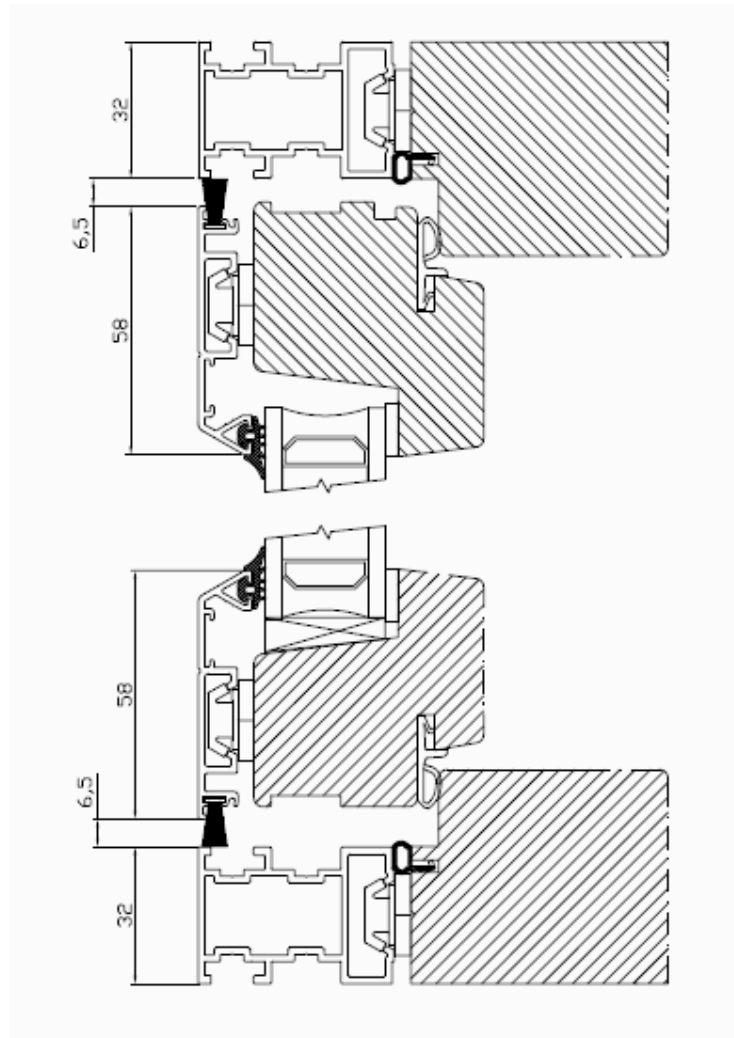


Do not scale. All dimensions are in mm

TEST OF DOOR ASSEMBLIES

TESTED TO PAS 7950:1997 INCORPORATING AMENDMENTS N°1,2,3

Figure 3 – Vertical section



Do not scale. All dimensions are in mm

Schedule of Components

(Refer to Figures 1 to)
(All values are nominal unless stated otherwise)
(All other details are as stated by the sponsor)

<u>Item</u>	<u>Description</u>
1. Frame	
Material	: Aluminium outer frame, Outer frame timber.
Overall size	: 1315mm x 1200mm
jointing method	: Timber: Finger Jointed with staples Aluminium: Crimped and silicone sealed with a 2 part adhesive.
Fixing method	:
Fixings	
i. manufacturer	: Am Profiles
ii. type	: Adhesive and staples
iii. material	: Staples: st/st
iv. size	: 10mm x 20mm
v. quantity	: 3 per corner
Adhesive	
i. manufacturer	: Timber: Rakoil – GX44 Pvac with Ex water repellent. Aluminium: Plexius MA310
2. Weather Seal	
Manufacturer	: Linear
Reference	: Weather fin in sash: 4.8 x 11.5 Fin pile
Material	: 4.8 x 11.5 Fin Pile
Fixing method	: Slotted into place then unit is crimped
3. Glass	
Manufacturer	: Solaglass
Thickness	: 6-16-6 Tuf / Tuf
Overall sizes	: 1030 x 1144mm
Nominal edge clearance	: 8mm
Setting blocks (base of glass)	
i. material	: Nylon Tapered wedge
ii. thickness	: 8 x 24mm tapered
4. Glazing Edge Seal / Lining	
Manufacturer	: Pal Glazing & UK Industrial Tape H+ Security Tapes
Reference	: RA3/5064-IE
Material	: Rubber
Overall size	: 15mm & 4 x 15mm foam link
Fixing method	: Captive Gasket & Self Adhesive

<u>Item</u>	<u>Description</u>
5. Glazing Beads	
Material	: Sash Aluminium exterior face
Fixing method	: Clipped in place
Fixings	
i. type	: Nylon Caps
ii. size	: 19 ^{dia}
iv. fixing centres	: 250mm Max centers
6. Hinges	
Manufacturer	: Group Co supplied, PN Manufactured
Reference	: PN top hung hinges
Type	: PN3927
Quantity	: 2
Fixings hinge to window	
i. type	: No. 8 x 18
ii. material	: Stainless Steel self tapper
Fixings hinge to frame	
i. type	: No.4 x 30
ii. material	: Stainless steal wood screws

Item

Description

7. Fastener

Manufacturer : Roto
Description : TSL 4 point locking Espag
i. type : No.4 x 30mm
ii. material : ST/ST

8. Window handles

Manufacturer : LSH Laird Security Hardware
Reference : Maxim 3 locking handle
Overall size : 140mm approx
Fixings : M5 x 50mm

12. Top Hung Casement

Overall Size : 1123 x 1238mm
Material : Aluminium Timber composite
Top rail section size : 66.6 x 59.5mm
Jamb section size: : 66.6 x 59.5mm
Bottom rail section size : 66.6 x 59.5mm
Glazing rebate : 33.6
Corner fixing method : Finger jointed, glued & stapled

Performance Criteria and Test Results		
Clause	Result	Pass/Fail
A.4 Manipulation test	<p>This test was carried out on sample 1.</p> <p>Attempts were made to force open the mushroom bolts using the paint scrapers and blows by hand for 40s and no vulnerability was identified</p> <p>Attempts were then made to cut out the bottom keeper using a craft knife for 36s but as the cladding was aluminium no vulnerabnility was identified.</p> <p>No entry was gained.</p>	Pass



TEST OF DOOR ASSEMBLIES

TESTED TO PAS 7950:1997 INCORPORATING AMENDMENTS N°1,2,3

Performance Criteria and Test Results Continued

Clause	Result	Pass/Fail
A.5.1 Manual test	<p>This test was carried out on sample 1.</p> <p>The bottom beading and one side beading were removed in a total of 1 min 46s using the 25mm and 6mm chisel the window was then tried to be levered out but didn't move, so attempts were made to try and split the wood keeping the window in.</p> <p>Entry was not gained in the 3 minute test time.</p>	Pass
A.5.2 Mechanical test	<p>This test was carried out on sample 2.</p> <p>2.0kN loads were applied to the 4 corners of the glazing,no damage occurred.</p> <p>No entry was gained.</p>	Pass

**Damage after
A.5 Glazing
Removal Test**



TEST OF DOOR ASSEMBLIES

TESTED TO PAS 7950:1997 INCORPORATING AMENDMENTS N°1,2,3

Performance Criteria and Test Results Continued

Clause	Result	Pass/fail
<p>A.6 Mechanical loading test</p>	<p>This test is carried out on sample 2</p> <p>Mechanical loads were applied to window as follows.</p> <ul style="list-style-type: none"> 1 Top right hinge 1KN Parallel, 3KN Perpendicular 2 Bottom right locking point 1KN Parallel along the edge, 3KN Perpendicular 2 Bottom right locking point 1KN Parallel along the edge, 3KN Perpendicular 2 Bottom right locking point 1KN Parallel 90° to edge, 3KN Perpendicular 3 Centre right locking point 1KN Parallel along the edge, 3KN Perpendicular 3 Centre right locking point 1KN Parallel along the edge, 3KN Perpendicular 3 Centre right locking point 1KN Parallel 90° to edge, 3KN Perpendicular 4 Centre left locking point 1KN Parallel along the edge, 3KN Perpendicular 4 Centre left locking point 1KN Parallel along the edge, 3KN Perpendicular 4 Centre left locking point 1KN Parallel 90° to edge, 3KN Perpendicular 5 Bottom left locking point 1KN Parallel along the edge, 3KN Perpendicular 5 Bottom left locking point 1KN Parallel along the edge, 3KN Perpendicular 5 Bottom left locking point 1KN Parallel 90° to edge, 3KN Perpendicular 6 Top left hinge 1KN Parallel, 3KN Perpendicular 7 Left dog bolt 1KN Parallel 90° to edge, 3KN Perpendicular 7 Left dog bolt 1KN Parallel along the edge, 3KN Perpendicular 8 Centre dog bolt 1KN Parallel 90° to edge, 3KN Perpendicular 8 Centre dog bolt 1KN Parallel along the edge, 3KN Perpendicular 9 Right dog bolt 1KN Parallel 90° to edge, 3KN Perpendicular 9 Right dog bolt 1KN Parallel along the edge, 3KN Perpendicular <p>The sample completed a full round of loading with no failures.</p> <p>No entry was achieved.</p>	<p>Pass</p>

TEST OF DOOR ASSEMBLIES

TESTED TO PAS 7950:1997 INCORPORATING AMENDMENTS N°1,2,3

Performance Criteria and Test Results Continued		
Clause	Result	Pass/Fail
A.7 Manual check test	<p>This test was carried out on sample 1</p> <p>Attacks were made with 2 nail bars between the locking points to lever the window out for 47s.</p> <p>Attacks were made with 1 nail bar and 1 screwdriver between the locking point and hinge to lever window out for 1min 1s.</p> <p>Attacks were made with 1 nail bar and 1 screwdriver between the dog bolts to lever window out for 1min 15s.</p> <p>Entry was not achieved and no vulnerabilities were identified.</p>	Pass
A.8 Additional mechanical loading test	<p>This test was not required as no vulnerabilities were identified in the manual check test.</p>	Pass

Limitations	
Limitations	<p>The results relate only to the behaviour of the specimens of the element of construction under the particular conditions of test. They are not intended to be the sole criteria for assessing the potential performance of the element in use, nor do they reflect the actual behaviour in use.</p>
Range of windows covered by this report	<p>The range of windows covered by this report are limited to the following</p> <ul style="list-style-type: none"> ▪ Assemblies with identical hardware fitted no further apart then in the tested assembly ▪ Assemblies of the same or smaller overall dimensions to the tested assembly
Uncertainty of Measurement	<p>The uncertainties of measurements calculated for a confidence level of 95% throughout these tests are within the limits of these tolerances.</p> <p>The standard specifies the following tolerances</p> <ul style="list-style-type: none"> ▪ Forces $\pm 5\%$ ▪ Distance $\pm 1\text{mm}$ for tape measures $\pm 0.1\text{mm}$ for dial gauges

Observations and Comments

The window supplied for testing complied with all the relevant testing requirements of BS7950:1997.

-End of Report-