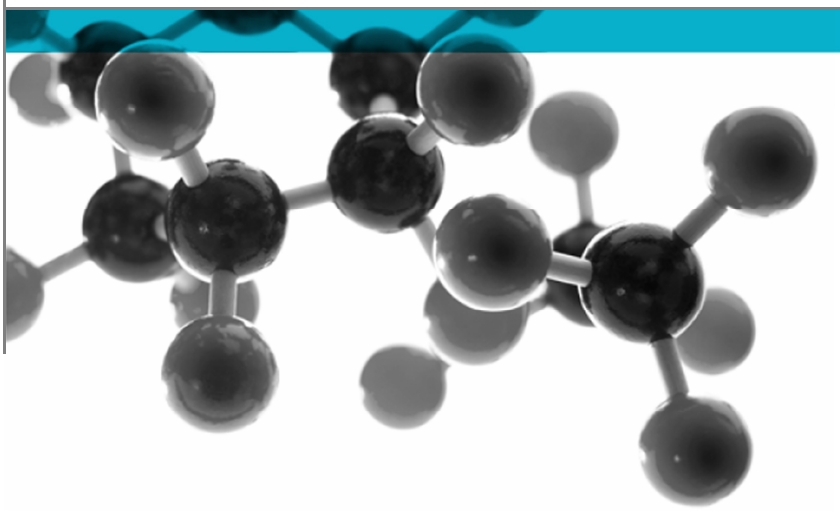
Exova Warringtonfire
Key Industrial Park
Fernside Road
Willenhall
West Midlands
WV13 3YA

T : +44 (0) 1902 722 122
F : +44 (0) 1902 727 242
E : willenhall@exova.com
W: www.exova.com

BS EN 14351-1:2006



Test of: **Push vent lock**
Locking vent lock
Uni stop
Side fix angel
Retro fit angel
Clip-in angel

Date: 21/03/2013

Copy: 1

Issue No.: 2

Windows and doors – Product standard, performance characteristics

A Report To: Mighton Products Ltd

Document Reference: WIL 327110

Testing
Advising
Assuring

UKAS TESTING
0621

TEST CONCLUSIONS

Samples of:

Manufacturer	Mighton Products Ltd
Product	Vertical slider in wood and PVC-u
Models	Push vent lock
	Locking vent lock
	Uni stop
	Side fix angel
	Retro fit angel
	Clip-in angel

have been tested in accordance with: BS EN 14351-1:2006
By Exova Warringtonfire Willenhall, a UKAS accredited Testing Laboratory (No. 0621) and EC Notified Body number (No. 1104)

At Key Industrial Park, Fernside Rd, Willenhall, West Midlands, WV13 3YA.
Results and comments as detailed below:

Clause No.	Description	Compliance
4.8	Load bearing capacity of safety devices – 350N	Yes

No inferences can be made regarding performance against other requirements of this standard

Tests marked " N/A" are not applicable to the sample under test.
Tests marked "N/T" were not applied to the sample under test

AUTHORISATION

Tests performed by: Chris Bryan, Laboratory Technician

Report issued by: Chris Bryan, Laboratory Technician

Signed

Date 21st March 2013

For and on behalf of Exova Warringtonfire

Report authorised by: Mark West, Assistant Operations Manager

Signed 

Date 21st March 2013

For and on behalf of Exova Warringtonfire

Report issued: 21 March 2013

UKAS TESTING
0621

NOTE.
Tests marked "Not UKAS Accredited" are not 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

Exova Warringtonfire is an EC Notified Body Number 1104

CONTENTS **PAGE NO.**

TEST DETAILS

CLIENT DETAILS

Company name	Mighton Products Ltd
Address	PO Box 1 Saffron Walden Essex
Postcode	CB10 1QJ
Contact	Rob Heron

ORDER DETAILS

Order number	2759
Dated	18/02/2013

SAMPLE DETAILS

Product	Vertical slider windows (Wood and PVC-u)	
Models	Push vent lock Locking vent lock Uni stop Side fix angel Retro fit angel Clip-in angel	
Manufacturer	Mighton Products Ltd	
Frame Dimensions	890 x 990 mm (Timber)	556 x 970mm (PVC-u)
Sash Dimensions	770 x 470 mm x2 (Timber)	440 x 440mm x2 (PVC-u)
Material	Timber and PVC-u	
Details of Hardware		
Balances	No information supplied	
Lock	No information supplied	
Markings	None	
Date of Manufacture	Unknown	
Other information	None	

TEST DETAILS

Test specification	BS EN 14351 :2006
Full test	Yes
Test to clauses	
Test Method	BS EN 14609:2004 strength of safety devices
Sample received	01/03/2013
Test started	07/03/2013
Test completed	08/03/2013
Special Test requirements	
Other reports to be used in conjunction with this report	

TEST PROCEDURE

Introduction	This test report should be read in conjunction with the Standard BS EN 14351-1:2006: Windows and doors – Product standard, performance characteristics – Part 1: Windows and external pedestrian door set's with out resistance to fire and/or smoke leakage characteristics. The specimens were judged on their ability to comply with the performance criteria as required in BS EN 14351-1:2006, with test methods BS EN 14609.
Instruction To Test	The test was conducted on the 7th March 2013 on behalf of Mighton Products Ltd. Initial requirement was as defined in BS EN 14351-1, requiring a performance of a threshold value of 350N for load-bearing capacity of safety devices.
Test Specimen Construction	A description of the test construction is given in the Schedule of Components. The description is based on a detailed survey of the specimens and information supplied by the sponsor of the test.
Sampling	The samples were not independently witnessed or selected and were provided direct from the test sponsor.
Installation	The sample was supplied mounted within a timber sub-frame of nominal section 75mm x 100mm fitted flush with the exterior face, in accordance with the clients fitting instructions.
Test Climate	The sample was conditioned in the laboratory in the range 10-30 °C and 25-75% humidity. The temperature and humidity in the lab was maintained in the range 16.1-21.0°C and 36-66% humidity for the duration of the test.

INITIAL OBSERVATIONS

The tested restrictors


CLIP-FIX ANGEL
Pilkington
RETRO-FIT ANGEL
SIDE-FIX ANGEL

TEST SPECIMEN

Figure 1- General Elevation of Test Specimen (External Face)

No Information supplied by client

Do not scale. All dimensions are in mm

Figure 2 – Horizontal section

No Information supplied by client

Do not scale. All dimensions are in mm

Figure 3 – Vertical section

No Information supplied by client

Do not scale. All dimensions are in mm

SCHEDULE OF COMPONENTS

(Refer to Figures 1 to 3)
(All values are nominal unless stated otherwise)
(All other details are as stated by the sponsor)

Variants

None

Item	Description

No Information supplied by client

PERFORMANCE CRITERIA & TEST RESULTS

Clause	Result	Pass/Fail
4.8 Load-bearing capacity of safety devices	The timber window was tested with the push vent lock restrictor engaged. A load was then applied to the top sash forcing the window down. The restrictor held a load of 350N for 60 seconds. The restrictor still operated after the test.	**PASS**
4.8 Load-bearing capacity of safety devices	The timber window was tested with the Locking vent lock restrictor engaged. A load was then applied to the top sash forcing the window down. The restrictor held a load of 350N for 60 seconds. The restrictor still operated after the test.	**PASS**
4.8 Load-bearing capacity of safety devices	The timber window was tested with the Uni stop restrictor engaged. A load was then applied to the top sash forcing the window down. The restrictor held a load of 350N for 60 seconds. The restrictor still operated after the test.	**PASS**
4.8 Load-bearing capacity of safety devices	The PVC-u window was tested with the side fix angel restrictor engaged. A load was then applied to the top sash forcing the window down. The restrictor held a load of 350N for 60 seconds. The restrictor still operated after the test.	**PASS**
4.8 Load-bearing capacity of safety devices	The timber window was tested with the retro fix angel restrictor engaged. A load was then applied to the top sash forcing the window down. The restrictor held a load of 350N for 60 seconds. The restrictor still operated after the test.	**PASS**
4.8 Load-bearing capacity of safety devices	The timber window was tested with the clip in angel restrictor engaged. A load was then applied to the top sash forcing the window down. The restrictor held a load of 350N for 60 seconds. The restrictor still operated after the test.	**PASS**

CONCLUSIONS

Evaluation against objective	The sample as provided by the client was subjected to operational & strength testing in accordance with BS EN 14351-1:2006 and achieved the requirements of clause 4.8 Load-bearing capacity of safety devices.
Observations & comments	

LIMITATIONS

Limitations	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.
Range of window assemblies covered by this report	It is our opinion that the range of window assemblies covered by this report are limited to the following ▪ Assemblies with identical hardware fitted no further apart than in the tested assembly ▪ Assemblies of the same or smaller overall dimensions to the tested assembly
Uncertainty of Measurement	The uncertainties of measurements calculated for a confidence level of 95% throughout these tests are within the limits of these tolerances. The standard specifies the following tolerances ▪ Forces: ±2% ▪ Distances: ±1mm for tape measures ± 0.01mm for dial gauges ▪ Times: ±5s

REVISION HISTORY

Issue No : 2	**Re - Issue Date : 21st March 2013**
Revised By: c. Bryan	**Approved By: M. West**
Reason for Revision: Spelling mistake	

Issue No :	**Re - Issue Date :**
Revised By:	**Approved By:**
Reason for Revision:	

END OF REPORT