



Test Report



Report No	2370/7479366/1 of 3	This Report consists of 18 pages
Client	Bowater Building Products limited Water Orton Lane Sutton Coldfield Minworth B76 9BW	
Authority & date	Request by Client dated 27 January 2010	
Items tested	8 off PVC-U windows, WHS Halo Eclipse and System 10 Internally Glazed Casement Window Systems BS EN 14351 : 2006 Windows and doors – Product standard, performance characteristics Part1:Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics BS EN 14609 : 2004 Windows – Determination of the resistance to static torsion	
Results	Pass	
Prepared by	D Kirsop 	(Technician)
Authorized by	M Manito 	(Senior Engineer)
Issue Date	12 February 2010	
Conditions of issue	This Test Report is issued subject to the conditions stated in current issue of CP0322 '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.	



0135

TEST AND EXAMINATION OF EIGHT PVC-U WINDOWS SUBMITTED FOR ASSESSMENT

INTRODUCTION

At the request of Bowater Building Products Limited, the PVCU windows detailed on page 4, were tested and assessed to the requirements of BS EN 14609: 2004 Windows – Determination of resistance to static torsion, as indicated on the following pages of this Report. This request was made by BSI Quotation referenced BSI0000240384 dated 27 January 2010. It is emphasized that assessments have not been made against the other Clauses of the Specification.

TEST SAMPLES

- 1 off projecting side hung window (sample1) WHS Halo Eclipse
- 1 off projecting top hung window (sample 2) WHS Halo Eclipse
- 1 off projecting side hung window (sample 3) WHS Halo Eclipse
- 1 off projecting top hung window (sample 4) WHS Halo System 10
- 1 off projecting side hung window (sample 5) WHS Halo System 10
- 1 off projecting top hung window (sample 6) WHS Halo Eclipse
- 1 off projecting top hung window (sample 7) WHS Halo System 10
- 1 off projecting side hung window (sample 8) WHS Halo System 10

(Equipment Record No 10113500)

Date samples received: 12 January 2010

Date of test: 4 February 2010

Laboratory temperature: 19°C

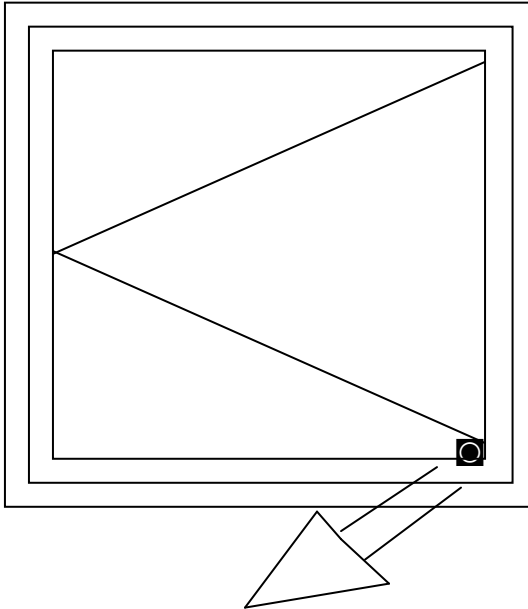
Laboratory Humidity: 38.4


Atmospheric pressure: 101.1

DESCRIPTION OF SAMPLE (Sample 1)

Sample type -	Projecting side hung
Material -	PVC-U
Construction -	Mitred, welded and grooved joints
Fittings -	Friction stays: 16" Securistyle defender restrictor side hung stays Locking: an eight point locking (eight mushroom bolts) Roto espagnolette system operated by a button operated handle
Glass -	Double glazed, 4-20-4mm toughened glass sealed unit
Glazing system -	Internal beads and gaskets
Sample dimensions -	For information only (nominal sizes) Overall size Length: 700mm Height: 1350mm Sash size Length: 645mm Height: 1295mm

SUMMARY OF RESULTS (Sample 1)



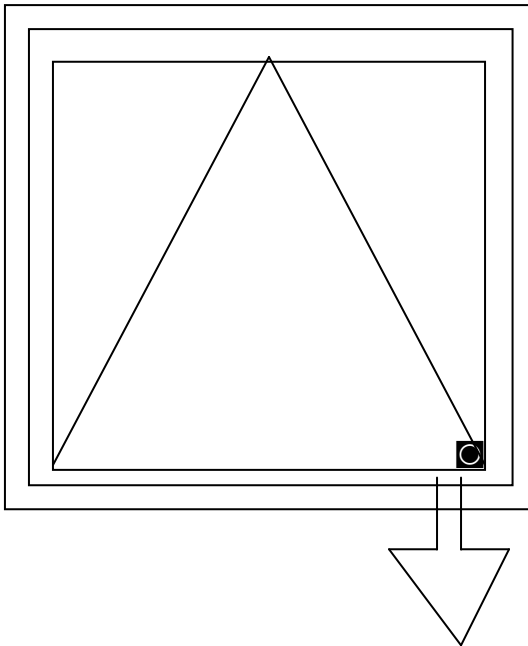
- The test specimen was opened and closed 5 times before test then opened to engage restrictor ready for the 350N force to be applied.
- A second load identical to the first was put onto the second limit on the restrictor
- Position of eyebolt attachment 
- Directions of load labelled by arrow
- Window had no permanent damage after test.

Pass

DESCRIPTION OF SAMPLE (Sample 2)

Sample type -	Projecting top hung
Material -	PVC-U
Construction -	Mitred, welded and grooved joints
Fittings -	Friction stays: 16" Securistyle defender restrictor top hung stays Locking: an eight point locking (eight mushroom bolts) Roto espagnolette system operated by a button operated handle
Glass -	Double glazed, 4-20-4mm toughened glass sealed unit
Glazing system -	Internal beads and gaskets
Sample dimensions -	For information only (nominal sizes) Overall size Length: 1250mm Height: 1250mm Sash size Length: 1195mm Height: 1195mm

SUMMARY OF RESULTS (Sample 2)



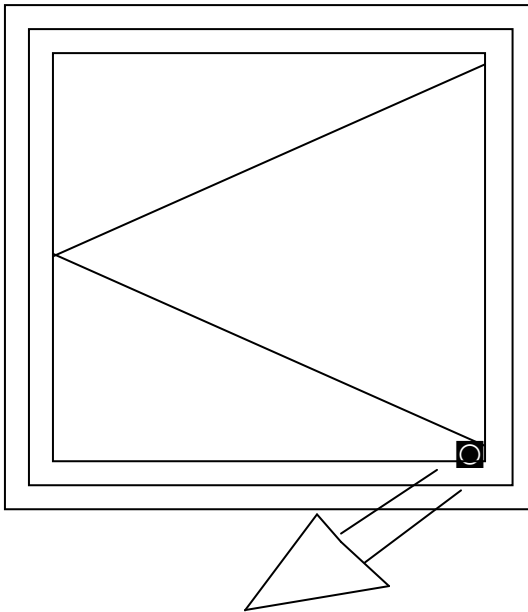
- The test specimen was opened and closed 5 times before test, then opened to engage restrictors ready for the 350N force to be applied.
- Position of eyebolt attachment ●
- Directions of load labelled by arrow
- Window had no permanent damage after test.


Pass

DESCRIPTION OF SAMPLE (Sample 3)

Sample type -	Projecting side hung
Material -	PVC-U
Construction -	Mitred, welded and grooved joints
Fittings -	Friction stays: 16" DGS defender restrictor side hung stays Locking: an eight point locking (eight mushroom bolts) Roto espagnolette system operated by a button operated handle
Glass -	Double glazed, 4-20-4mm toughened glass sealed unit
Glazing system -	Internal beads and gaskets
Sample dimensions -	For information only (nominal sizes) Overall size Length: 695mm Height: 1350mm Sash size Length: 645mm Height: 1295mm

SUMMARY OF RESULTS (Sample 3)



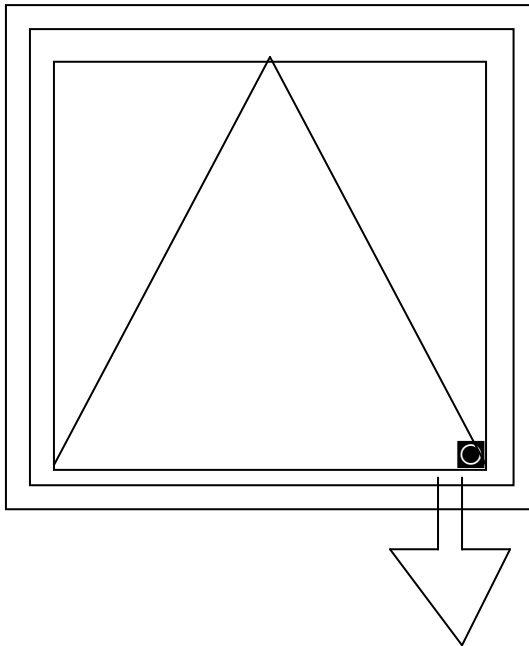
- The test specimen was opened and closed 5 times before test then opened to engage restrictor ready for the 350N force to be applied.
- Position of eyebolt attachment 
- Directions of load labelled by arrow
- Window had no permanent damage after test.

Pass

DESCRIPTION OF SAMPLE (Sample 4)

Sample type -	Projecting top hung
Material -	PVC-U
Construction -	Mitred, welded and grooved joints
Fittings -	Friction stays: 24" Securistyle defender restrictor top hung stays Locking: an eight point locking (eight mushroom bolts) Roto espagnolette system operated by a key locking handle
Glass -	Double glazed, 4-20-4mm toughened glass sealed unit
Glazing system -	Internal beads and gaskets
Sample dimensions -	For information only (nominal sizes) Overall size Length: 1250mm Height: 1250mm Sash size Length: 1195mm Height: 1195mm

SUMMARY OF RESULTS (Sample 4)



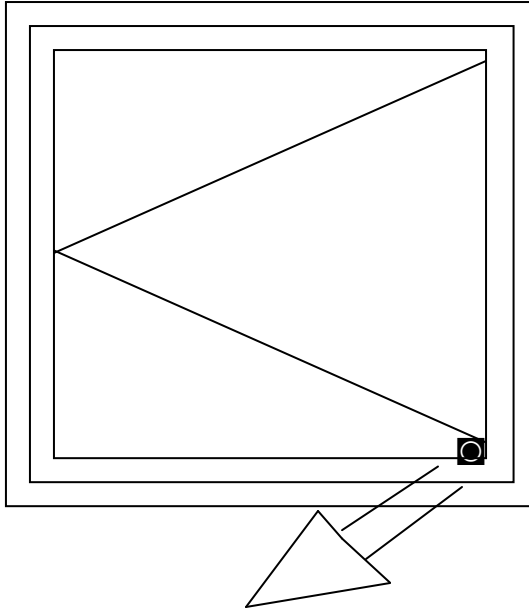
- The test specimen was opened and closed 5 times before test, then opened to engage restrictors ready for the 350N force to be applied.
- Position of eyebolt attachment ●
- Directions of load labelled by arrow
- Window had no permanent damage after test.


Pass

DESCRIPTION OF SAMPLE (Sample 5)

Sample type -	Projecting side hung
Material -	PVC-U
Construction -	Mitred, welded and grooved joints
Fittings -	Friction stays: 16" DGS defender restrictor side hung stays Locking: an eight point locking (eight mushroom bolts) Roto espagnolette system operated by a button operated handle
Glass -	Double glazed, 4-20-4mm toughened glass sealed unit
Glazing system -	Internal beads and gaskets
Sample dimensions -	For information only (nominal sizes) Overall size Length: 700mm Height: 1350mm Sash size Length: 645mm Height: 1295mm

SUMMARY OF RESULTS (Sample 5)



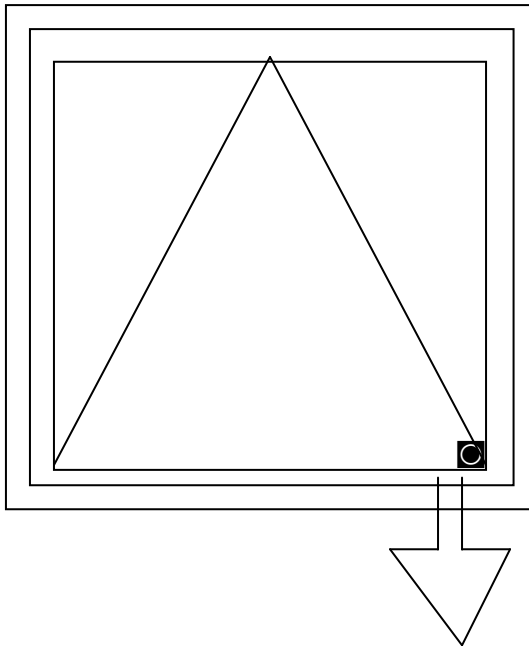
- The test specimen was opened and closed 5 times before test then opened to engage restrictor ready for the 350N force to be applied.
- Position of eyebolt attachment 
- Directions of load labelled by arrow
- Window had no permanent damage after test.


Pass

DESCRIPTION OF SAMPLE (Sample 6)

Sample type -	Projecting top hung
Material -	PVC-U
Construction -	Mitred, welded and grooved joints
Fittings -	Friction stays: 24" DGS restrictor top hung stays Locking: an eight point locking (eight mushroom bolts) Roto espagnolette system operated by a button operated handle
Glass -	Double glazed, 4-20-4mm toughened glass sealed unit
Glazing system -	Internal beads and gaskets
Sample dimensions -	For information only (nominal sizes) Overall size Length: 1250mm Height: 1250mm Sash size Length: 1195mm Height: 1195mm

SUMMARY OF RESULTS (Sample 6)



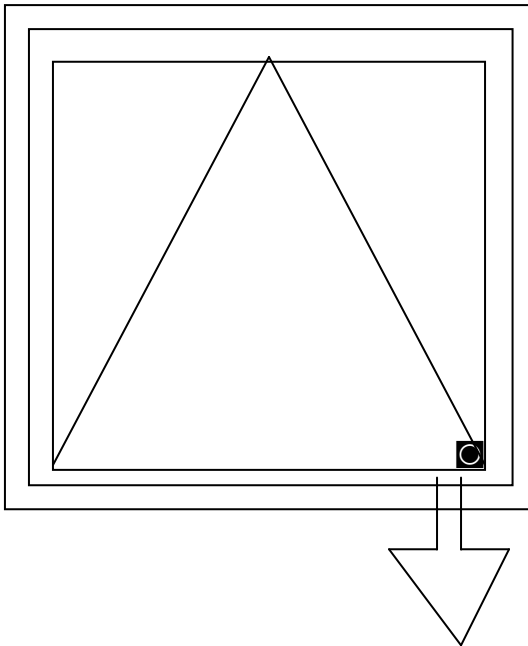
- The test specimen was opened and closed 5 times before test, then opened to engage restrictors ready for the 350N force to be applied.
- A second load identical to the first was put onto the second limit on the restrictor
- Position of eyebolt attachment 
- Directions of load labelled by arrow
- Window had no permanent damage after test.


Pass

DESCRIPTION OF SAMPLE (Sample 7)

Sample type -	Projecting top hung
Material -	PVC-U
Construction -	Mitred, welded and grooved joints
Fittings -	Friction stays: 24" DGS restrictor top hung stays Locking: an eight point locking (eight mushroom bolts) Roto espagnolette system operated by a button operated handle
Glass -	Double glazed, 4-20-4mm toughened glass sealed unit
Glazing system -	Internal beads and gaskets
Sample dimensions -	For information only (nominal sizes) Overall size Length: 1250mm Height: 1250mm Sash size Length: 1195mm Height: 1195mm

SUMMARY OF RESULTS (Sample 7)



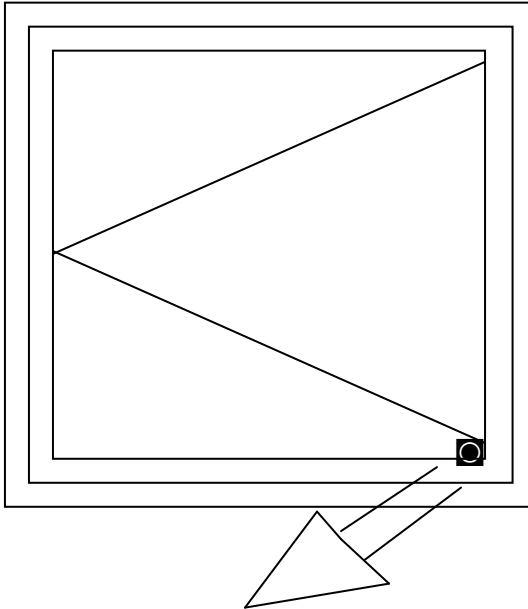
- The test specimen was opened and closed 5 times before test, then opened to engage restrictors ready for the 350N force to be applied.
- A second load identical to the first was put onto the second limit on the restrictor
- Position of eyebolt attachment 
- Directions of load labelled by arrow
- Window had no permanent damage after test.

Pass

DESCRIPTION OF SAMPLE (Sample 8)

Sample type -	Projecting side hung
Material -	PVC-U
Construction -	Mitred, welded and grooved joints
Fittings -	Friction stays: 16" Securistyle defender restrictor side hung stays Locking: an eight point locking (eight mushroom bolts) Roto espagnolette system operated by a button operated handle
Glass -	Double glazed, 4-20-4mm toughened glass sealed unit
Glazing system -	Internal beads and gaskets
Sample dimensions -	For information only (nominal sizes) Overall size Length: 695mm Height: 1350mm Sash size Length: 650mm Height: 1290mm

SUMMARY OF RESULTS (Sample 8)



- The test specimen was opened and closed 5 times before test then opened to engage restrictor ready for the 350N force to be applied.
- A second load identical to the first was put onto the second limit on the restrictor
- Position of eyebolt attachment ●
- Directions of load labelled by arrow
- Window had no permanent damage after test.

Pass