

ASSA ABLOY

PAS 24:2016

Test of:

Ideal Plastics side Hung next to top hung casement
Enhanced security performance requirements for
doorsets and windows in the UK

Customer:

Ideal Plastics Limited (Trading as Allerton Windows)



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AUTHORISATION

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Report issued by: Richard Darrell (Senior Test Engineer)

Signed:



Date: 18th August 2020

For and on behalf of ASSA ABLOY UK Test Laboratory

Report authorised by: Ian Bridge (Test Laboratory Manager)

Signed:



Date: 18th August 2020

For and on behalf of ASSA ABLOY UK Test Laboratory

Date report issued: 18th August 2020

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Note:

Tests marked "Not UKAS Accredited" are not covered by the Laboratory UKAS accreditation schedule

Results are valid only for the conditions under which the test was conducted and for the specific range of door sets / windows

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Origin of Request**Client Details**

Company Name Ideal Plastics Limited (Trading as Allerton Windows)
Address Regent Works,
1 Irlam Rd,
Liverpool,
Bootle
Post Code L20 4AE
Contact Anthony Hanratty
(In Partnership with Carl F GroupCo Limited, Culley Court, Orton Southgate,
Peterboroug, PE2 6WA and Assa Abloy, School Street, Willenhall, WV13 3PW)

Order Details

Order Number 071806
Dated 31st July 2020

Test Details**Sample Details**

Product Side Hung next to top hung Casement
Model Number Side hung next to top hung fitted with Encloser
Marking / Brand Ideal Plastics
Manufacturer Ideal Plastics/ Liniar
Date of Manufacture Not known
Other information None

Test Specification / Details PAS 24:2016– Enhanced security performance requirements for doorsets and windows in the UK
Date samples received 13th August 2020
Date test commenced 18th August 2020
Date test completed 18th August 2020
Job Number 2020-134
Any special test requirements None

Test Sample

Figure 1 – General Elevation

Side hung next to top hung, double glazing

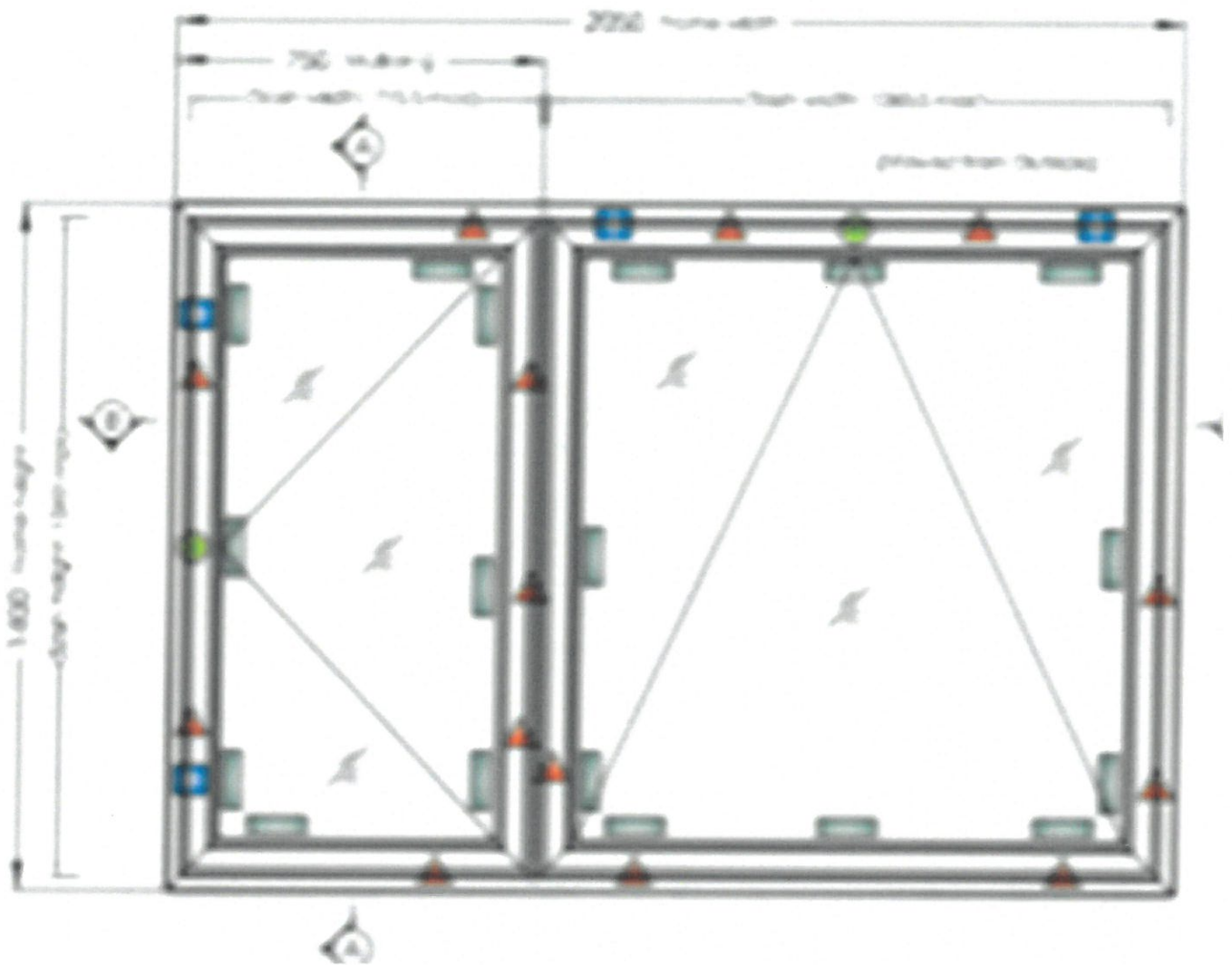


Figure 2 – Vertical Section

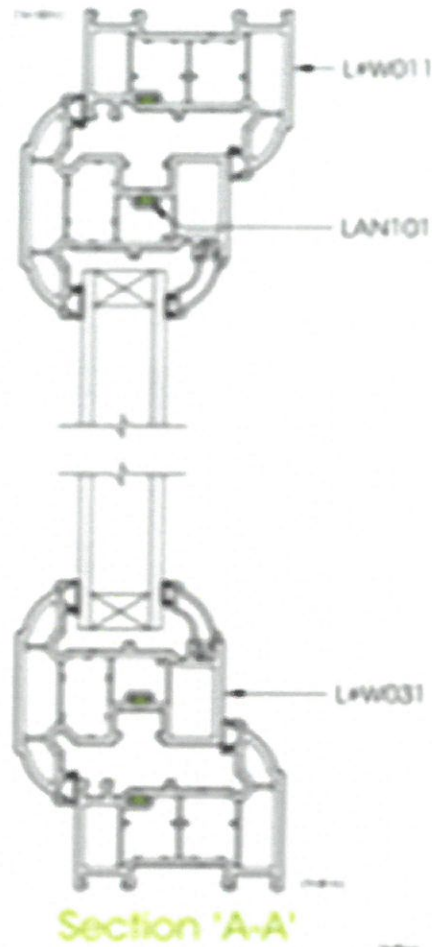
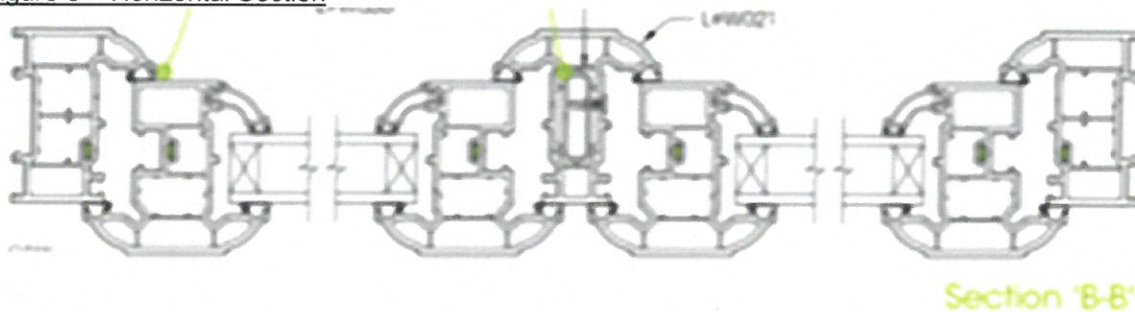


Figure 3 – Horizontal Section



Note : The test sample was as provided by the customer. The results apply to the sample as received

Component Details

Sample Details:	Allerton Windows side hung and top hung casement
Fabricator:	Allerton Windows & Liniar
Material:	Liniar Outer Frame: LSW016 Vent: LSW031 Transom: LSW021 Reinforcement : LSR021 LAN101
Finish:	White
Lock:	Lock : YWBL7-2009R-19 Keeps : YWK261
Hinges:	Hinge: YS16-H Side Hung YT24-H Top Hung Hinge Protector : GT Products
Cylinder:	N/A
Handle:	White Key Locking Handle – YBI40WH
Fixings:	Lock: 4.3 x 25 CS Keep: 4.3 x 25 CS / 3.9 x 25 CS / 4.3 x 19 CS / 3.9 x 19 CS Hinge to frame: 4.3 x 25 Pan Head Hinge to leaf: 4.3 x 25 Pan Head Handle: M5 x 40 Hinge protector 4.3 x 25 Pan Head / Interlock and Run Up 4.3 x 25 CS Reinforcement Screw 3.9 x 16 CS Supplier: Rapier Star
Letterplate:	N/A
Weather sealing:	Gasket
Glass:	Total thickness : 28mm 4 x 20 x 4mm Clear Toughened
Glazing system:	Internally Beaded
Sample dimensions:	Frame : 2070mmW x 1360mmH Side hung Vent : 695mmW x 1260mmH Top Hung vent : 1260mmW x 1260mmH

Note: The sample details are as supplied by the customer and have not been verified by the Laboratory

Test Summary

Clause No.	Description	Comment
A.3	Security hardware and cylinder test	N/A
C.4.3	Manipulation test (a)	No Entry gained
C.4.4.2	Infill manual test	No Entry gained
C.4.4.3	Infill mechanical test	No Entry gained
C.4.5	Mechanical loading test	No Entry gained
C.4.3	Manipulation test (b)	No Entry gained
C.4.6	Manual check test	No Entry gained
C.4.7	Additional mechanical loading test	N/A

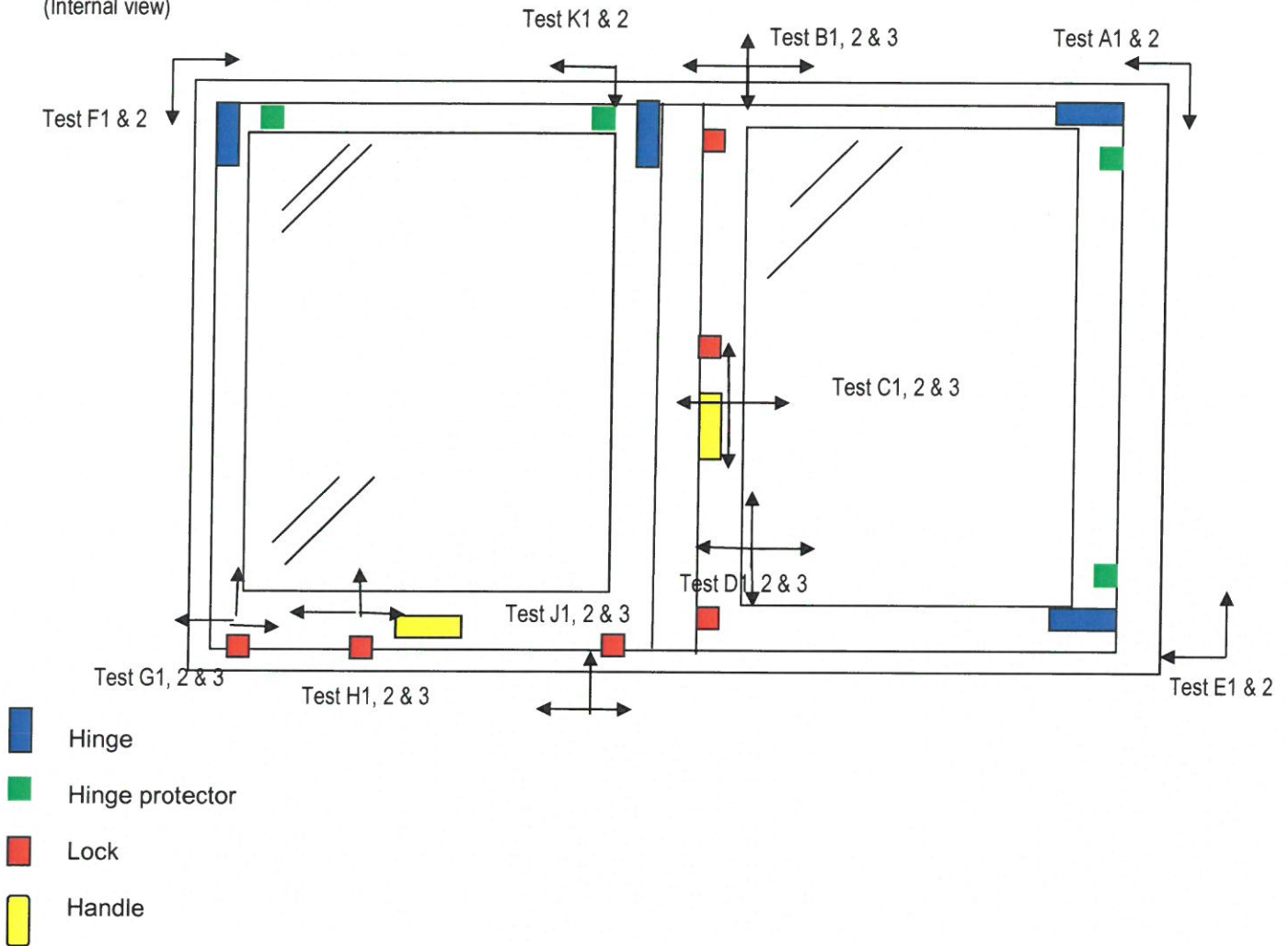
Classification (according to 4.4)	Code
	W

Hardware Positions

Locking Point	Position
Side Hung Centre mushrooms	495mm from Top
Side Hung Bottom mushrooms	70mm from Bottom
Side Hung Top mushrooms	70mm from Top
Side Hung hinge protector Top	70mm from Top
Side Hung hinge protector Bottom	70mm from Bottom
Top Hung Centre mushrooms	495mm from LH side
Top Hung LH mushrooms	70mm from LH side
Top Hung RH mushrooms	1150mm from LH side
Top Hung hinge protector LH	70mm from LH side
Top Hung hinge protector RH	1160mm from LH side

Test Results

Window Layout & Loading Directions
(Internal view)



All hardware was checked for correct operation prior to the commencement of the test

Test Clause	Test Date	Laboratory Temperature
C.4.3 – Manipulation test (a)	18/8/20	21°C
C.4.4.2 – Infill manual test	18/8/20	21°C
C.4.4.3 – Infill mechanical test	18/8/20	21°C
C.4.5 – Mechanical load test	18/8/20	21°C
C.4.3 – Manipulation test (b)	18/8/20	21°C
C.4.6 – Manual check test	18/8/20	21°C
C.4.7 – Additional mechanical load test	N/A	N/A

C.4.3 – Manipulation Test

Test	Sample / Actual
C.4.3 – Manipulation Test (a)	<p>Craft knife used to cut away side hung vent near bottom mushroom bolt and bottom hinge protector points – 3 minutes</p> <p>Craft knife used to cut away top hung vent near RH mushrooms, the flat bladed screwdriver was then used to attack the RH mushrooms – 3 minutes</p> <p>Flat bladed screwdrivers were used in an attempt to manipulate the bottom hinge protector of side hung vent – 3 minutes</p> <p>Paint scraper was used in an attempt to manipulate the bottom mushrooms of side hung vent – 3 minutes</p> <p>Paint scraper used to attack the RH hinge protector area of top hung vent – 3 minutes</p> <p>Following 15 minutes the window remained secure</p>

C.4.4 – Infill Medium Removal Test

Test	Sample / Actual
C.4.4.2 – Infill Manual Test	<p>Craft knife used to cut away both sides of side hung vent and along the bottom rail. The flat bladed screwdriver was then used to attack the internal clip in beads.</p> <p>Following 3 minutes no beads were removed and the glazing remained secure.</p>

Test	Sample / Actual
C.4.4.3 – Infill Mechanical Test	4 corners of the top hung vent infill were loaded to 2 kN for 10 seconds each

C.4.5 – Mechanical Load Test

Side hung vent

A1 – Top Side Hung Hinge	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3005N
A2 – Top Side Hung Hinge	Parallel to plane at right angles to the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3003N
B1 – Top Side hung mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3003N
B2 – Top Side hung mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3000N
B3 – Top Side hung mushrooms	Parallel to plane at right angles to the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3003N
C1 - Centre Side hung mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3001N
C2 - Centre Side hung mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3006N
C3 – Centre Side hung mushrooms	Parallel to plane at right angles to the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3009N
D1 – Bottom side hung mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3001N
D2 – Bottom side hung mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3001N
D3 – Bottom side hung mushrooms	Parallel to plane at right angles to the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3000N
E1 – Bottom side hung hinge	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3008N
E2 – Bottom side hung hinge	Parallel to plane at right angle to the edge	1.0kN (100Kg)	100Kg

Top hung vent

F1 – Top Hung LH Hinge	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3006N
F2 – Top Hung LH Hinge	Parallel to plane at right angles to the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3001N
G1 – Top hung LH mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3006N
G2 – Top hung LH mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3007N
G3 – Top hung LH mushrooms	Parallel to plane at right angles to the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3003N
H1 - Centre Top hung mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3000N
H2 - Centre Top hung mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3001N
H3 – Centre Top hung mushrooms	Parallel to plane at right angles to the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3005N
J1 – Top hung RH mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3001N
J2 – Top hung RH mushrooms	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3006N
J3 – Top hung RH mushrooms	Parallel to plane at right angles to the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3005N
K1 – Top hung RH hinge	Parallel to plane along the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3000N
K2 – Top hung RH hinge	Parallel to plane at right angle to the edge	1.0kN (100Kg)	100Kg
	Perpendicular to plane	3kN	3002N

Test

Sample / Actual

C.4.3 – Manipulation Test (b)

Attempt made to unscrew the bottom side hung vent hinge protector fixings using the cross head screwdriver.
Following 3 minutes unable to gain a good purchase and the fixings remained secure.

Test

Sample / Actual

C.4.6 – Manual Check Test

The 2 nail bars were used to attack the top hung vent along the mullion hinge side, between the LH mushrooms and centre mushrooms of the top hung, between the centre mushrooms and RH mushrooms of the top hung and between the centre mushrooms and bottom mushrooms of the side hung vent.
Each area was attacked for 3 minutes with the nail bars resulting in a total attack time of 12 minutes.
Entry was not gained

Test

Sample / Actual

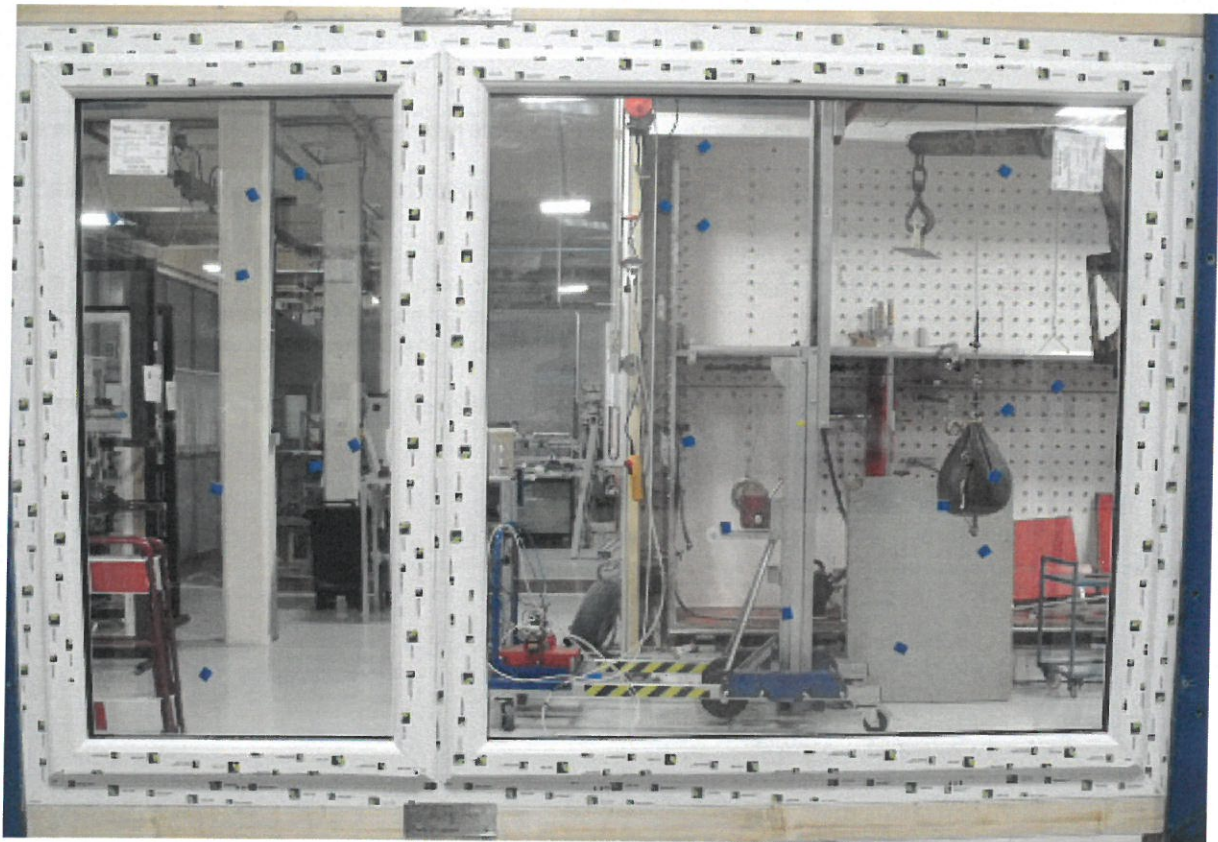
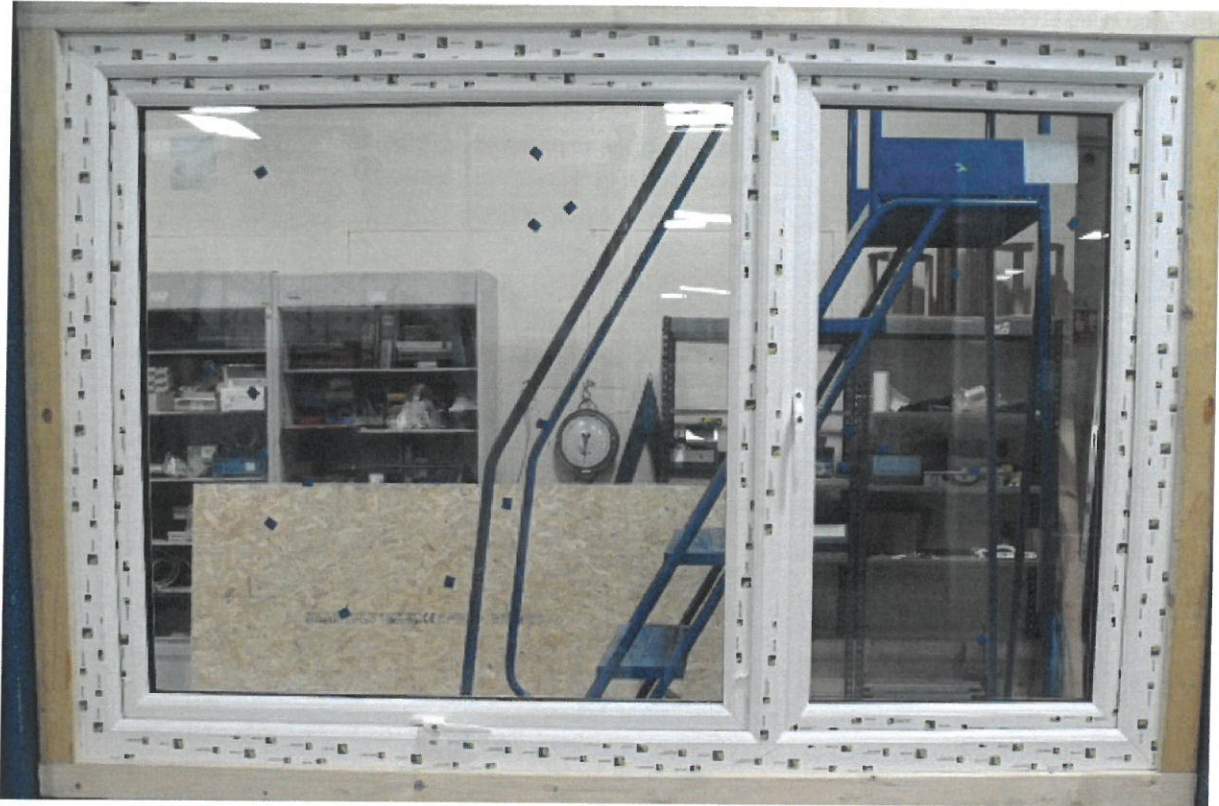
C.4.7 – Additional Mechanical Loading Test

N/A as entry under C.4.6 was not achieved

Test Equipment Used

Equipment No.	Description
LEN 195	Loading frame
LEN 127	Max / min thermometer
LEN 090	Tool sets A & B
LEN 091	Tool set (clause A.7)
LEN 211	Spring balance
LEN 212	Spring balance

Pictures



Sample received in good condition