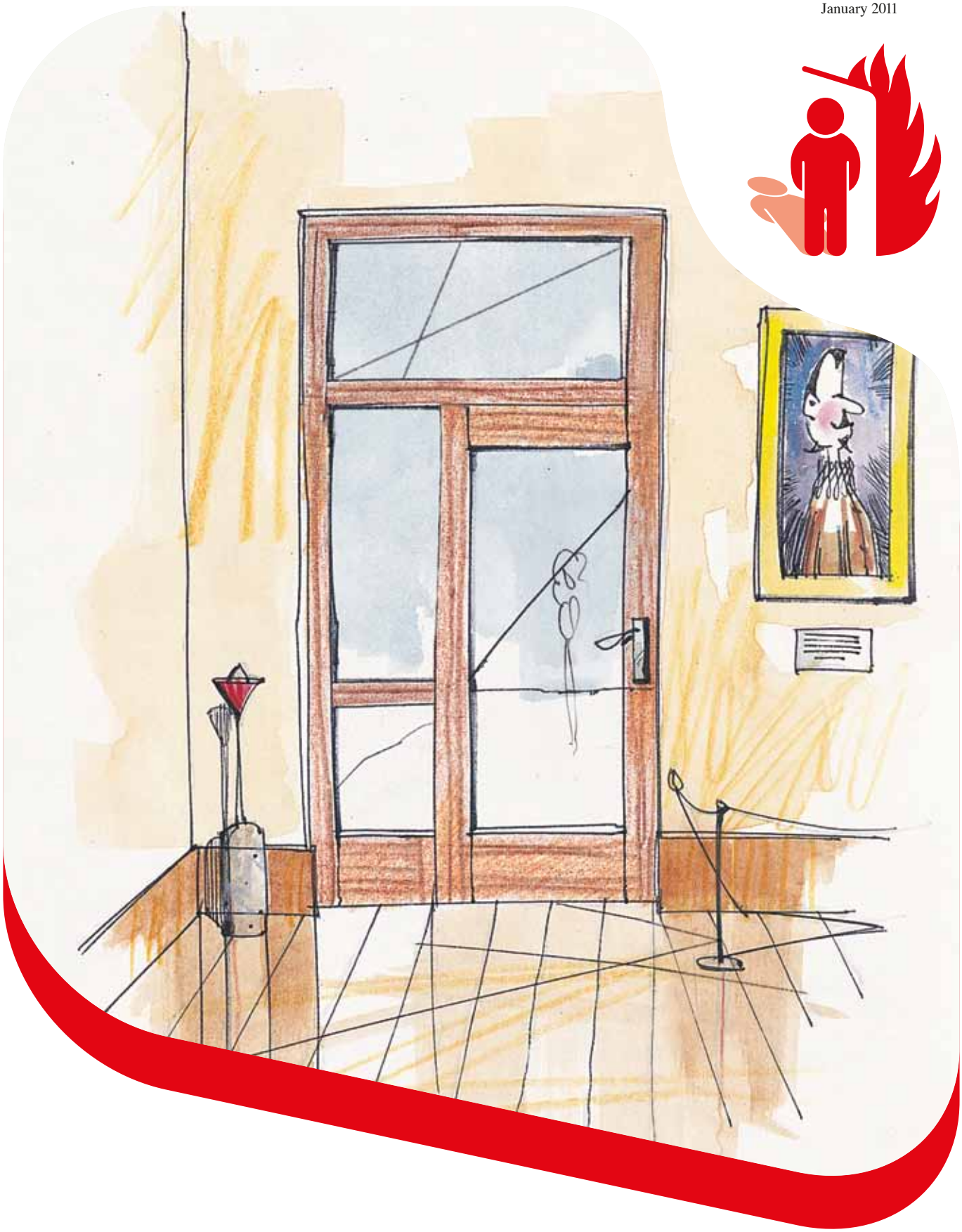
CI/SfB Ro8 (Aq)
January 2011



Pilkington **Pyroshield**™ 2 Safety Clear

ASSESSMENT SUMMARY

For timber door sets and glazed screens

60 minutes integrity. Reference Chilt/A10162

PILKINGTON
NSG Group Flat Glass Business

Pilkington **Pyroshield**™ 2 Safety Clear in Single Leaf Single Acting Hardwood Doorset in a Glazed Panel 60 minutes Integrity

Pilkington **Pyroshield**™ 2 Safety Clear is a traditional Georgian wired fire-resistant glass providing integrity with impact resistance for screens and doors.

Assessment Reference:
Chilt/A10162
Based on test: Chilt/RF10083 (14th June 2010)

Test Station:
Chiltern International Fire Ltd

Assessment Date:
22nd September 2010

Test Sponsor:
Pilkington United Kingdom Ltd

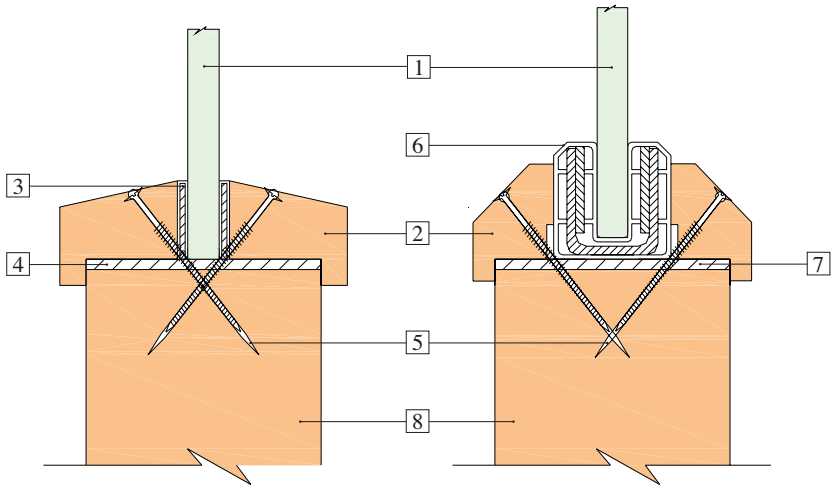
Test Standard:
BS 476 : Part 22 : 1987

General description of the assembly

- 7 mm Pilkington **Pyroshield**™ 2 Safety Clear
- Single leaf, single acting timber doorset with side light and fan light

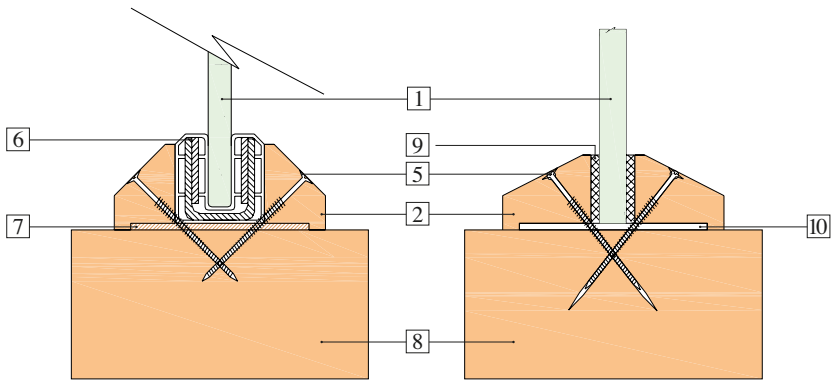
Key to figures:

1. Pilkington **Pyroshield**™ 2
2. Hardwood Beads
3. ISL Therm-A-Bead
4. ISL Therm-A-Line
5. 60 mm Screws
6. Lorient System90+ Channel
7. Lorient LX5402 Aperture Liner
8. Min 90 x 45 mm Frame/Door Leaf
9. Sealmaster Fireglaze Mastic
10. Sealmaster G60 Liner



Glazing System 1 (Therm-A-Bead)

Glazing System 2 (System 90+)



Glazing System 3 (System 90+)

Glazing System 4 (Fireglaze)

Glazed Assembly - Option 1

Pane	Maximum size mm (WxH)	Maximum area m^2	Glazing System
Door Leaf	550 x 1300	0.715	1
Side Light	310 x 1300	0.4	3 or 4
Fan Light	1110 x 750	0.83	3

Door Leaf - Glazing System 1 (Therm-A-Bead)

Element		Details
Beading Size		30 mm high x 24.5 mm deep with a 20°chamfer including a 5 mm x 5 mm bolection return
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Door Leaf Only	Intumescent Seals Ltd Therm-A-Bead (25 mm wide x 4 mm thick) between the glass and bead on both faces, Intumescent Seals Ltd Therm-A-Line (54 mm wide x 2 mm thick) lining the glazing aperture

Side Light - Glazing System 3 (System 90+)

Element		Details
Beading Size		24 mm high x 19 mm deep with a 45° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Lorient Polyproducts Ltd System 90+ glazing channel, Lorient Polyproducts Ltd LX5402 (54 mm wide x 2 mm thick) lining the glazing aperture

Side Light - Glazing System 4 (Fireglaze)

Element		Details
Beading Size		25 mm high x 35 mm deep with a 20° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Sealmaster Ltd Fireglaze Compound (25 mm wide x 4 mm thick) between the glass and bead on both faces, Sealmaster Ltd GL60 (63 mm wide x 2 mm thick) lining the glazing aperture

Fan Light - Glazing System 3 (System 90+)

Element		Details
Beading Size		24 mm high x 19 mm deep with a 45° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Lorient Polyproducts Ltd System 90+ glazing channel, Lorient Polyproducts Ltd LX5402 (54 mm wide x 2 mm thick) lining the glazing aperture

Glazed Assembly - Option 2

Pane	Maximum size mm (WxH)	Maximum area m²	Glazing System
Door Leaf	310 x 1300	0.4	2
Side Light	310 x 1300	0.4	3 or 4
Fan Light	1110 x 750	0.83	3

Door Leaf - Glazing System 2 (System 90+)

Element		Details
Beading Size		27 mm high x 19 mm deep with a 45° chamfer including a 5 mm x 5 mm bolection return
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Door Leaf Only	Lorient Polyproducts Ltd System 90+ glazing channel, Lorient Polyproducts Ltd LX5402 (54 mm wide x 2 mm thick) lining the glazing aperture

Side Light - Glazing System 3 (System 90+)

Element		Details
Beading Size		24 mm high x 19 mm deep with a 45° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Lorient Polyproducts Ltd System 90+ glazing channel, Lorient Polyproducts Ltd LX5402 (54 mm wide x 2 mm thick) lining the glazing aperture

Side Light - Glazing System 4 (Fireglaze)

Element		Details
Beading Size		25 mm high x 35 mm deep with a 20° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Sealmaster Ltd Fireglaze Compound (25 mm wide x 4 mm thick) fitted between the glass and bead on both faces, Sealmaster Ltd GL60 (63 mm wide x 2 mm thick) lining the glazing aperture

Fan Light - Glazing System 3 (System 90+)

Element		Details
Beading Size		24 mm high x 19 mm deep with a 45° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Lorient Polyproducts Ltd System 90+ glazing channel, Lorient Polyproducts Ltd LX5402 (54 mm wide x 2 mm thick) lining the glazing aperture

Glazed Assembly - Option 3

Pane	Maximum size mm (WxH)	Maximum area m²	Glazing System
Door Leaf	550 x 1300	0.715	1
Side Light	310 x 1300	0.4	3 or 4
Fan Light	1300 x 310	0.4	4

Door Leaf - Glazing System 1 (Therm-A-Bead)

Element		Details
Beading Size		30 mm high x 24.5 mm deep with a 20° chamfer including a 5 mm x 5 mm bolection return
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Door Leaf Only	Intumescent Seals Ltd Therm-A-Bead (25 mm wide x 4 mm thick) between the glass and bead on both faces – with, Intumescent Seals Ltd Therm-A-Line (54 mm wide x 2 mm thick) lining the glazing aperture

Side Light - Glazing System 3 (System 90+)

Element		Details
Beading Size		24 mm high x 19 mm deep with a 45° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner; see section 6.2.5)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Lorient Polyproducts Ltd System 90+ glazing channel, Lorient Polyproducts Ltd LX5402 (54 mm wide x 2 mm thick) lining the glazing aperture

Side Light - Glazing System 4 (Fireglaze)

Element		Details
Beading Size		25 mm high x 35 mm deep with a 20° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Sealmaster Ltd Fireglaze Compound (25 mm wide x 4 mm thick) between the glass and bead on both faces, Sealmaster Ltd GL60 (63 mm wide x 2 mm thick) lining the glazing aperture

Fan Light - Glazing System 4 (Fireglaze)

Element		Details
Beading Size		25 mm high x 35 mm deep with a 20° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Sealmaster Ltd Fireglaze Compound (25 mm wide x 4 mm thick) between the glass and bead on both faces, Sealmaster Ltd GL60 (63 mm wide x 2 mm thick) lining the glazing aperture

Glazed Assembly - Option 4

Pane	Maximum size mm (WxH)	Maximum area m²	Glazing System
Door Leaf	310 x 1300	0.4	2
Side Light	310 x 1300	0.4	3 or 4
Fan Light	1300 x 310	0.4	4

Door Leaf - Glazing System 2 (System 90+)

Element		Details
Beading Size		27 mm high x 19 mm deep with a 45° chamfer including a 5 mm x 5 mm bolection return
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Door Leaf Only	Lorient Polyproducts Ltd System 90+ glazing channel, Lorient Polyproducts Ltd LX5402 (54 mm wide x 2 mm thick) lining the glazing aperture

Side Light - Glazing System 3 (System 90+)

Element		Details
Beading Size		24 mm high x 19 mm deep with a 45° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Lorient Polyproducts Ltd System 90+ glazing channel, Lorient Polyproducts Ltd LX5402 (54 mm wide x 2 mm thick) lining the glazing aperture

Side Light - Glazing System 4 (Fireglaze)

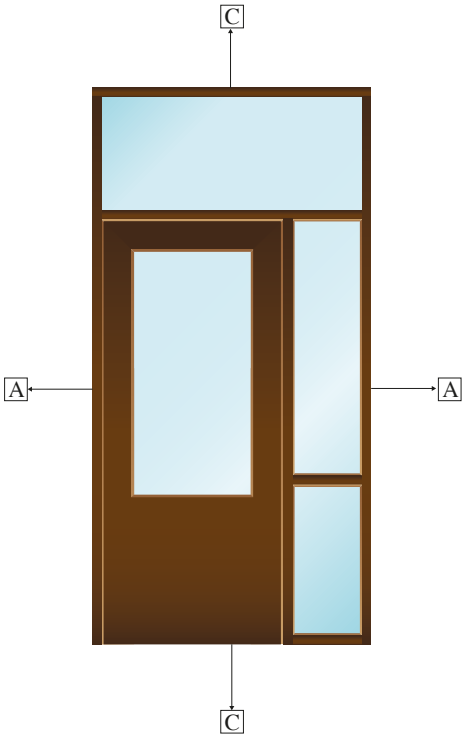
Element		Details
Beading Size		25 mm high x 35 mm deep with a 20° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Sealmaster Ltd Fireglaze Compound (25 mm wide x 4 mm thick) between the glass and bead on both faces, Sealmaster Ltd GL60 (63 mm wide x 2 mm thick) lining the glazing aperture

Fan Light - Glazing System 4 (Fireglaze)

Element		Details
Beading Size		25 mm high x 35 mm deep with a 20° chamfer (bead must incorporate a 2 mm deep rebate to accommodate the intumescent liner)
Beading Fixing		60 mm long wood screws, fitted 50 mm from corners and 150 mm apart at approximately 45° to the face of the glass
Sealant System	Side Lights and Fan Lights Only	Sealmaster Ltd Fireglaze Compound (25 mm wide x 4 mm thick) between the glass and bead on both faces, Sealmaster Ltd GL60 (63 mm wide x 2 mm thick) lining the glazing aperture

General

Glazing must be fitted fully in accordance with Pilkington tested details/installation requirements, particularly with respect to edge cover and expansion tolerances. For all systems beads must be fixed with 60 mm long screws. All timber beading and for screen framing must be hardwood to class J30 as specified in BS EN 942: 2007, provided any defects are adequately repaired and has a minimum density of 640kg/m3.

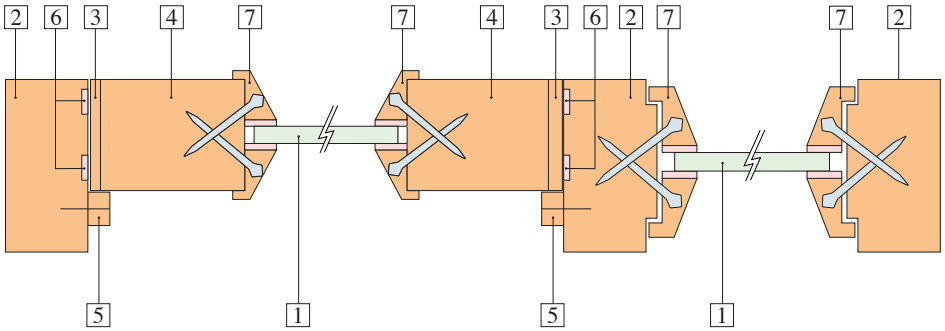


Cross Section Diagrams

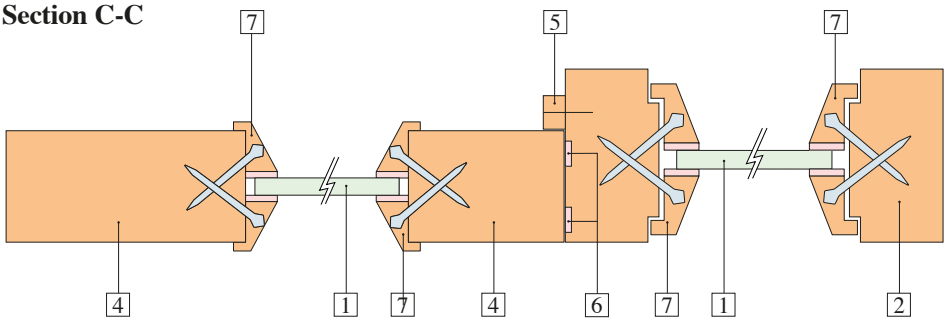
Glass is Pilkington **Pyroshield**™2 Safety Clear polished wired glass to BS EN 572: 2004 Glass in Building Basic soda lime silica glass Part 3: Polished wire Part 6: Patterned wired.

Example Door Frame

Section A-A



Section C-C



Key

1. Pilkington **Pyroshield**™2 Safety Clear
2. 90 X 45 mm sapele (640 kg/m^3) head jambs, side and fanlight framing
3. 8 mm sapele lipings on vertical edges only
4. Core 54 mm thick Halspan Prima particle board (630 kg/m^3)
5. Door stops pinned sapele 20 mm wide, 12 mm deep (640 kg/m^3)
6. 2 x Lorient Polyproducts Ltd LP1504 type 617 intumescent strips 15 mm X 4 mm frame reveal, heads & jambs 10 mm apart fitted centrally in frame reveal.
7. See framing detail

All jointing methods of the framing were conventional mortice & tenon construction, fixed with 2 off 70 mm long wood screws.

Scope

This assessment is based on a detailed test programme carried out at the Pilkington Technical Centre and Chiltern Fire, leading up to the independent test RF10083. In that programme, the glazing system has been found to be the critical factor in determining a 60 minute test performance, linked to glazing panel size. If sealants other than those specified (or larger glass pane sizes) are to be used, Chiltern Fire should be consulted (www.chilternfire.co.uk). Approval of alternative glazing systems is likely to require further test work to substantiate performance of those systems.

Assessment based on test reference Chilt/RF10083 Rev A

7 mm Pilkington **Pyroshield**™ 2 Safety Clear is classified as a 3(B)3 Class 3 safety glass according to BS EN 12600, and has been tested in accordance with the fire test requirements of BS 476 : Part 22 : 1987.

For technical advice please contact us on 01744 692000 or visit www.pilkington.co.uk/pyroshield2

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NSG Group Flat Glass Business

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9721 – January 2011