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Proud to be part of element

PILKINGTON

Title:
Scope of Application Document for:

Pilkington **Pyrostop**®
Pilkington **Pyrodur**®
Pilkington **Pyrodur**® Plus

for doors, screens and screens incorporating doors in timber with 30 and 60 minutes fire-resistance

WF Report No:

Chilt/A07245 Revision A

WF Contract No:

WF368307

Valid From: 29th January 2019

Valid Until: 29th January 2024

Prepared for:

Pilkington United Kingdom Ltd

Greengate Works
Sherdley Road
St Helens
Merseyside,
WA9 5DZ

Contents

*This glass is due to be withdrawn during the validity period of this document. Please consult Pilkington UK Ltd where necessary.

1 Introduction

This assessment has been commissioned by Pilkington United Kingdom Ltd and relates to the fire resistance of glazed timber screens and doorsets.

The assessment is written in terms of fire resistance performance if the elements were to be tested against BS 476 Part 22 1987.

The assessment considers the performance of the glass types detailed in section 2.2 if tested in accordance with BS 476 Part 22 1987 but considers evidence based on testing to the following fire resistance test standards: BS 476: Part 22: 1987, BS EN 1634-1 and BS EN 1364-1:1999.

The methodology adopted is for national application and should not be considered for European classification or CE marking purposes.

For constructions outside the scope of this document it is necessary to obtain, in writing, the expert opinion of an appropriate body on the suitability of the proposed framing, configuration and glazing system.

The report is only valid if presented in its entirety.

Much of the guidance that supports fire safety legislation in the UK is given in terms of performance in relation to British or European Standards which may take the form of test methods or agreed product standards.

Legislative guidance states that a material, product or structure should:

a) have a specification or design which has been shown by test to be capable of meeting the required performance; or

b) have been assessed from test evidence generated against appropriate standards, or by using relevant design guides, to be capable of meeting the required performance.

This approach is outlined as being acceptable in paragraphs 1 a) and b) of appendix A in Approved Document B Vol. 1 - Dwellinghouses (2006 edition incorporating 2010 and 2013 amendments) and Approved Document B Vol. 2 - Buildings other than dwellinghouses (2006 edition incorporating 2007, 2010 and 2013 amendments), the Passive Fire Protection Federation (PFPF) guidelines to undertaking assessments in lieu of fire tests and EGOLF Recommendation 026 – 2018.

Test reports provide information on the performance of a specimen that was tested against the relevant standard and do not offer any extension to scope (e.g. leaf dimensions or hardware options). Assessments are written based on applicable primary test evidence and extend the scope of application of the tested design to provide for different design options and are written by person(s) with the necessary expertise in the performance of construction products under fire test conditions, as detailed in appendix A of Approved Document B Vol. 1 and Vol. 2.

This assessment has been written to the principles outlined in the PFPF guidelines to undertaking assessments in lieu of fire tests. The aim of the PFPF guidelines is to give confidence to end-users that assessments that exist in the UK are of a satisfactory standard to be used in lieu of fire tests for building control and other purposes.

The PFPF guidelines are produced by the UK Fire Test Study Group (FTSG) an association of the major fire testing laboratories in the UK and are published by the PFPF, the representative body for the passive fire protection industry in the UK.

2 Proposal

2.1 General

This assessment will consider the screen and door constructions and the maximum glass sizes (area) that can be used for each glass type assessed.

2.2 Glass Types

Fire-resistant glass types:

Pilkington **Pyrodur** ® Plus 30-104, 7mm, internal application only
Pilkington **Pyrodur** ® 30-105, 7mm, internal application only
Pilkington **Pyrodur** ® 30-201, 10mm, internal & external application
Pilkington **Pyrodur** ® 30-203, 11mm, internal & external application
Pilkington **Pyrodur** ® 60-10, 10mm, internal application only
Pilkington **Pyrodur** ® 60-20, 13mm, internal & external application

Pilkington **Pyrostop** ® 30-103, 14mm, internal application only
Pilkington **Pyrostop** ® 30-10, 15mm, internal application only
Pilkington **Pyrostop** ® 30-20, 18mm, internal & external application
Pilkington **Pyrostop** ® 60-101, 23mm, internal application only
Pilkington **Pyrostop** ® 60-201, 27mm, internal & external application

2.3 Fire Resistance Performance

Glass Type	Performance period[1] (mins)	Impact resistance[2]	Security Rating[3]
1. Pilkington **Pyrodur** ® Plus 30-104, 7mm	30/15	class 2(B)2	
2. Pilkington **Pyrodur** ® 30-105, 7mm	30/15	class 3(B)3	
3. Pilkington **Pyrodur** ® 30-201, 10mm	30/15	class 2(B)2	
4. Pilkington **Pyrodur** ® 30-203, 11mm	30/15	class 2(B)2	P1A
5. Pilkington **Pyrodur** ® 60-10, 10mm	60/15	class 2(B)2	
6. Pilkington **Pyrodur** ® 60-20, 13mm	60/15	class 1(B)1	
7. Pilkington **Pyrostop** ® 30-103, 14mm	30/30	class 2(B)2	
8. Pilkington **Pyrostop** ® 30-10, 15mm	60/30	class 2(B)2	P1A
9. Pilkington **Pyrostop** ® 30-20, 18mm	60/30	class 1(B)1	P2A
10. Pilkington **Pyrostop** ® 60-101, 23mm	60/60	class 1(B)1	P1A
11. Pilkington **Pyrostop** ® 60-201, 27mm	60/60	class 1(B)1	P2A

1 Fire resistance performance in terms of integrity/insulation

2 Performance stated by sponsor

3 As defined within BS EN356, performance stated by sponsor.

3 Test Evidence

The test evidence cited in support of this scope of application document is listed in appendix I.

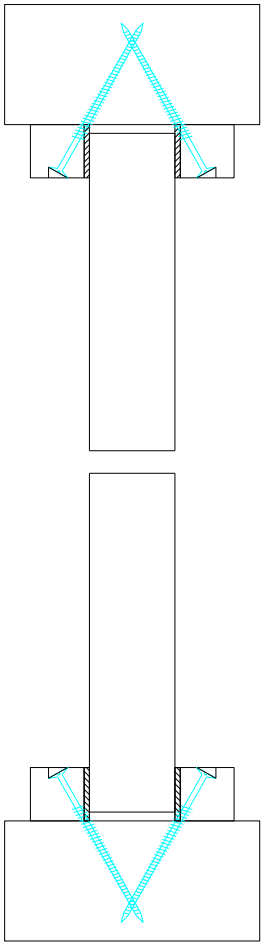
Consideration has been given to similarities of glass type, insulation performance, overall performance and other physical characteristics such as weight and thickness.

4 Analysis

A review of the existing test evidence allows standard details to be proposed which is either equivalent to or less onerous than the originally tested design. Glass type 9 shown in section 2.3 must be installed in hardwood screen framing as detailed in section 4.2.

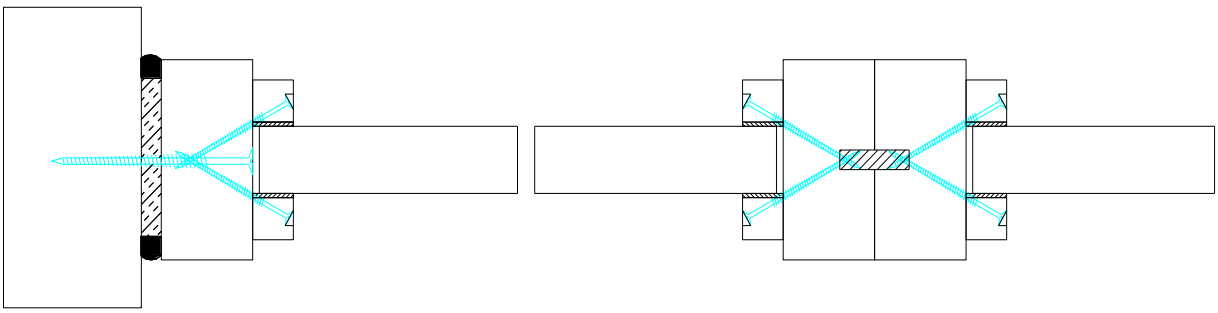
4.1 Screens for 30 minute applications

The figure adjacent shows a typical cross section of a glazed screen which can accommodate glass types 1 – 9 outlined in section 2, for 30 minutes performance.



The following construction details must be followed:

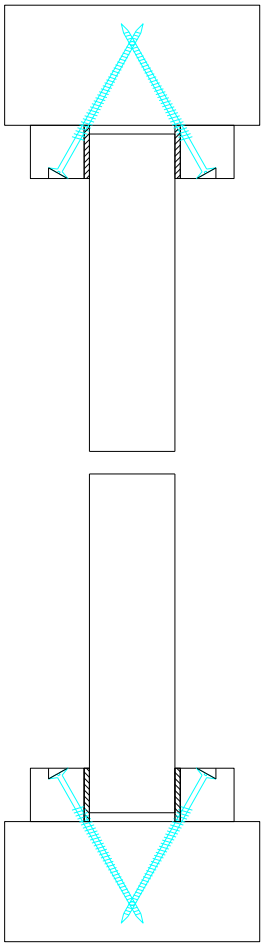
1. The framing members must be constructed from either MDF with a nominal density of > 750kg/m^3, or softwood or hardwood timber with a nominal density of > 510kg/m^3 and a cross section size of at least 70mm wide x 32mm thick.
2. The glazing beads must be either MDF (minimum density > 750kg/m^3) or softwood or hardwood timber (minimum density 510kg/m^3) and of sufficient depth to provide a minimum edge cover depth of 15mm (allowing for any setting blocks) and a width suitable to mechanically restrain the glass but no less than 15mm. Pins may be used in conjunction with glass types having 30 minutes integrity & insulation performance only.
3. The beads must be fixed in position using pins or screws of a minimum length of 40mm for 30 min applications at no greater than 200 mm centres and no further than 50mm from the corner of the glass. The pins or screws should be inserted at approximately 30° to the face of the glass.
4. The seal between the glass and the bead must be a Pilkington approved glazing seal as covered by their test evidence (e.g. Interdens, Fiberfrax tape) or products assessed within FEA/F07201 Revision A.
5. The glass pane sizes permissible are dependent on the glass type and are detailed in the relevant appendix.



4.2 Screens for 60 minute applications

The use of Beech (*Fagus sylvatica*) is not permitted for 60 minute applications, whether for constructing screen or door leaf framing, glazing beads or lippings.

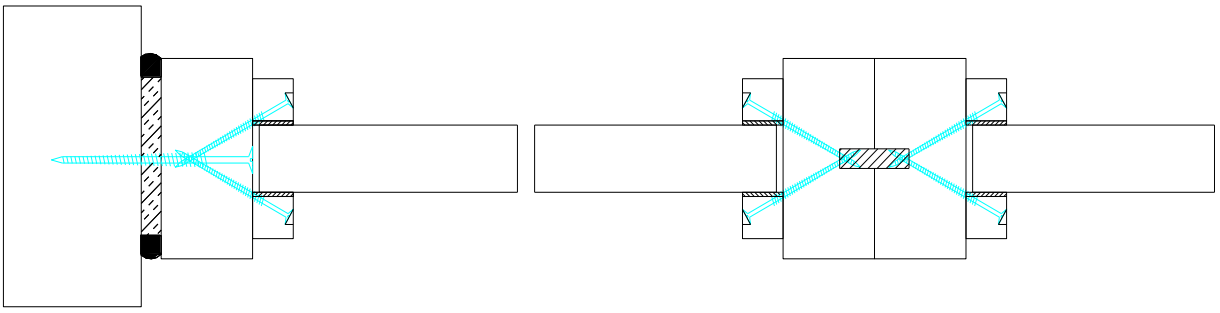
The figure adjacent shows a typical cross section of a glazed screen which can accommodate glass types 5*, 6*, 8, 9, 10 & 11, outlined in section 2, for 60 minutes performance.



The following construction details must be followed:

1. The framing members must be constructed from hardwood with a density of > 650kg/m^3 and a cross section size of at least 95mm wide x 45mm thick.
2. The glazing beads must be hardwood (minimum density 650kg/m^3) and have a minimum depth of 20mm and a width suitable to mechanically restrain the glass but no less than 20mm.
3. The beads must be fixed in position using screws of a minimum length of 65mm for 60 min applications at no greater than 200 mm centres and no further than 50mm from the corner of the glass. The screws should be inserted at approximately 30° to the face of the glass.
4. The seal between the glass and the bead must be a Pilkington approved glazing seal as covered by their test evidence (e.g. Interdens, Fiberfrax tape) or products assessed within FEA/F07201 Revision A.
5. The glass pane sizes permissible are dependent on the glass type and are detailed in the relevant appendix.

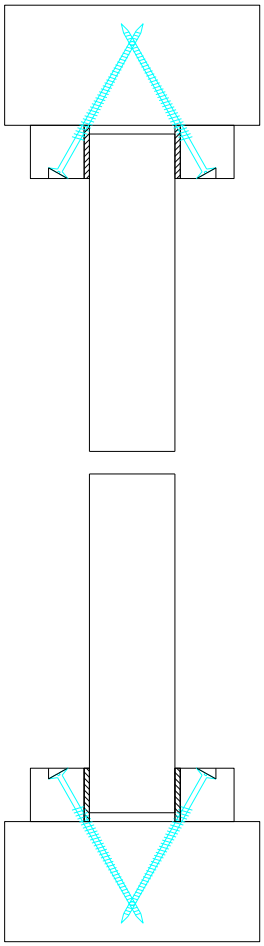
* For 60 minutes performance glass types 5 and 6 are integrity only.



4.3 Screens for 60 minute applications

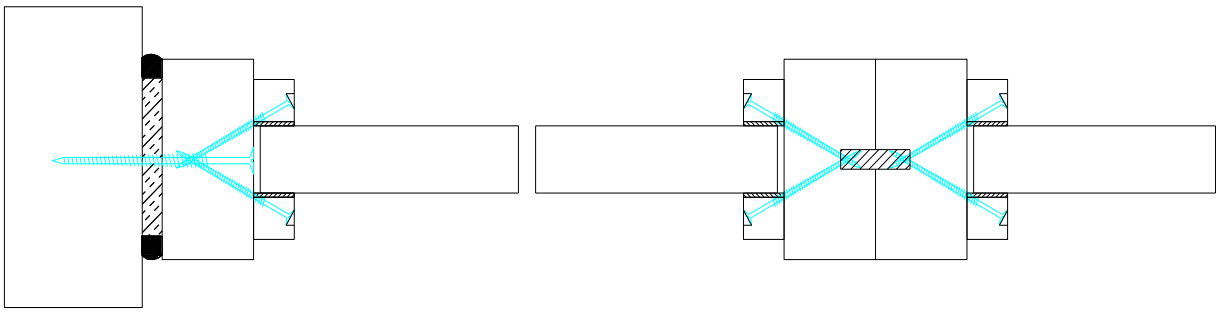
The use of Beech (*Fagus sylvatica*) is not permitted for 60 minute applications, whether for constructing screen or door leaf framing, glazing beads or lippings.

The figure adjacent shows a typical cross section of a glazed screen which can accommodate glass types 8, 9, 10 & 11 outlined in section 2, for 60 minutes integrity and insulation performance.



The following construction details must be followed:

1. Framing members must be constructed from softwood or hardwood with a density of > 560kg/m^3 and a cross section size of at least 90mm wide x 60mm thick.
2. The glazing beads must be softwood or hardwood (minimum density 560kg/m^3) and have a minimum depth of 20mm and a width suitable to mechanically restrain the glass at the pane size required, but no less than 20mm.
3. The beads must be fixed in position using screws of a minimum length of 65mm for 60 min applications at no greater than 200 mm centres and no further than 50mm from the corner of the glass. The screws should be inserted at approximately 30° to the face of the glass.
4. The seal between the glass and the bead must be a Pilkington approved glazing seal as covered by their test evidence (e.g. Interdens, Fiberfrax tape) or products assessed within FEA/F07201 Revision A.
5. The glass pane sizes permissible are dependent on the glass type and are detailed in the relevant appendix.



4.4 Additional Field of Application Rules for Screens

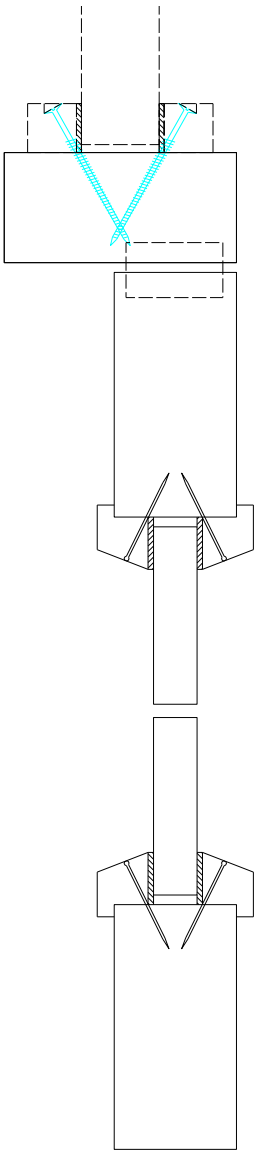
The specifications outlined in this document are directly applicable to constructions where one or more of the following changes are made, providing that the revised specification continues to comply with the appropriate design codes for timber stiffness and stability. Other changes outside those discussed in this document are not permitted.

Permissible changes:

- Decrease in the linear dimensions of panes
- Decrease in the distance between fixing centres
- Increase in the cross sectional dimension of framing members
- Changes in angle of installation by up to 10° from the vertical
- Increase in width of a multi-pane screen is allowed providing the original specimen was tested with one vertical mullion not having been fixed to the restraint frame (unrestrained) and the increase in width is achieved by additional framing members and additional glass panes which do not exceed the specified widths herein.

4.5 Doorsets (including where fitted within screens) for 30 Minute Applications

The figure adjacent shows a typical cross section of a glazed doorset which can accommodate glass types 1 – 8 outlined in section 2.



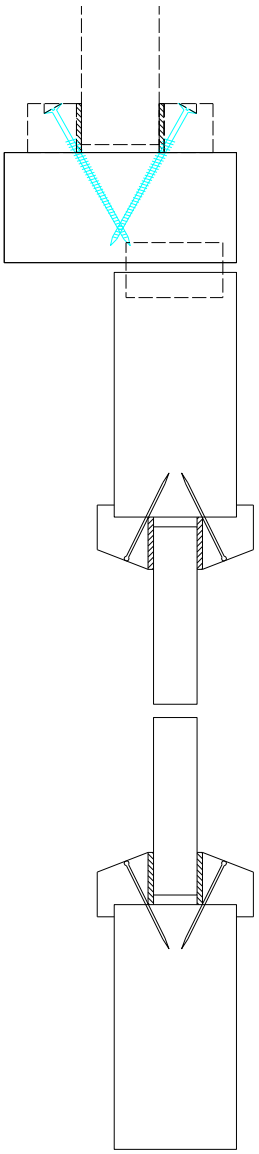
The following construction details must be followed:

1. The framing members (stiles and rails) must be constructed from softwood or hardwood with a density of greater than 510kg/m^3 and a cross section size as follows:
   - A) Thickness 44mm (except for glass types 6 & 7 shown in section 2.3 where the leaf must be 54mm thick)
   - B) Width – Head rail and stiles 100mm, mid rail 180mm (as required), bottom rail 200mm.

   The doorframe (if not integral to the screen) must have a density > 510kg/m^3 and have a minimum cross section of 70 wide x 32 thick.
2. Glazing beads must be softwood or hardwood (minimum density 510kg/m^3) and have a minimum height (upstand) of 18mm by a width to finish at least flush with the face of the leaf. They may be chamfered to 20° or square and have a 5mm x 5mm bolection return if required
3. The beads must be fixed in position using pins or screws (pneumatically fired steel pins are also acceptable for 30 min applications) of a minimum length of 40mm, at no greater than 200 mm centres, and no further than 50mm from the corner of the framing. The fixings should be inserted at approximately 30° to the face of the glass.

4.6 Doorsets (including where fitted within screens) for 60 Minute Applications

The figure adjacent shows a typical cross section of a glazed doorset which can accommodate glass types 5, 6 and 8 - 11 outlined in section 2.



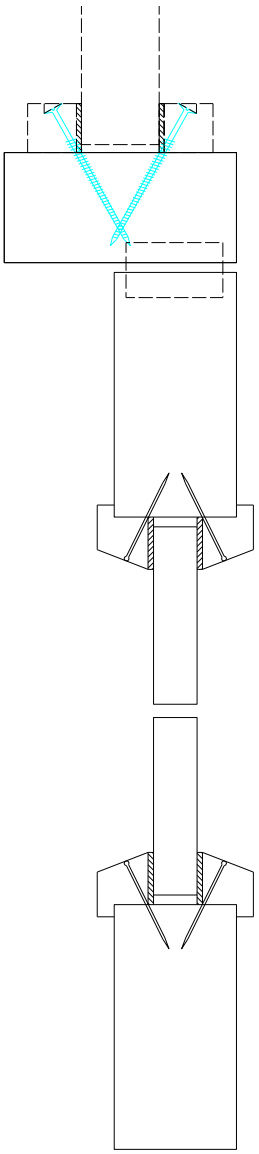
The following construction details must be followed:

1. The framing members (stiles and rails) must be constructed from hardwood with a density of greater than 640kg/m^3 and a cross section size as follows:
   - C) Thickness 54mm for (except for glass type 10 shown in section 2.3 where the leaf must be 60mm thick or glass type 11 where the leaf must be 64mm thick)
   - D) Width – Head rail and stiles 100mm, mid rail 180mm (as required), bottom rail 215mm.

   The doorframe (if not integral to the screen) must be have a density > 640kg/m^3 and have a minimum cross section of 95 wide x 45 thick.
2. Glazing beads must be hardwood (minimum density 640kg/m^3) and have a minimum depth (height) of 20mm by a width to finish at least flush with the face of the leaf. They must be chamfered to 20° for glass types 8 and 9 but may be chamfered or square for glass types 10 and 11. Beads may have a 5mm x 5mm bolection return if required
3. The beads must be fixed in position using screws of a minimum length of 65mm at no greater than 200 mm centres and no further than 50mm from the corner of the glass. The fixings should be inserted at approximately 30° to the face of the glass.

4.7 Doorsets (including where fitted within screens) for 60 Minute Applications

The figure adjacent shows a typical cross section of a glazed doorset which can accommodate glass types 8 - 11 outlined in section 2.



The following construction details must be followed:

4. The framing members (stiles and rails) must be constructed from softwood or hardwood with a density greater than 560kg/m^3 and a cross section size as follows:
   - E) Thickness 54mm for (except for glass type 10 shown in section 2.3 where the leaf must be 60mm thick or glass type 11 where the leaf must be 64mm thick)
   - F) Width – Head rail and stiles 100mm, mid rail 180mm (as required), bottom rail 215mm.

   The doorframe (if not integral to the screen) must have a density > 560kg/m^3 and have a minimum cross section of 95 wide x 60 thick.
5. Glazing beads must be hardwood (minimum density 640kg/m^3) and have a minimum depth of 20mm by a width to finish at least flush with the face of the leaf. They may be chamfered to 20° or square and have a 5mm x 5mm bolection return if required
6. The beads must be fixed in position using screws of a minimum length of 65mm at no greater than 200 mm centres and no further than 50mm from the corner of the glass. The fixings should be inserted at approximately 30° to the face of the glass.

4.8 Additional Installation Requirements for both 30 & 60 Minute Applications

1. The seal between the glass and the bead must be a Pilkington approved glazing seal as covered by their test evidence (e.g. Interdens, Fiberfrax tape) or products assessed within FEA/F07201 Revision A.
2. Perimeter intumescents must have been successfully tested for the required integrity performance in a timber joinery doorset meeting the following specification:

a) 30 minute applications must have a 20 x 4mm PVC encased Palusol based seal tested for this application on the head and vertical edges and 3 No. 10 x 4mm PVC encased, Palusol based seals tested for this application, in the meeting edges of a double doorset (2 seals opposing 1 seal)

b) 60 min applications must have either:

Seal Type	**Frame/Leaf Edge** (mm)	**Meeting edges of doubles** (mm)
1. PVC encapsulated Palusol based seal tested for this application.	2No. 15 x 4 in the frame reveal opposing 1No 20 x 4 in the leaf edge	2No. 15 x 4 in one leaf spaced 8 apart opposing 1No 20 x 4 in the opposite leaf
2. ISL Ltd Therm-A-Seal	2No. 20 x 4 seals spaced 5 apart in the frame reveal	2No. 20 x 4 seals spaced 5 apart in one leaf edge

3. The glass pane sizes permissible are dependent on the glass type and are detailed in the relevant appendix
4. All hardware including latches (bodies, forend, keep) and hinges, must be protected with either 2mm thick Mono-ammonium Phosphate based intumescent gaskets or gaskets utilising other intumescent sheet materials proven for this application.

4.9 Summary of appendices

The following table lists the contents of the appendices. The intention is that when this assessment is used in practise it will only be forwarded with the appropriate appendix for the glass type in question.

Appendix	Content
A_1	Approved glass sizes for Pilkington **Pyrodur** ® Plus 30-104, 7mm for various screen/doorset configurations
A_2	Approved glass sizes for Pilkington **Pyrodur** ® 30-105, 7mm for various screen/doorset configurations
B_1	Approved glass sizes for Pilkington **Pyrodur** ® 30-201, 10mm for various screen/doorset configurations
B_2	Approved glass sizes for Pilkington **Pyrodur** ® 30-203, 11mm for various screen/doorset configurations
C	Approved glass sizes for Pilkington **Pyrodur**® 60-10, 10mm for various screen/doorset configurations
D	Approved glass sizes for Pilkington **Pyrodur** ® 60-20, 13mm for various screen/doorset configurations
E_1	Approved glass sizes for Pilkington **Pyrostop**® 30-103, 14mm for various screen/doorset configurations (30 minute applications)
E_2	Approved glass sizes for Pilkington **Pyrostop**® 30-10, 15mm for various screen/doorset configurations (30 & 60 minute applications)
F	Approved glass sizes for Pilkington **Pyrostop**® 30-20, 18mm for various screen/doorset configurations (30 & 60 minute applications)
G	Approved glass sizes for Pilkington **Pyrostop**® 60-101, 23mm for various screen/doorset configurations
H	Approved glass sizes for Pilkington **Pyrostop**® 60-201, 27mm for various screen/doorset configurations
I	Informative appendix outlining test specification for primary evidence
J	Revisions

5 Structural Opening

The supporting construction into which screens or doorsets are to be installed must provide the required level of fire resistance designated for the screen or doorset design and be a suitable medium to permit adequate fixity.

6 Sealing to Structural Opening

The screen or door frame to structural opening gap must be appropriately protected; guidance for various methods of sealing the frame to structural opening gap is given in BS 8214: 2016, *"Timber-based fire door assemblies. Code of practice"*, which may be referred to where appropriate.

Note: where foam products (e.g. expanding PU) are referenced in BS 8214: 2016, the test evidence for the product must be checked to ensure testing was to the standards applicable to this assessment. Testing which has only been to general standards such as BS 476 Part 20:1987 or BS EN 1363-1:2012 is not acceptable.

7 Conclusion

From an analysis of the test evidence supporting the different glass types it is our opinion that, when used in the sizes tabulated in Appendices A to H, and using the construction methodologies outlined in section 4, the glass types listed in section 2 would be capable of achieving 30 minutes or 60 minutes fire resistance as required under section 2.1.

Certain deviations from the construction outlined within this assessment may be permissible if the primary test evidence given in Section 3 for a particular glass type and size allows it.

8 Declaration by the Applicant

1. We the undersigned confirm that we have read and comply with obligations placed on us by FTSG Resolution No. 82: 2001.
2. We confirm that the component or element of structure, which is the subject of this assessment, has not to our knowledge been subjected to a fire test to the Standard against which this assessment is being made.
3. We agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test to the Standard against which this assessment is being made.
4. We are not aware of any information that could adversely affect the conclusions of this assessment.
5. If we subsequently become aware of any such information we agree to ask the assessing authority to withdraw the assessment.

Signed:

Name:

For and on behalf of: Pilkington United Kingdom Ltd

9 Limitations

The following limitations apply to this assessment:

1. This assessment addresses itself solely to the elements and subjects discussed and does not cover any other criteria. All other details not specifically referred to should remain as tested or assessed.
2. This assessment is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available, Warringtonfire reserves the right to withdraw the assessment unconditionally but not retrospectively.
3. This assessment has been carried out in accordance with Fire Test Study Group Resolution No. 82: 2001.
4. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
5. This assessment relates only to those aspects of design, materials and construction that influence the performance of the element(s) under fire resistance test conditions. It does not purport to be a complete specification ensuring fitness for purpose and long-term serviceability. It is the responsibility of the client to ensure that the element conforms to recognised good practice in all other respects and that, with the incorporation of the guidance given in this assessment, the element is suitable for its intended purpose.
6. This assessment represents our opinion as to the performance likely to be demonstrated on a test in accordance with BS 476 part 22: 1987, on the basis of the evidence referred to herein. We express no opinion as to whether that evidence, and/or this assessment, would be regarded by any Building Control authority as sufficient for that or any other purpose. This assessment is provided to the client for its own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.
7. This report may only be reproduced in full. Extracts or abridgements of reports shall not be published without permission of Warringtonfire. All work and services carried out by Warringtonfire Testing and Certification Limited are subject to, and conducted in accordance with, the Standard Terms and Conditions of Warringtonfire Testing and Certification Limited, which are available at https://www.element.com/terms/terms-and-conditions or upon request.

10 Validity

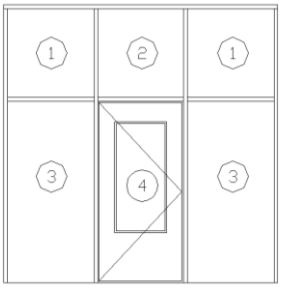
1. The assessment is initially valid for five years from the date of issue after which time it must be submitted to Warringtonfire for technical review and revalidation
2. This assessment report is not valid unless it incorporates the declaration given in Section 8 duly signed by the applicant.

Signature:		
Name:	**S Bailey**	**A M Winning**
Title:	Senior Product Assessor	Senior Product Assessor

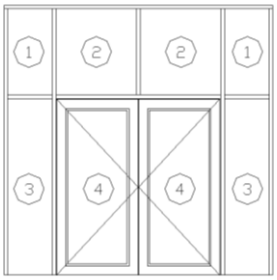
Appendix A_1

(Normative) Pilkington **Pyrodur®** Plus 30-104, 7mm

Internal Application – Impact Resistance Class 2(B)2 (BS EN 12600)
Fire Resistance 30 mins Integrity

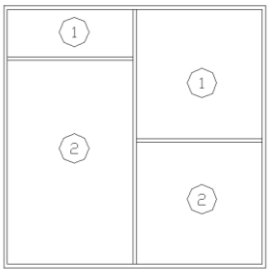


Pane Location	Maximum sight size permissible (h x w)
1	860mm x 955mm
2	860mm x 906mm
3	2057mm x 1000mm
4	1885mm x 650mm



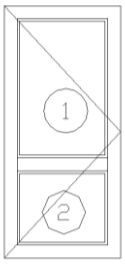
Pane Location	Maximum sight size permissible (h x w)
1	860mm x 955mm
2	760mm x 1710mm
3	2057mm x 1000mm
4	1885mm x 650mm

Pane Location	Maximum sight size permissible (h x w)
1	2057mm x 1000mm

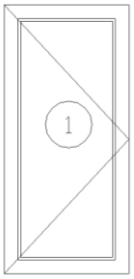


Pane Location	Maximum sight size permissible (h x w)
1	760mm x 1710mm
2	2057mm x 1000mm

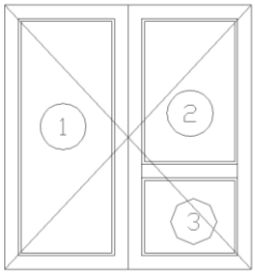
Pilkington **Pyrodur** ® Plus **30-104, 7mm** continued



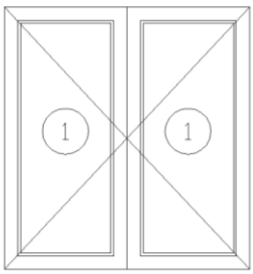
Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1885mm minus the width of the mid-rail. Width up to 760mm.
2	



Pane Location	Maximum sight size permissible (h x w)
1	1885mm x 650mm



Pane Location	Maximum sight size permissible (h x w)
1	1885mm x 650mm
2	Maximum combined height equal to 1885mm minus the width of the mid-rail. Width up to 650mm.
3	

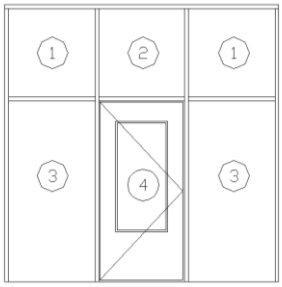


Pane Location	Maximum sight size permissible (h x w)
1	1885mm x 650mm

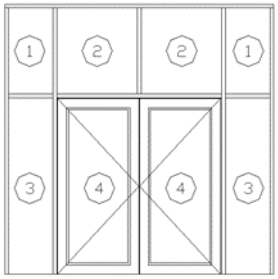
Appendix A_2

(Normative) Pilkington **Pyrodur**® 30-105, 7mm

Internal Application – Impact Resistance Class 3(B)3 (BS EN 12600)
Fire Resistance 30 mins Integrity

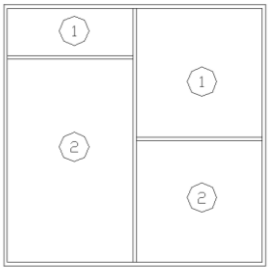


Pane Location	Maximum sight size permissible (h x w)
1	783mm x 953mm
2	783mm x 1892mm
3	2930mm x 1000mm
4	1824mm x 694mm



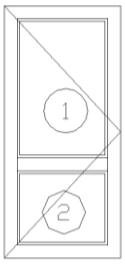
Pane Location	Maximum sight size permissible (h x w)
1	783mm x 953mm
2	783mm x 1892mm
3	2930mm x 1000mm
4	1824mm x 694mm

Pane Location	Maximum sight size permissible (h x w)
1	2930mm x 1000mm

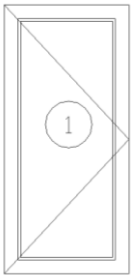


Pane Location	Maximum sight size permissible (h x w)
1	783mm x 1892mm
2	2930mm x 1000mm

Pilkington **Pyrodur® 30-105, 7mm** continued



Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1824mm minus the width of the mid-rail. Width up to 694mm
2	

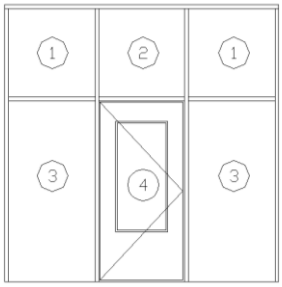


Pane Location	Maximum sight size permissible (h x w)
1	1824mm x 694mm

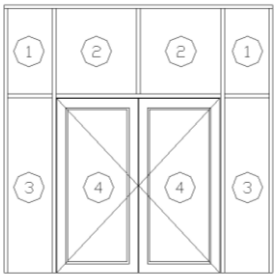
Appendix B_1

(Normative) Pilkington **Pyrodur**® 30-201, 10mm

Internal/External Application – Impact Resistance Class 2(B)2 (BSEN 12600)
Fire Resistance 30 mins Integrity

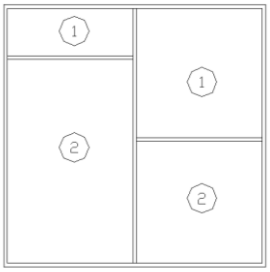


Pane Location	Maximum sight size permissible (h x w)
1	865mm x 1400mm
2	865mm x 932mm
3	2698mm x 1371mm
4	1786mm x 664mm



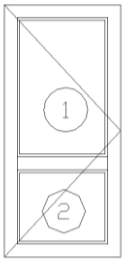
Pane Location	Maximum sight size permissible (h x w)
1	865mm x 1400mm
2	865mm x 1710mm
3	2698mm x 1371mm
4	1835mm x 650mm

Pane Location	Maximum sight size permissible (h x w)
1	2698mm x 1371mm

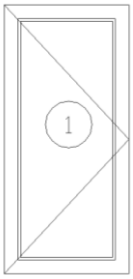


Pane Location	Maximum sight size permissible (h x w)
1	865mm x 1400mm
2	2698mm x 1371mm

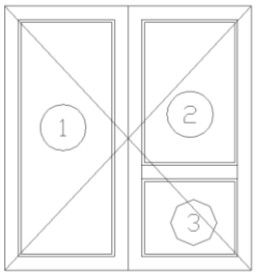
Pilkington **Pyrodur**® **30-201, 10mm continued**



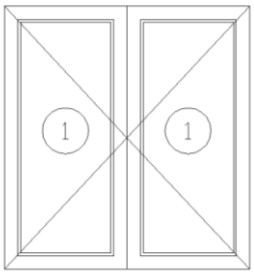
Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1885mm minus the width of the mid-rail. Width up to 760mm.
2	



Pane Location	Maximum sight size permissible (h x w)
1	1885mm x 760mm



Pane Location	Maximum sight size permissible (h x w)
1	1752mm x 732mm
2	Maximum combined height equal to 1752mm minus the width of the mid-rail. Width up to 732mm.
3	

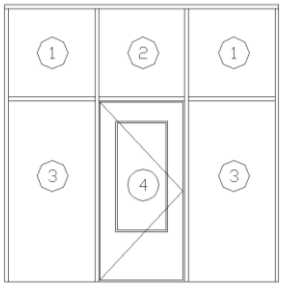


Pane Location	Maximum sight size permissible (h x w)
1	1752mm x 732mm

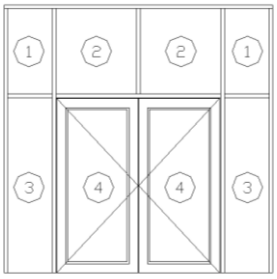
Appendix B_2

(Normative) Pilkington **Pyrodur**® 30-203, 11mm

Internal/External Application – Impact Resistance Class 2(B)2 (BSEN 12600)
Security Classification P(1)A (EN356); Fire Resistance 30 mins Integrity

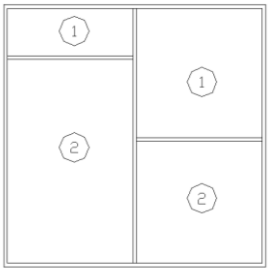


Pane Location	Maximum sight size permissible (h x w)
1	865mm x 1400mm
2	865mm x 932mm
3	2698mm x 1371mm
4	1786mm x 664mm



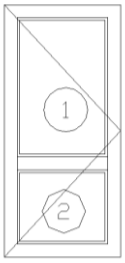
Pane Location	Maximum sight size permissible (h x w)
1	865mm x 1400mm
2	865mm x 1710mm
3	2698mm x 1371mm
4	1835mm x 650mm

Pane Location	Maximum sight size permissible (h x w)
1	2698mm x 1371mm

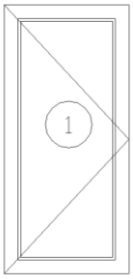


Pane Location	Maximum sight size permissible (h x w)
1	865mm x 1400mm
2	2698mm x 1371mm

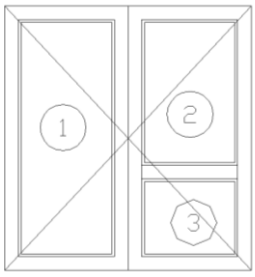
Pilkington **Pyrodur**® **30-203, 11mm continued**



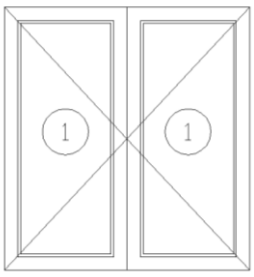
Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1885mm minus the width of the mid-rail. Width up to 760mm
2	



Pane Location	Maximum sight size permissible (h x w)
1	1885mm x 760mm



Pane Location	Maximum sight size permissible (h x w)
1	1752mm x 732mm
2	Maximum combined height equal to 1752mm minus the width of the mid-rail. Width up to 732mm
3	

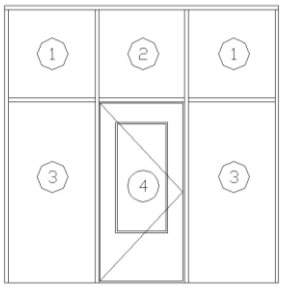


Pane Location	Maximum sight size permissible (h x w)
1	1752mm x 732mm

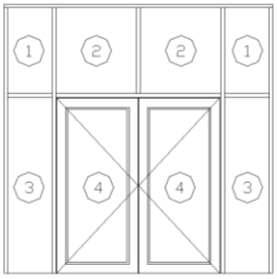
Appendix C

(Normative) Pilkington **Pyrodur**® 60-10, 10mm

Internal Application – Impact Resistance Class 2(B)2 (BSEN 12600)
Fire Resistance 60 mins Integrity

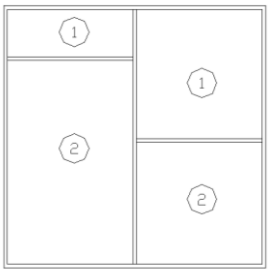


Pane Location	Maximum sight size permissible (h x w)
1	815mm x 850mm
2	735mm x 1000mm
3	1970mm x 850mm
4	1790mm x 792mm



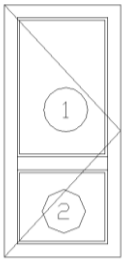
Pane Location	Maximum sight size permissible (h x w)
1	815mm x 850mm
2	735mm x 1000mm
3	1970mm x 850mm
4	1790mm x 792mm

Pane Location	Maximum sight size permissible (h x w)
1	2240mm x 1140mm

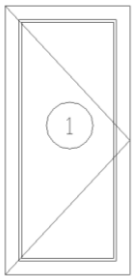


Pane Location	Maximum sight size permissible (h x w)
1	815mm x 850mm
2	2240mm x 1140mm

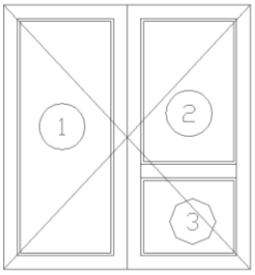
Pilkington **Pyrodur**® 60-10**, 10mm** continued



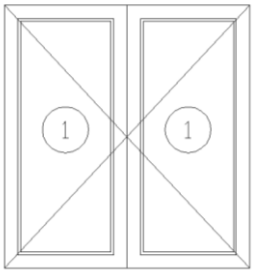
Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1790mm minus the width of the mid-rail. Width up to 792mm
2	



Pane Location	Maximum sight size permissible (h x w)
1	1790mm x 792mm



Pane Location	Maximum sight size permissible (h x w)
1	1790mm x 792mm
2	Maximum combined height equal to 1790mm minus the width of the mid-rail. Width up to 792mm.
3	



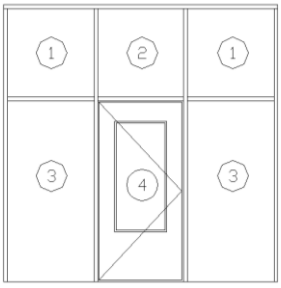
Pane Location	Maximum sight size permissible (h x w)
1	1790mm x 792mm

Appendix D

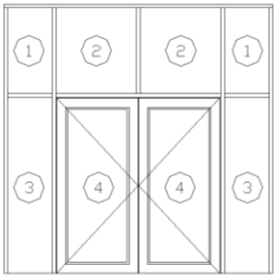
(Normative) Pilkington **Pyrodur**® 60-20, 13mm

External Application – Impact Resistance Class 1(B)1 (BSEN 12600)

Fire Resistance 60 mins Integrity

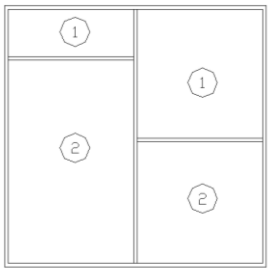


Pane Location	Maximum sight size permissible (h x w)
1	815mm x 850mm
2	735mm x 1000mm
3	1970mm x 850mm
4	1790mm x 792mm



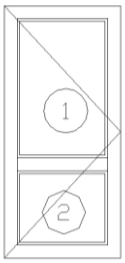
Pane Location	Maximum sight size permissible (h x w)
1	815mm x 850mm
2	735mm x 1400mm
3	1965mm x 850mm
4	1790mm x 792mm

Pane Location	Maximum sight size permissible (h x w)
1	2240mm x 1140mm

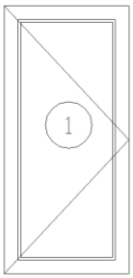


Pane Location	Maximum sight size permissible (h x w)
1	815mm x 850mm
2	1970mm x 850mm

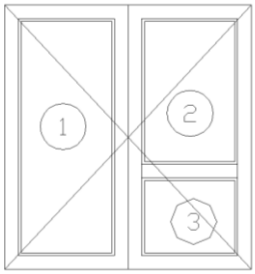
Pilkington **Pyrodur**® **60-20, 13mm** continued



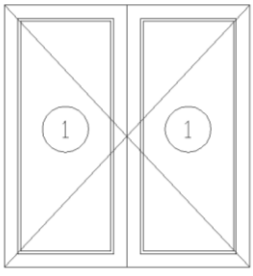
Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1790mm minus the width of the mid-rail. Width up to 792mm.
2	



Pane Location	Maximum sight size permissible (h x w)
1	1790mm x 792mm



Pane Location	Maximum sight size permissible (h x w)
1	1790mm x 792mm
2	Maximum combined height equal to 1790mm minus the width of the mid-rail. Width up to 792mm.
3	

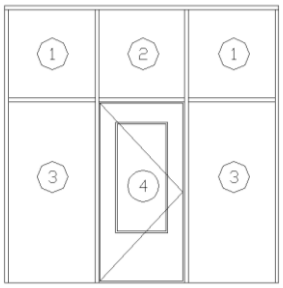


Pane Location	Maximum sight size permissible (h x w)
1	1790mm x 792mm

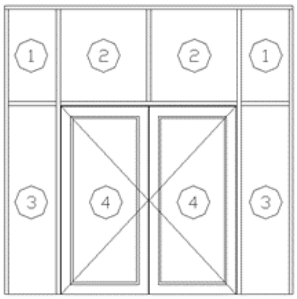
Appendix E_1

(Normative) Pilkington **Pyrostop**® 30-103, 14mm

Internal Application – Impact Resistance Class 2(B)2 (BSEN 12600)
Fire Resistance 30 mins Insulation and Integrity

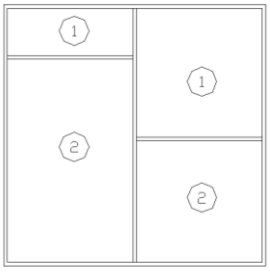


Pane Location	Maximum sight size permissible (h x w)
1	787mm x 1895mm
2	787mm x 1895mm
3	2206mm x 1006mm
4	1830mm x 702mm



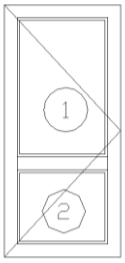
Pane Location	Maximum sight size permissible (h x w)
1	787mm x 1006mm
2	787mm x 1006mm
3	2206mm x 1006mm
4	1830mm x 702mm

Pane Location	Maximum sight size permissible (h x w)
1	2206mm x 1006mm

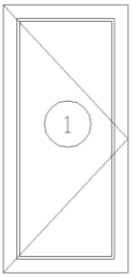


Pane Location	Maximum sight size permissible (h x w)
1	787mm x 1895mm
2	2206mm x 1006mm

Pilkington **Pyrostop**® **30-103, 14mm continued**
Fire Resistance 30 mins Insulation and Integrity



Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1830mm minus the width of the mid-rail. Width up to 702mm.
2	

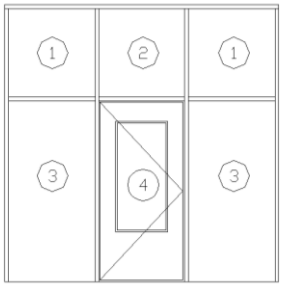


Pane Location	Maximum sight size permissible (h x w)
1	1830mm x 702mm

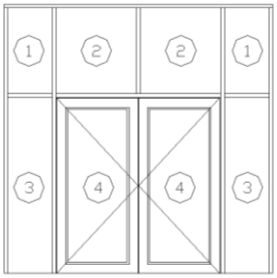
Appendix E_2

(Normative) Pilkington **Pyrostop**® 30-10, 15mm

Internal Application – Impact Resistance Class 2(B)2 (BSEN 12600)
Security Classification P(1)A (EN356); Fire Resistance 30 mins Insulation and Integrity

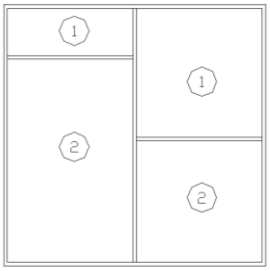


Pane Location	Maximum sight size permissible (h x w)
1	733mm x 1001mm
2	733mm x 1001mm
3	2870mm x 1370mm
4	1795mm x 795mm



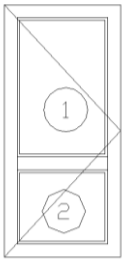
Pane Location	Maximum sight size permissible (h x w)
1	733mm x 1001mm
2	757mm x 1370mm
3	2870mm x 1370mm
4	1795mm x 795mm

Pane Location	Maximum sight size permissible (h x w)
1	2870mm x 1370mm

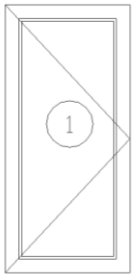


Pane Location	Maximum sight size permissible (h x w)
1	1970mm x 1370mm
2	2870mm x 1370mm

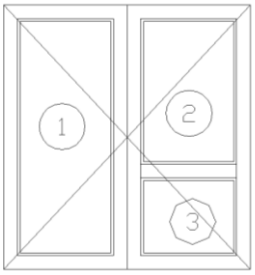
Pilkington **Pyrostop**® **30-10, 15mm continued**
Fire Resistance 30 mins Insulation and Integrity



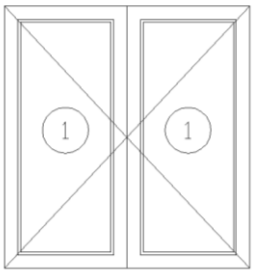
Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1795mm minus the width of the mid-rail. Width up to 795mm.
2	



Pane Location	Maximum sight size permissible (h x w)
1	1795mm x 795mm

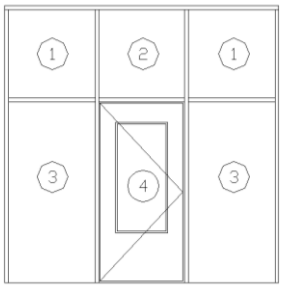


Pane Location	Maximum sight size permissible (h x w)
1	1795mm x 795mm
2	Maximum combined height equal to 1795mm minus the width of the mid-rail. Width up to 795mm.
3	

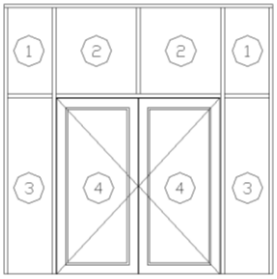


Pane Location	Maximum sight size permissible (h x w)
1	1795mm x 795mm

Pilkington **Pyrostop**® 30-10**, 15mm**
Internal Application – Impact Resistance Class 2(B)2 (BSEN 12600)
Fire Resistance 60 mins Integrity and 30 mins Insulation

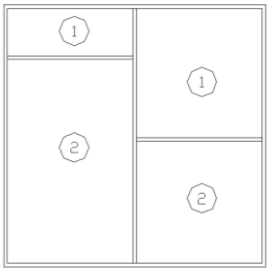


Pane Location	Maximum sight size permissible (h x w)
1	850mm x 850mm
2	733mm x 1001mm
3	1908mm x 964mm
4	1795mm x 795mm



Pane Location	Maximum sight size permissible (h x w)
1	800mm x 800mm
2	757mm x 1370mm
3	1908mm x 964mm
4	1795mm x 795mm

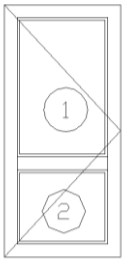
Pane Location	Maximum sight size permissible (h x w)
1	1908mm x 964mm



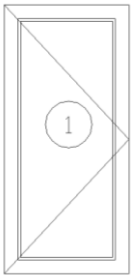
Pane Location	Maximum sight size permissible (h x w)
1	850mm x 850mm
2	1908mm x 964mm

Pilkington **Pyrostop**® **30-10, 15mm** continued

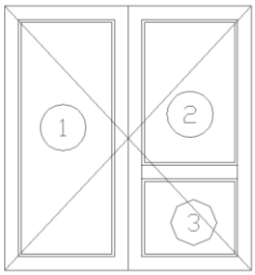
Fire Resistance 60 mins Integrity and 30 mins Insulation



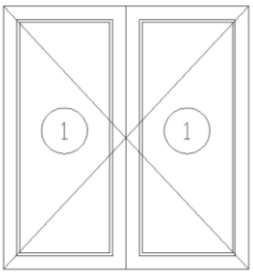
Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1795mm minus the width of the mid-rail. Width up to 795mm.
2	



Pane Location	Maximum sight size permissible (h x w)
1	1795mm x 795mm



Pane Location	Maximum sight size permissible (h x w)
1	1795mm x 795mm
2	Maximum combined height equal to 1795mm minus the width of the mid-rail. Width up to 795mm.
3	

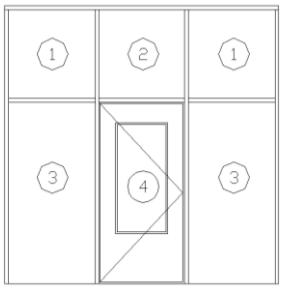


Pane Location	Maximum sight size permissible (h x w)
1	1795mm x 795mm

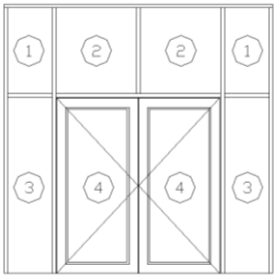
Appendix F

(Normative) Pilkington **Pyrostop**® 30-20, 18mm

Internal/External Application – Impact Resistance Class 1(B)1 (BSEN 12600)
Fire Resistance 60 minutes Integrity and 30 minutes Insulation

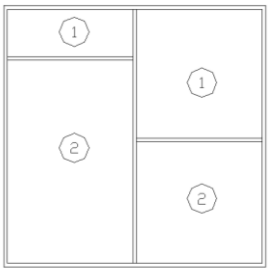


Pane Location	Maximum sight size permissible (h x w)
1	733mm x 1001mm
2	733mm x 1001mm
3	2870mm x 1370mm
4	1795mm x 795mm



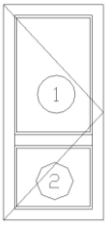
Pane Location	Maximum sight size permissible (h x w)
1	733mm x 1001mm
2	757mm x 1370mm
3	2870mm x 1370mm
4	1795mm x 795mm

Pane Location	Maximum sight size permissible (h x w)
1	2870mm x 1370mm

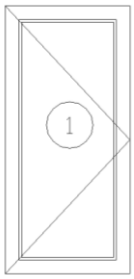


Pane Location	Maximum sight size permissible (h x w)
1	1970mm x 1370mm
2	2870mm x 1370mm

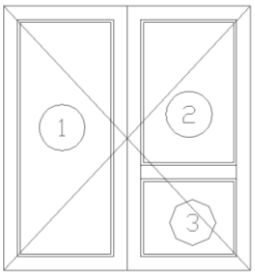
Pilkington **Pyrostop**® **30-20, 18mm** continued



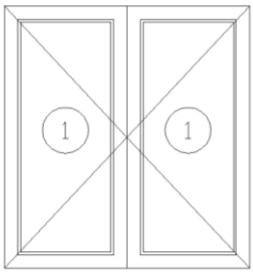
Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1795mm minus the width of the mid-rail. Width up to 795mm.
2	



Pane Location	Maximum sight size permissible (h x w)
1	1795mm x 795mm



Pane Location	Maximum sight size permissible (h x w)
1	1795mm x 795mm
2	Maximum combined height equal to 1795mm minus the width of the mid-rail. Width up to 795mm.
3	

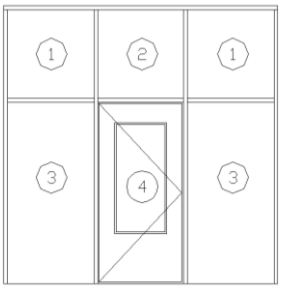


Pane Location	Maximum sight size permissible (h x w)
1	1795mm x 795mm

Appendix G

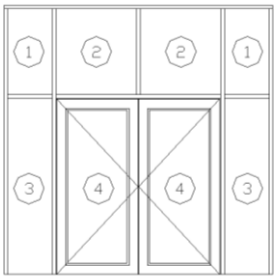
(Normative) Pilkington **Pyrostop**® 60-101, 23mm

Internal Application – Impact Resistance Class 1(B)1 (BSEN 12600)
Fire Resistance 60 mins Insulation and Integrity



DOORLEAF THICKNESS 60MM

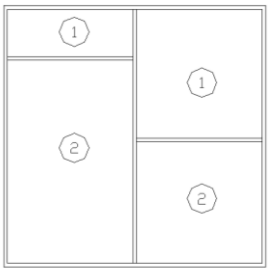
Pane Location	Maximum sight size permissible (h x w)
1	855mm x 680mm
2	855mm x 680mm
3	2910mm x 1510mm
4	1791mm x 792mm



DOORLEAF THICKNESS 60MM

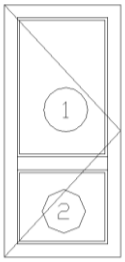
Pane Location	Maximum sight size permissible (h x w)
1	855mm x 680mm
2	855mm x 680mm
3	2910mm x 1510mm
4	1791mm x 792mm

Pane Location	Maximum sight size permissible (h x w)
1	2910mm x 1510mm

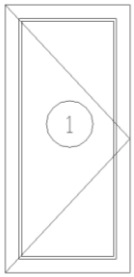


Pane Location	Maximum sight size permissible (h x w)
1	855mm x 680mm
2	2910mm x 1510mm

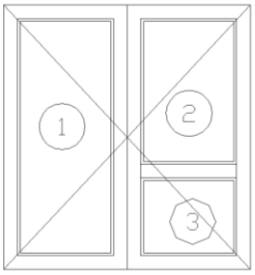
Pilkington **Pyrostop**® 60-101**, 23mm** continued



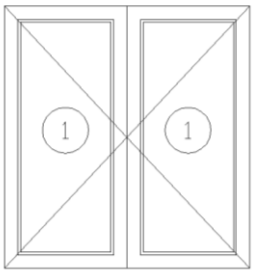
Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1791mm minus the width of the mid-rail. Width up to 792mm
2	



Pane Location	Maximum sight size permissible (h x w)
1	1791mm x 792mm



Pane Location	Maximum sight size permissible (h x w)
1	1791mm x 792mm
2	Maximum combined height equal to 1791mm minus the width of the mid-rail. Width up to 792mm
3	

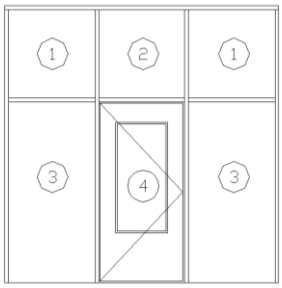


Pane Location	Maximum sight size permissible (h x w)
1	1791mm x 792mm

Appendix H

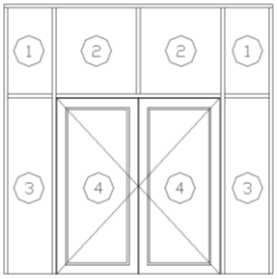
(Normative) Pilkington **Pyrostop**® 60-201, 27mm

Internal/External Application – Impact Resistance Class 1(B)1 (BSEN 12600)
Fire Resistance 60 mins Insulation and Integrity



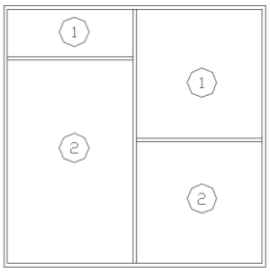
DOORLEAF THICKNESS 60MM

Pane Location	Maximum sight size permissible (h x w)
1	855mm x 680mm
2	855mm x 680mm
3	2866mm x 1381mm
4	1791mm x 792mm



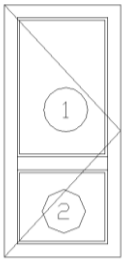
Pane Location	Maximum sight size permissible (h x w)
1	855mm x 680mm
2	855mm x 680mm (with mullion)
3	2910mm x 1510mm
4	1791mm x 792mm

Pane Location	Maximum sight size permissible (h x w)
1	2910mm x 1510mm

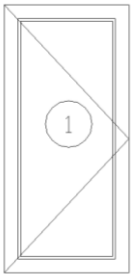


Pane Location	Maximum sight size permissible (h x w)
1	n/a
2	2910mm x 1510mm

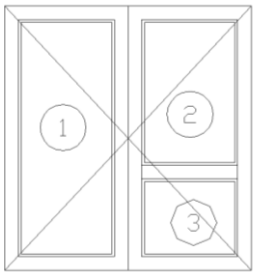
Pilkington **Pyrostop® 60-201, 27mm** continued



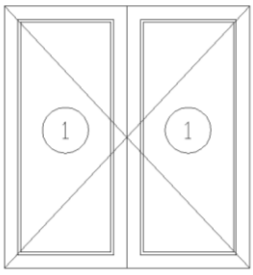
Pane Location	Maximum sight size permissible (h x w)
1	Maximum combined height equal to 1791mm minus the width of the mid-rail. Width up to 792mm
2	



Pane Location	Maximum sight size permissible (h x w)
1	1791mm x 792mm



Pane Location	Maximum sight size permissible (h x w)
1	1791mm x 792mm
2	Maximum combined height equal to 1791mm minus the width of the mid-rail. Width up to 792mm
3	



Pane Location	Maximum sight size permissible (h x w)
1	1791mm x 792mm

Appendix I

Performance Data

Primary Data

Report No.	Doorset/ Screen	Glass Type	Test Standard	Result (minutes)
FR1425	Screen	Pilkington **Pyrostop**® 30-10, 15mm	BS476: Part 22	30 +
RF03068	Both	Pilkington **Pyrodur**® Plus 30-104, 7mm	BSEN 1634:1/1364:1	30 +
RF00138	Both	Pilkington **Pyrodur**® Plus 30-104, 7mm	BSEN 1634:1/1364:1	30 +
145651	Screen	Pilkington **Pyrodur**® 60-10, 10mm	BSEN 1364:1	60 +
RF00137	Doors	Pilkington **Pyrodur**® Plus 30-104, 7mm	BSEN 1634:1	30 +
RF05036	Both	Pilkington **Pyrodur**® 60-10, 10mm	BSEN 1634:1/1364:1	60 +
RF06175	Doors	Pilkington **Pyrostop**® 60-101, 23mm	BSEN 1634:1	60 +
RF01024	Both	Pilkington **Pyrodur**® 30-201, 10mm	BS476: Part 22	30 +
68360	Screen	Pilkington **Pyrodur**® 60-20, 13mm	BS476: Part 22	60 +
RF04001	Doors	Pilkington **Pyrodur**® 60-20, 13mm	BS476: Part 22	60 +
RF05037	Both	Pilkington **Pyrostop**® 30-10, 15mm	BSEN 1634:1/1364:1	30 +
RF03058	Screen	Pilkington **Pyrostop**® 60-101, 23mm	BSEN 1364:1	60 +
RF05035*	Doors	Pilkington **Pyrostop**® 60-101, 23mm	BSEN 1634:1	60 +
NR433090	Screen	Pilkington **Pyrostop**® 60-101, 23mm/ Pilkington **Pyrostop**® 60-201, 27mm	BSEN 1364:1	60 +
RF06091	Screens	Pilkington **Pyrodur**® 30-201, 10mm	BSEN 1364:1	30 +
RF07012**#	Doors	Pilkington **Pyrodur**® Plus 30-104, 7mm	BSEN 1634:1	30 +
176288	Screen	Pilkington **Pyrostop**® 30-10, 15mm	BS476: Part 22	60 +
11-V-271#	Both	Pilkington **Pyrostop**® 60-101, 23mm	BSEN 1634:1	60+
CFR1803061#	Screen	Pilkington **Pyrostop**® 30-10, 15mm	BS476: Part 22	60 +
RF16200#	Both	Pilkington **Pyrodur**® 30-105, 7mm	BSEN 1363:1/1364:1	30 +
CFR1410231#	Screen	Pilkington **Pyrodur**® Plus 30-104, 7mm	BSEN 1364:1	30 +
FEP/F14310#	Both	Pilkington **Pyrostop**® **3**0-103, 7mm	BSEN 1363:1/1634:1	30 +
ift17-003273-PRO1#	Screen	Pilkington **Pyrodur**® **3**0-105, 7mm	BSEN 1363:1/1364:1	30 +
WF372578#	Both	Pilkington **Pyrodur**® **3**0-104, 7mm	BS476: Part 22	30 +

* Door perimeter to be based on doorset A only.

** Latch detail supported by report CFR0704111.

Softwood framing and/or beads.

Performance Data by Glass Type

	Single door in screen	Double door in screen	Single pane screen	Multi pane screen	2XGG single door	Pattern 10 single door	Mixed Double door	Pattern 10 double door
Pyrodur 30-104	RF03068	RF00138	RF03068	RF03068 CFR1409021	RF00137 RF07012#	RF00137 RF07012#	RF00137/8 RF07012#	RF00138 RF07012#
Pyrodur 30-105	RF16200#	n/a	RF16200 17-003273-PRO1#	RF16200# 17-003273-PRO1#	n/a	RF16200#	n/a	n/a
Pyrodur 60-10	RF05036	RF05036 RF06175	145651	RF05036	RF05036	RF05036	RF05036 RF06175	RF05036 RF06175
Pyrodur 30-201	RF01024 RF00138*** RF06091	RF00138*** RF01024 RF06091	RF01024 RF06091	RF01024 RF06091	RF01024 RF00137	RF01024 RF00137	RF00137/8***	RF00138***
Pyrodur 60-20	RF05036 68360 RF04001	RF05036 68360 RF04001 RF06175	RF05036 68360	RF05036 68360	RF04001†	RF04001†	RF04001 RF06175	RF04001 RF06175
Pyrostop 30-103	RF14310#	n/a	RF14310#	RF14310#	n/a	RF14310#	n/a	n/a
Pyrostop 30-10 (30 min applic.)	176288 RF05037	RF00138*** FR1425/ RF05037 176288	RF05037	RF05037	RF05037	RF05037	RF00137/8*** RF05037	RF00138*** RF05037
Pyrostop 30-10* (60 min applic.)	176288 FR1425	176288 FR1425	176288 FR1425	176288 FR1425	RF05035 RF05037 176288	RF05035 RF05037 176288	RF06175 RF05037 176288	RF06175 RF05037 176288
Pyrostop 60-101	RF03058 RF05035	RF03058 RF06175 11-V-271#	RF03058	RF03058 11-V-271#	RF05035	RF05035	RF06175	RF06175 11-V-271#
Pyrostop 30-20* (30 min.)	RF05037**	RF05037 RF00138***	RF05037	RF05037	RF05037	RF05037	RF05037 RF00138***	RF05037 RF00138***
Pyrostop 60-201	NR433090 RF05035 RF03058	NR433090 RF06175 RF03058	NR433090 RF03058	NR433090 RF03058	RF05035 NR433090	RF05035 NR433090	RF06175 NR433090	RF06175 NR433090

* 54mm 60min door design to be used

** Door glazed with 30-10

*** Double doorsets assessable based on glass performance vs type 30-104

† Not joinery doors

Softwood framing and/or glazing beads

Justification for the assessments detailed in this report.

The assessments in both Section 4 of this report and Normative appendices A – H are based on the evidence referenced in the Performance Data tables above and summarised in the following Test Summary tables.

The matrix of Performance by Glass type, above indicates which tests in the Primary Data table have been used directly or as assessed amalgamations of test evidence for which glass type with which screen and doorset configurations.

Where softwood has been assessed in section 4 for use as both framing and glazing beads, the basis of the assessment is that where softwood beads and framing have been shown by test evidence to perform successfully at the largest sizes required, the performance can be used to justify the performance of the tested glass type in other configurations and glass sizes proven by test with hardwood framing and beads.

In addition, where appropriate, alternative glass types can be justified if they are in the same Pilkington product family. (Refer to Pilkington UK for further guidance on product families.)

Test Summaries: Table 1 – Pilkington **Pyrodur®** & **Pyrodur®** Plus

Report No.	Doorset/ Screen	Glass Type	Screen Timber X-section	Door timber X-section	Glazing detail	Door intumescent detail	Test Method
RF03068	Both	30-104	Sapele 95x45	Sapele 100/95/217 x45	Door 23x23 HW beads & Interdens. Screen 20x20 HW beads Interdens Steel pins	20x4 centrally fitted Palusol	BSEN
RF00138	Both	30-104	Sapele 95x44	Sapele 100/95/212 x44	Door 24x20 HW beads & Interdens. Steel pins. Screen 20x20 HW beads & Interdens.	20x4 Palusol frame. 3No 10x4 Palusol in MEs	BSEN
C145651	Screen	60-10	Sapele 90x50	n/a	Norsound liner Hodgson Firestrip 60 25x35 HW beads.	n/a	BSEN
RF00137	Doors	30-104	n/a	Sapele 25/95/180/215 x44	Interdens 24x20 HW beads & steel pins	20x4 Palusol centrally fitted	BSEN
RF05036	Both	60-10	Sapele 95x45	Sapele 100/95 x 54	Door Hodgson Firestrip 60 Norsound liner 20x24 HW beads. Screen 20 high HW beads Hodgson Firestrip 60.	2No 15x4 Palusol in frame 1No 15x4 Palusol in leaf	BSEN
RF01024	Both	30-201	Sapele 95x45	IBC Door	20x20 beads HW Interdens – Screen Fireglaze 60 – Leaf	n/a	BS
RF16200	Both	30-105	Softwood 70x32	Softwood 100/70/200 x44	Leaf & Screen – Zero Seals ceramic fibre tape 15x3 Softwood beads 20x18 in screen, 20x15.5 in leaf	15x4 Pyroplex Box Seal centrally fitted	BSEN

Report No.	Doorset/ Screen	Glass Type	Screen Timber X-section	Door timber X-section	Glazing detail	Door intumescent detail	Test Method
CFR1410231	Screen	30-104	Softwood 70x33	n/a	Fireprotect Ltd 20x3 Ceramic fibre tape 20x20 softwood beads	n/a	BSEN
RF00137	Doors	30-104	n/a	Sapele 95/180/215 x44	20x2 Interdens 24x20 HW beads	20x4 Palusol all edges	BSEN
C68360	Screen	60-20	Steel	n/a	n/a	n/a	BS
RF04001	Doors	60-20	n/a	48 thick Bridgeman IBC Doorleaf	Fireglaze 60 & liner	2No 15x4 Therm-a-Seal	BS
RF07012	Doors	30-104	n/a	European Redwood 100/175/200 x 44	20x20 Hardwood bead with 14ºc chamfer and 5x5 bolection return. 15x4 Intumescent Seals Ltd Therm-A-Bead.	Frame Head + Jambs, 1No 10x4 Therm-A-Seal and 1No 10x4 Therma-A-Blade meeting edges. 2No Therm-A-Seal in one leaf opposing. 1No Therm-A-Blade in the other leaf (spaced 10 apart).	BSEN
CFR0704111	Doors	30-104	n/a	European Redwood 100/200 x 42.5	As per RF07012	As per RF07012 except latch protected with 2 thick Intumescent Seals Ltd Therm-A-Flex.	BSEN (Indicative)
CFR1409021	Screen	30-104	Softwood 70x33	n/a	20x20 softwood bead with 20ºc chamfer; 20x3 Technical Fibre Products Ceramic/mineral tape	n/a	BSEN (Indicative)

Report No.	Doorset/ Screen	Glass Type	Screen Timber X-section	Door timber X-section	Glazing detail	Door intumescent detail	Test Method
WF398276	Door	30-105	n/a	Strebord 44	17x17 softwood bead Technical Fibre Products Ceramic/mineral tape	15 x 4 Pyroplex Rigid Box Seal FO8700	BS (Indicative)

Note: All measurements are in mm

Test Summaries: Table 2 - Pilkington **Pyrostop®**

Report No.	Doorset/ Screen	Glass Type	Screen Timber X-section	Door timber X-section	Glazing detail	Door intumescent detail	Test Method
FR1425	Screen	30-10	Hardwood 82x40	n/a	30x20 HW beads Fibrefrax & Interdens. Screws @ 200	n/a	BS
RF14310	Both	30-103	European Redwood 70x33	European Redwood 110/200 x54	Leaf & Screen – Zero Seals mineral fibre tape 15x3 Softwood beads 20x18 in screen, 20x15.5 in leaf	15x4 Pyroplex Box Seal centrally fitted	BSEN
RF06175	Doors	60-101	n/a	Sapele 100/174/200 x 60	GL 60 liner 25x5 Fibrefrax 30 high x 19 HW beads & 70 long screws	2No 20x4 Therm-a-Seal frame. 2No 20x4 Therm-a-Seal meeting edge.	BSEN
RF05037	Both	30-10	Sapele 95x45	Sapele 100/95 x44	Hodgsons Firestrip30. 20x16 HW bead – door. 20 deep HW – screen.	20x4 Palusol centrally fitted.	BSEN
RF03058	Screen	60-101	Utile: 95x45	n/a	Utile:20 deep, 2 thick Interdens	n/a	BSEN
RF05035	Doors	60-101	n/a	Sapele 100/180/200 x54	Norsound 50x2 Hodgson Firestrip30 20x3	2No 15x4 Palusol frame 1No 15x4 Palusol leaf	BSEN
11-V-271	Both	60-101	Larch 60x98	Larch 115x80	15x4 glazing tape behind beads, 20x2 intumescent tape lining aperture. 25x20 deep Larch leaf & screen	2No 20x2 intumescent 1 each offset in leaf and frame	NFEN

Report No.	Doorset/ Screen	Glass Type	Screen Timber X-section	Door timber X-section	Glazing detail	Door intumescent detail	Test Method
NR433090	Screen	60-201/60-101	Hardwood 82x40	n/a	Ceramic fibre tape 4mm thick with 22mm deep hardwood beads	n/a	BSEN
176288	Screen	30-10	Hardwood 90x44	n/a	Pyroplex FS60 glazing system comprising a 3.3mm thick seal (26 deep x 22.3 wide) between the glass and beads/framing	n/a	BS

Appendix J

Revisions

Revision	Warringtonfire Reference	Date	Description
A	WF368307	29.01.2019	Revalidation of entire document together with the incorporation of additional test evidence to allow the use of softwood framing and glazing beads where appropriate and the use of Pilkington **Pyrodur** ® 30-105, 7mm glass. Update document to new Warringtonfire format