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Testing, calibrating, advising.

Title:

Global Fire Resistance Assessment
of EGGER FD30 & FD30 Decor
44mm Door Blanks

30 Minutes Fire Resistance

WF Report No:

Chilt/A13085 Revision D

WF Contract No:

WF406084

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Prepared for:

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Exova Warringtonfire – the new name for BM TRADA

On December 1st 2015, Chiltern International Fire Limited (trading as BM TRADA) commenced trading under the name Exova Warringtonfire.

To coincide with this change, our Technical Reports, Test Reports, Product Assessments, company stationery and marketing collateral have been updated to reflect the Exova Warringtonfire branding.

The validity of all documents previously issued by Chiltern International Fire Limited including certificates, test reports and product assessments is unaffected by this change. A letter to this effect is available upon request by e-mailing globalfire@exova.com

About Exova Warringtonfire

Exova Warringtonfire is part of the Exova Group one of the world's leading laboratory-based testing groups, trusted by organisations to test and advise on the safety, quality and performance of their products and operations. Headquartered in Edinburgh, UK, Exova operates 143 laboratories and offices in 32 countries and employs around 4,500 people throughout Europe, the Americas, the Middle East and Asia/Asia Pacific. With over 90 years' experience, Exova specialises in testing across a number of key sectors from health sciences to aerospace, transportation, oil and gas, fire and construction.

Be assured that whilst the name will change, your service provision and primary contacts have not. What will be available to you is a wider team of testing experts and an extended range of testing capabilities including structural steelwork testing, ventilation duct and damper testing, ASTM testing, water mist system testing and smoke toxicity testing and covering additionally both the rail and marine sectors.

If you have any questions, please do not hesitate to contact a member of the team and we will do our best to answer them. We appreciate your business to date and we look forward to working with you in the future.

Kind regards

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1 Introduction

This document constitutes a Global Assessment relating to Egger (UK) Ltd. 44mm thick, 30 minute fire resisting doorsets. The assessment uses established extrapolation and interpretation techniques in order to extend the scope of application by determining the limits for the design based on the tested constructions and performances obtained. The assessment is an evaluation of the potential fire resistance performance, if the elements were to be tested in accordance with BS 476: Part 22: 1987 and is only valid on presentation of the report 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.

Typically therefore 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 Agreement EGA 10 Rev 2: 2014.

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 General Description of Construction

The primary construction for door leaves of this design comprises the following:

- A solid sheet of 44mm thick Egger particleboard (minimum density 540kg/m³ to maximum density 580kg/m³). Where required, the leaves are to be lipped, see section 6.

3 Leaf Sizes

Assessment for increased leaf dimensions is based on the design's performance and the characteristics exhibited during test. Data sheets specifying the maximum assessed leaf sizes and graphs showing the permitted gradient between maximum height and width are contained in Appendix D.

Unequal leaf double doorsets are covered by this assessment with no restriction on the smaller leaf.

4 Doorset Configurations and Orientation

4.1 Configurations

Based on the test evidence listed in Appendix A, this assessment covers the following doorset configurations:

Abbreviation	Description
LSASD & ULSASD	Latched & unlatched, single acting, single doorset
DASD	Double acting, single doorset
LSASD+OP & ULSASD+OP	Latched & unlatched, single acting, single doorset + flush overpanel
LSADD & ULSADD	Latched & unlatched, single acting, double doorset
LSADD+OP & ULSADD+OP	Latched & unlatched, single acting, double doorset + flush overpanel
DADD	Double acting, double doorset

4.2 Orientation

The primary fire resistance tests for these designs were all conducted with the doorset hung such that the door leaf opened towards the fire, which is considered the most onerous orientation in terms of fire resistance performance. Based on this testing, assessment is made that the fire risk may be from either side of the doorset.

5 Leaf Size Adjustment

Egger particleboard core door leaves may be altered as follows:

Element	Reduction
Leaf	The manufactured size of the leaf may be reduced in height or width without restriction provided the lipping requirements in section 6 are complied with.
Timber lippings	Dimensions stated in section 6.1 may be reduced by 20% for fitting purposes

6 Edging Materials

6.1 Timber Lippings

Egger particleboard core door leaves must be lipped in accordance with the following specification:

Material	Size (mm)	Min. Density (kg/m ³)
Straight grained, joinery quality hardwood, free from knots, splits and checks	1. Flat = 6-13 thick with a maximum 2mm profiling permitted at corners of lipping (see section 7.1)	640
	2. Rounded = 10-15 thick with a radius matching the distance between the leaf edge and floor pivot (see section 7.1)	
	3. Rebated = 23-28 thick with a 15 high x 22 deep rebate	

Notes:

1. Single doorsets are not permitted with rebated vertical edges.
2. Single & double doorsets without flush overpanels only require lipping on the vertical edges, but may be lipped on all edges if required.
3. Doorsets with flush overpanels must be lipped on the vertical edges and additionally at the bottom edge of the overpanel and top edge of the doors.
4. Single and double doorsets without flush overpanels must use square edges only.
5. Double doorsets with flush overpanels may use a square or rebated overpanel junction.
6. Double doorsets are not permitted with rebated meeting edges.

6.2 ABS Lippings

Single leaf Egger doors may be lipped in accordance with the following specification:

Material	Size (mm)	Density (kg/m ³)
ABS	2 thick	1150 - 1160

Notes:

1. 2mm thick ABS lippings may be applied to all edges of single leaf doorsets only (see Appendix D for single leaf size ranges).
2. Where ABS lippings are fitted to single leaf doors, door edge intumescent seals must be fitted in the frame reveal, not the leaf edge.
3. The adhesive to be used for applying ABS lippings must be either PVA or PUR (see section 12).

7 Door Frames

7.1 Door Frame Construction

Door frames for Egger particleboard core door leaves may be timber or MDF as follows:

Material	Frame Section Size (mm)		Min. Density (kg/m ³)
	Single Acting	Double Acting	
Softwood	70 x 32	70 x 40	510
Hardwood	70 x 32	70 x 40	510
MDF	70 x 30	70 x 40	750

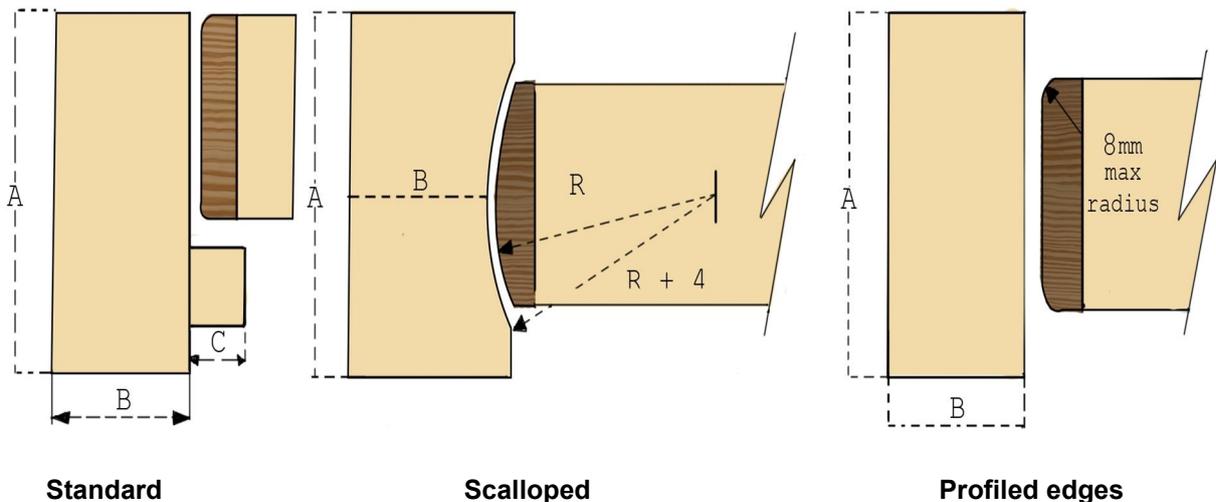
If the doorset features a transomed overpanel, the door frame must be softwood or hardwood with a minimum section of 70mm x 32mm and of the minimum densities stated above. All door frame timber must be straight grained, joinery quality, free from knots, splits and checks.

Flush overpanels are not permitted with double acting doorsets. See section 9.2 for requirements when glazed fanlights are required.

A 12mm deep planted stop is adequate for single acting frames whilst double acting frames may be scalloped or square. If frames are square the maximum radius to the corners of the leaf is 8mm. Frame joints must be mortice and tenoned, mitred or half lapped. Joints must be tight with no gaps and must be mechanically fixed with appropriate sized ring shank nails or steel wood.

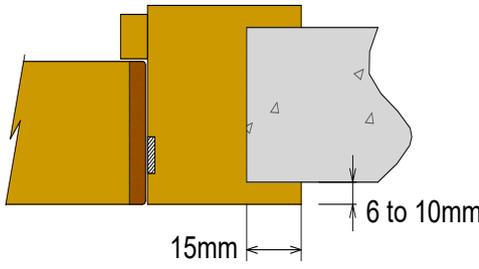
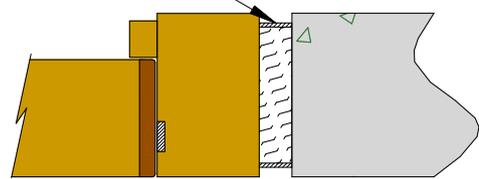
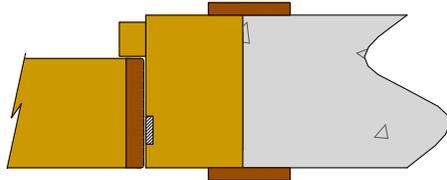
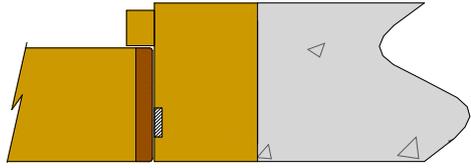
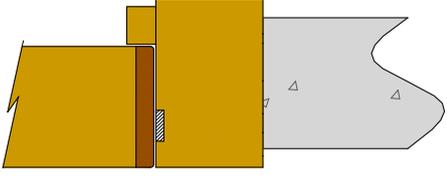
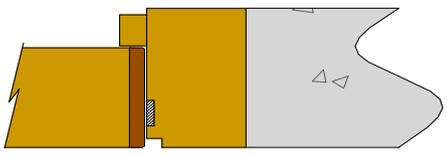
The following diagram depicts the assessed frame profiles and dimensions:

A = 70mm B = 30-40mm (see table above for details) C = 12mm
R = Radius from floor spring – 8mm radius to create maximum 2mm edge profiling



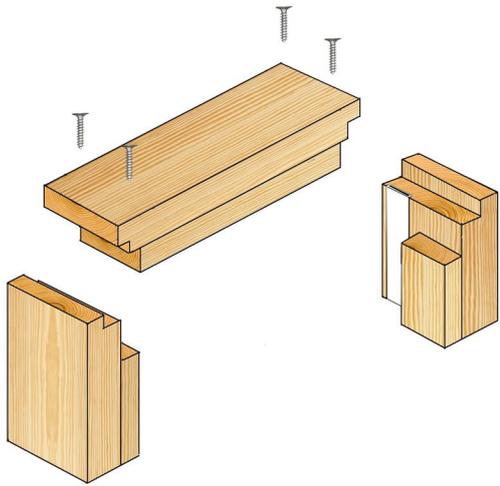
7.2 Door Frame Installation

The following diagrams indicate acceptable door frame installations:

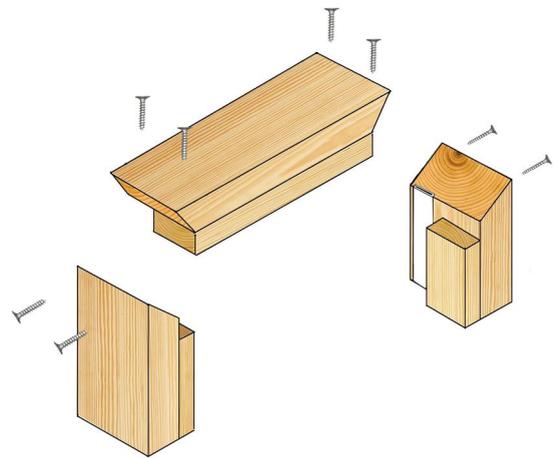
Permitted Installations	
 <p style="text-align: center;">15mm</p> <p style="text-align: center;">6 to 10mm</p>	<p>Max 10 x 10mm shadow gap with 2mm intumescent mastic capping or 10 x 4mm PVC encased intumescent seal</p> 
<p>6-10mm is the maximum a frame is permitted to be proud of the structural surround when combined with a 15mm bolection return. Projecting frames outside these dimensions will require specific test evidence or assessment.</p>	<p>Shadow gaps are permitted as shown in the above diagram providing the frame to structural surround is infilled with timber of the same density as the frame or a non combustible material such as plasterboard. Other shadow gap dimensions will require specific test evidence or assessment.</p>
	
<p>Architraves overlapping the frame to structural surround junction are always permitted where required but may be mandatory depending on the size of frame to surround junction gap and the fire stopping used. See section on Sealing to the Structural Surround.</p>	<p>Depending on the size of the frame to surround junction gap and the fire stopping methods used, it may be permitted to install doorsets without architraves. See section on Sealing to the Structural Surround.</p>
Installations Not Permitted	
	
<p>Projecting frames without bolection returns are not permitted without specific test evidence or assessment due to the potential for increased charring to the back of the frame.</p>	<p>Quirks between the leaf and frame are not permitted without specific test evidence or assessment due to the potential for increased charring of the leaf to frame gap.</p>

Drawing is representative.; actual installation must be as the text within this document specifies.

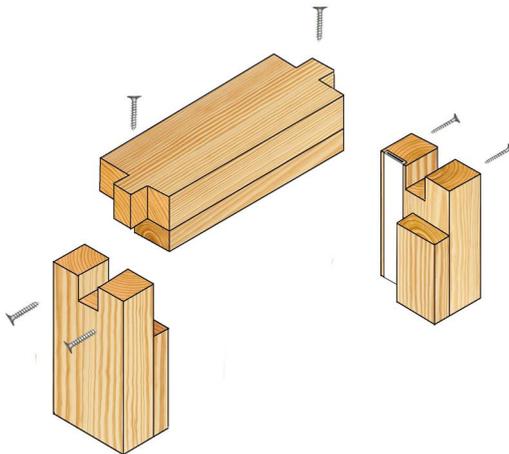
7.3 Door Frame Joints



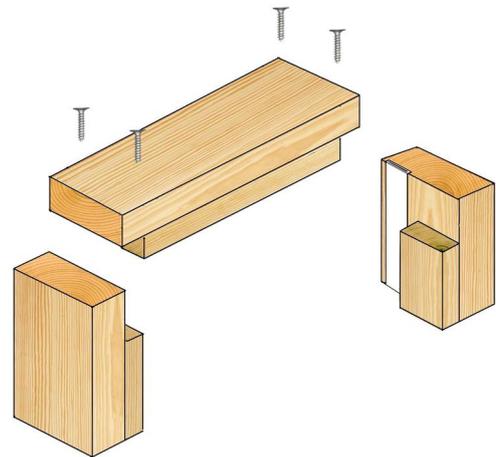
Half Lapped Joint



Mitre Joint



Mortice & Tenon Joint



Butt Joint

Note: Drawings are representative of each type of door frame joint; actual construction in terms of intumescent seal location and material, etc. must be as the text within this document specifies.

8 Intumescent Materials

The seal specification for each configuration is shown in Appendix D.

The intumescent materials tested/assessed for this doorset design are as follows:

Application	Location	Product/Manufacturer
Edge seals	Fitted in the frame jambs or leaf edges	<ol style="list-style-type: none"> 1. Type 617 - Lorient Polyproducts Ltd. 2. 100P - Mann McGowan Fabrication Ltd. 3. Pyroplex Rigid Box Seal – Pyroplex Ltd.
Hinges	Under hinge blades (doorsets over 2440mm high)	<ol style="list-style-type: none"> 1. 1mm MAP paper - Lorient Polyproducts Ltd. 2. 1mm Interdens - Dufaylite Developments Ltd. 3. 1mm Therm-A-Flex - Intumescent seals Ltd. 4. 1mm Pyrostrip - Mann McGowan Ltd.
Lock/latches	Under forend & keep (forends over 57 x 26mm)	<ol style="list-style-type: none"> 1. 1mm MAP paper - Lorient Polyproducts Ltd. 2. 1mm Interdens - Dufaylite Developments Ltd. 3. 1mm Therm-A-Flex - Intumescent seals Ltd. 4. 1mm Pyrostrip - Mann McGowan Ltd.
Flush bolts	Lining all sides of the mortices	<ol style="list-style-type: none"> 1. 1mm MAP paper - Lorient Polyproducts Ltd. 2. 1mm Interdens - Dufaylite Developments Ltd. 3. 1mm Therm-A-Flex - Intumescent seals Ltd. 4. 1mm Pyrostrip - Mann McGowan Ltd.
Top & bottom pivot points	Lining all sides of the mortice	<ol style="list-style-type: none"> 1. Interdens – Dufaylite Developments Ltd. 2. MAP paper - Lorient Polyproducts Ltd. 3. Approved intumescent protection pack as supplied by hardware manufacturer

See section 6.2 for intumescent seal location when ABS lippings are fitted to single leaf doors.

9 Overpanels

9.1 Solid

Overpanels of the same construction as the door leaves may be used with this doorset design, either with or without a transom between the leaf head and overpanel. Transoms separating the leaf from the overpanel must be to the same specification as the timber door frame.

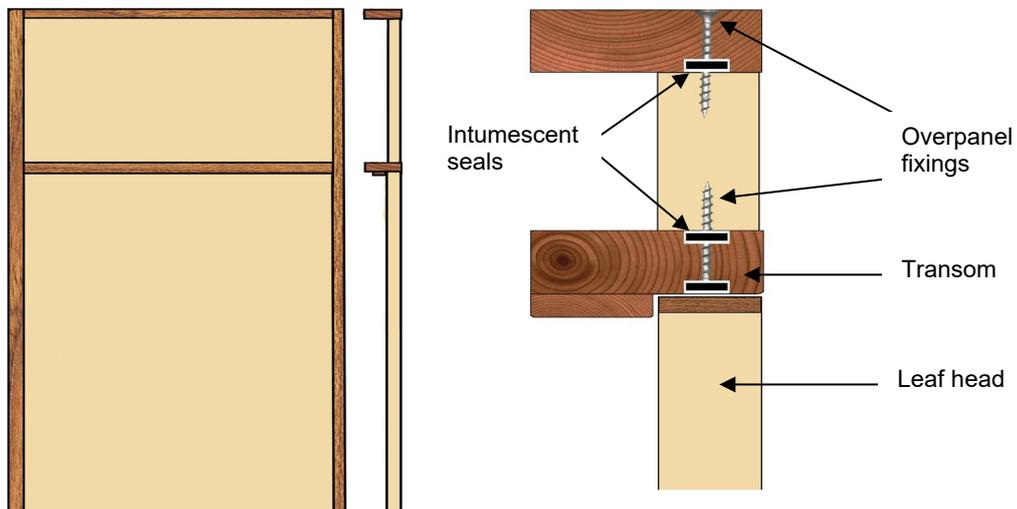
Door frame joints for overpanels must utilise mortice and tenon or butt joints (see section 7.3). Both methods require joints to be tight, with no gaps, and require mechanical fixing with the appropriate size ring shank nails or screws. Butt joints must be additionally bonded with urea formaldehyde or equivalent.

Overpanels must be fixed by steel screws through the rear of the frame penetrating at least 30mm centrally into all edges of the overpanel. Fixings must be no more than 100mm from each corner and a maximum of 400mm centres in between.

The intumescent seals required for the overpanel edges are as for the frame jambs and are specified in Appendix D. The seals may be fitted either in the overpanel edges or alternatively in the frame reveal. Providing the seals are fitted to all four edges of the overpanel, the gap between the overpanel and frame is permitted to have a 1mm gap tolerance.

Maximum overpanel heights are as follows:

- Single doorsets - 2000mm
- Double doorsets - 1500mm



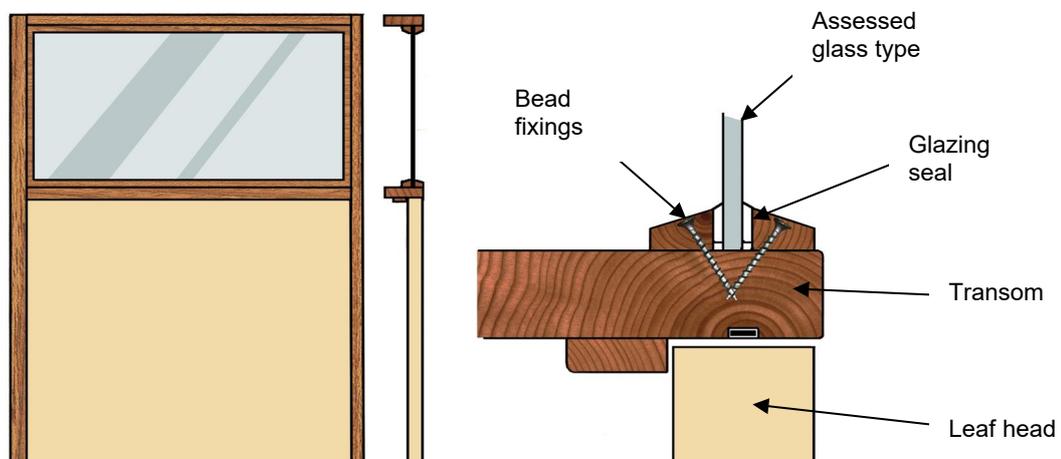
Drawing is representative of doorset construction only; actual construction must be as the text within this document specifies.

9.2 Glazed Fanlights

Timber frame doorsets including a transom may have the overpanel section glazed in lieu of a section of door. The glazing system and glass must be able to demonstrate adequate performance when tested as a window or screen in accordance with BS 476: Part 22: 1987 or BS EN 1634-1. The timber frame and glazing beads must be hardwood with a minimum density of 640kg/m³; frame sections must be a minimum of 70mm x 44mm. MDF frame sections are not assessed for glazed fanlights.

The maximum assessed fanlight dimensions are detailed in the table below:

Configuration	Height (mm)	Width (mm)
Single & double doorsets	≤600	Overall door width



Drawing is representative of doorset construction only; actual construction must be as the text within this document specifies.

10 Glazing

10.1 General

The testing conducted on the Egger particleboard core door leaf has demonstrated that the design is capable of tolerating glazed apertures, whilst providing a margin of over-performance. Glazing is therefore acceptable within the following parameters:

The total maximum assessed glazed area is 1.29m².

The maximum individual pane size is determined by the maximum assessed for the glass type.

10.2 Assessed Glazing Systems

The glazing system must be one of the following tested proprietary systems:

Glazing System	Manufacturer
1. Therm-A-Strip	Intumescent Seals Ltd.
2. Fireglaze 30	Sealmaster Ltd.
3. Firestrip 30	Hodgsons Sealants Ltd.
4. Pyroglaze 30	Mann McGowan Ltd.
5. R8193	Pyroplex Ltd.
6. System 36+	Lorient Polyproducts Ltd.
7. Flexible Figure 1	Lorient Polyproducts Ltd.

10.3 Assessed Glass Products

Glass Type	Manufacturer	Thickness (mm)	Maximum Pane Area (m ²)
1. Pyroshield	Pilkington Group Ltd.	6 & 7	1.29
2. Pyroshield II	Pilkington Group Ltd.	6 & 7	1.29
3. Pyran S	Schott UK Ltd.	6	1.29
4. Pyrostem	Pyroguard UK Ltd.	6	1.29
5. Pyroguard EW30	Pyroguard UK Ltd.	7	0.87
6. Pyrobelite 7	AGC Flat Glass UK	7	1.29
7. Pyrodur 30-104	Pilkington Group Ltd.	7	1.29
8. Pyrodur 60-10	Pilkington Group Ltd.	10	1.29
9. Pyroguard EW MAXI	Pyroguard UK Ltd.	11	0.58
10. Pyranova 15-S2.0	Schott UK Ltd.	11	1.29
11. Pyrobelite 12	AGC Flat Glass UK	12	1.29
12. Pyrodur 60-20	Pilkington Group Ltd.	13	1.29
13. Swissflam Lite	Vetrotech Saint Gobain AG	14	1.29

Glass Type	Manufacturer	Thickness (mm)	Maximum Pane Area (m ²)
14. Pyroguard EI30	Pyroguard UK Ltd.	15	0.54
15. Pyrostop 30-10	Pilkington Group Ltd.	15	1.29
16. Pyrobel 16	AGC Flat Glass UK	16	1.29

1. All glass types must be fitted fully in accordance with the manufacturers' tested details/installation requirements, particularly with respect to edge cover and expansion clearance.
2. Glass types 14-16 are fully insulating for 30 minutes in terms of the criteria set out in BS 476 Part 20: 1987

10.4 Glazing Beads & Installation

Glazing beads must be from hardwood as specified in the following table:

Material	Profile	Min. Density (kg/m ³)	Application
Hardwood	Splayed	640	All proprietary systems detailed in section 10.2 and Appendix B and all glass types in section 10.3
Hardwood	Square	640	Proprietary systems 1-3 detailed in section 10.2 and Appendix B and glass types 5-16 detailed in section 10.3

A square bead profile may be used as an alternative to the splayed beads subject to the restricted glass types and glazing systems specified in the table above. See Appendix B for square bead options.

The shape of glazed apertures is not restricted providing the glazing system can accommodate the profile.

Timber for glazing beads must be straight grained, joinery quality hardwood, free from knots, splits and checks.

Glazing beads must be retained in position with 40mm long x 2mm diameter steel pins or 40mm long No. 6–8 steel screws inserted at 35–40° to the vertical, and at no more than 50mm from each corner and at 150mm maximum centres. Pneumatically fired pins are acceptable providing the pins meet the specification given in section 10.5 below.

Sectional drawings detailing proprietary systems are contained in Appendix B.

False timber beads may be bonded to the glass face with an intumescent mastic/silicon or a 0.5-2mm thick self-adhesive intumescent tape/strip. Suitable glass for this application is restricted to types 6 -16.

Glazed apertures must not be nearer than 100mm to any leaf edge. Multiple apertures are acceptable up to the maximum approved area with a minimum dimension of 100mm of door core separating the apertures.

10.5 Gun (Pneumatically) Fired Pins

The following pin specification is permitted and has been considered suitable for gun (pneumatically) fired applications:

10.5.1 Option 1 – Round, Oval & Rectangular Pins

The following dimension of pin has been approved for round, oval and rectangular shaped pins:

- Minimum Standard Wire Gauge (SWG) 16.
- Minimum cross section area of 2.03mm².
- Minimum linear dimension of 1.6mm in any direction.

Round pin diameter (mm) = minimum 1.6mm:



Oval/rectangular pin minimum diameter linear dimension = 1.6mm:



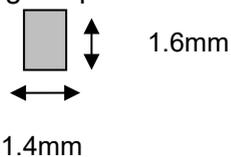
10.5.2 Option 2 – Rectangular Pins

Dimensions

The following dimension of rectangular pin has been deemed suitable for gun (pneumatically) fired applications:

- Minimum Standard Wire Gauge (SWG) 16.
- Minimum cross section area of 2.24mm².
- Minimum linear dimension of 1.4mm.

Rectangular pin minimum diameter linear dimension = 1.4mm:



10.5.3 Note of Caution

Pins with dimensions less than those stated are not covered by this assessment.

10.6 Morland Quickfix Glazing Bead System

The Morland Quickfix MDF glazing beads have the following scope of application based on the testing conducted in WF341550 and WF342584:

1. The maximum glazed aperture area permitted when using the Morland Quickfix glazing beads is 0.48m².
2. Permitted glass types for use with the Morland Quickfix glazing beads are restricted to glass types 1 – 7 given in the table in section 10.3 above.
3. Morland Quickfix glazing bead dimensions are held in confidence on file by Exova Warringtonfire.
4. Morland Quickfix glazing beads may be retained in position with 50mm long x 2mm diameter steel pins, or pneumatically fired 50mm long pins meeting the

specification given in section 10.5 above. Pin fixings are to be inserted at 30° to the vertical, at maximum 150mm centres on the vertical beads and maximum 230mm centres on the horizontal beads.

5. When using glass types 1 - 5 from the table in section 10.3 above, a 6mm deep bead of Lorient Polyproducts Ltd. 4 hour fire-rated intumescent mastic must be applied around the perimeter of the glass.
6. The glass must be fitted with maximum 13mm edge cover and allowing for 3mm expansion on all edges.
7. Glazed openings must not be less than 95mm from any edge, with a minimum dimension of 80mm between apertures.
8. Multiple apertures are permitted, subject to point 7 above.

11 Leaf Facing Materials

11.1 General

The facings for the Egger particleboard core door design are integral with the core construction and therefore alternative materials are not permitted.

11.2 Additional Decorative & Protective Facings

The following decorative materials are permitted for this door design, since they would degrade rapidly under test conditions without significant effect:

Facing Material	Maximum Permitted Thickness (mm)
Paint	0.5
Timber veneers	2
PVC/Plastic laminates	2
Decorative paper/Non-metallic foil	0.5

1. Metallic facings are not permitted (except for push plates and kick plates).
2. The door leaf thickness may be reduced by a total maximum of 0.5mm for calibration purposes in order to accommodate the chosen finish.
3. Materials must not conceal intumescent strips.
4. PVC laminates may be applied to the leaf faces and leaf edges.
5. ABS meeting the specification in section 6.2 may be applied to the leaf edges.

12 Adhesives

The following adhesives must be used in construction of this doorset design:

Element	Product/Manufacturer
Timber lippings	PVA, Polyurethane (PUR), Urea/Phenol formaldehyde (UF/PF)
ABS lippings	PVA, Polyurethane (PUR)
Additional decorative & protective facings	Polyurethane (PUR)

13 Tested Hardware

The following hardware has been successfully incorporated in the tests on this design:

Element	Make/Type	Size (mm)	Location
Hinges	Royde and Tucker H105 lift-off type	101 x 32 (blade size)	See section 14.2
	Hafele bearing butt type hinge; Ref: 926.90.203	101 x 30 (blade size)	
Closers	Dorma Door Controls TS68	220 x 54 (footprint size)	Fitted to exposed face of leaf as per manufacturer's specification
	Hafele overhead type closer; Ref: 931.16.169	230 x 68 (footprint size)	
Locks/Latches	Henderson Hardware Tubular mortice latch	57 x 26 (forend size)	Fitted in leaf edge 1000mm up from threshold
	Eurospec Easi-T mortice sash lock	235 x 24 (forend size) 175 x 38 (keep size)	
Furniture	Aluminium lever type handle	100 x 38 (footprint size)	Fitted appropriate to the latch
	Handle and lock escutcheon: Eurospec Easi-T mortice sashlock set	52 diameter rose	
	Eurocylinder: Eurospec Easi-T mortice sashlock set	80 long	
Floor Springs	Dorma Door Controls BTS80F	341 long x 78 wide x 60 deep	Fitted as per manufacturer's specification
Top Pivots	Dorma Door Controls 8067	165 long x 25 wide	Fitted as per manufacturer's specification
Drop Down Seal	Hafele; Ref: 950.07.546	33.5 high x 15 wide	Fitted at the threshold
Flush Bolt	Hafele; Ref: 911.62.125	200 long x 24 wide x 30 deep	Fitted at the threshold

14 Additional & Alternative Hardware

The following sections detail a generic specification for ironmongery assessed for use with this doorset design.

14.1 CE Marking

The following items of hardware must also bear the CE mark:

- Locks and latches: test standard EN 12209
- Electro mechanically operated locks: test standard EN 14846
- Single axis hinges: test standard EN 1935
- Controlled door closing devices: test standard EN 1154
- Electrically powered hold open devices: test standard EN 1155
- Door co-ordinators: test standard EN 1158
- Emergency exit hardware: test standard EN 179
- Panic exit hardware: test standard EN 1125.

14.2 Certifire

The following sections detail a generic specification for ironmongery assessed for use with this doorset design. Providing the parameters of this assessment, including specified protection such as hardware gaskets, always take precedence, where alternative hardware to that tested is permitted in the following sections, Certifire approved hardware may be incorporated subject to the design, material and dimensional limitations both specified within this assessment report and identified on the relevant Certifire certificate. This route cannot be used where only specific hardware options stated by the doorset manufacturer are permitted (i.e. where alternative hardware is not permitted).

14.3 Latches & Locks

Latches and locks must either be as tested, or alternatively components with the following specification are acceptable:

Maximum forend & strike plate dimensions	235mm high by 25mm wide by 4mm thick
Maximum body dimensions	180mm high by 150mm wide by 18mm thick
Intumescent protection	See section 8
Materials	All parts essential to the locking/latching action (including the latch bolt, forend & strike) to be steel
Maximum height of threshold	1200mm

14.4 Hinges

Egger particleboard core door designs must be hung on a minimum of 3 hinges. Leaves over 2440mm high must fit a minimum of 4 hinges. Hinges with the following specification are acceptable:

Blade height		90 – 120mm	
Blade width (excluding knuckle)		30 – 35mm	
Blade thickness		2.5 - 4mm	
Fixings		Minimum of 4No. 30mm long No. 8 - 10 steel wood screws per blade	
Materials		Steel, stainless steel, or brass (melting point $\geq 800^{\circ}\text{C}$)	
Hinge positions	If 3 hinges are required	Top	150-180mm from the head to top of hinge
		2 nd	Equispaced between top and bottom
		Bottom	150-250mm from foot of leaf to bottom of hinge
	If 4 hinges are required	Top	100-180mm from the head to top of hinge
		2 nd & 3 rd	Equispaced between top and bottom or 2 nd hinge 200mm from top hinge and 3 rd hinge equally spaced between 2 nd and bottom hinge
		Bottom	180-250mm from foot of leaf to bottom of hinge
Intumescent protection		See section 8	

14.5 Automatic Closing

Automatic closing devices must either be as tested, or components of equal specification that have demonstrated contribution to the required integrity performance of these types of doorset design, when tested to BS 476: Part 22: 1987 or BS EN 1634-1.

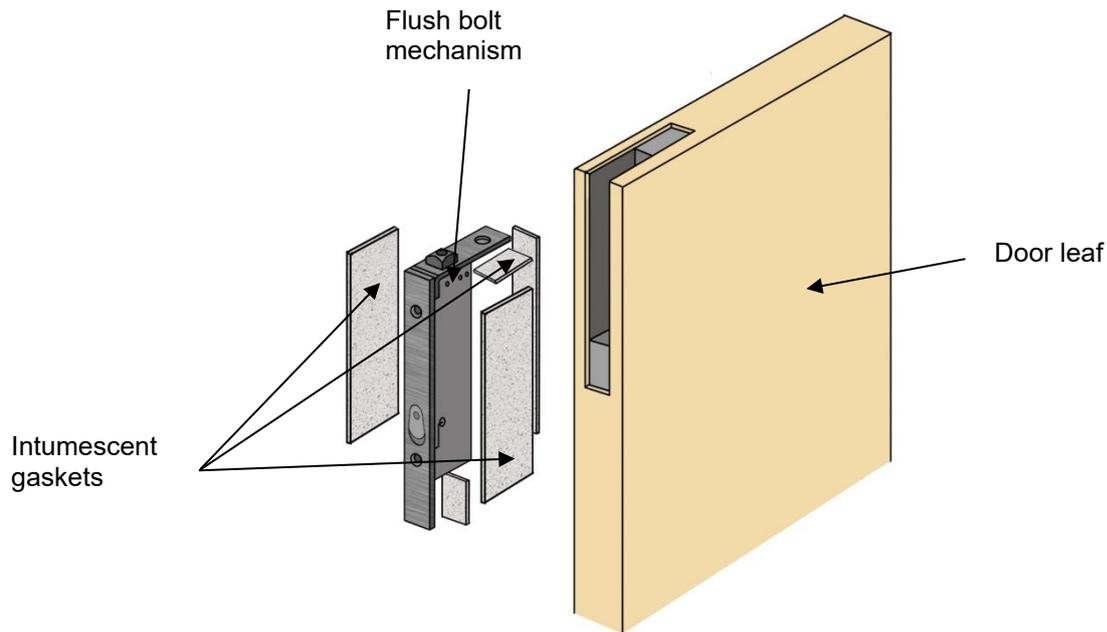
Note: The top and bottom pivots to floor spring assemblies must be protected with intumescent gaskets (see section 8).

14.6 Flush Bolts

Flush bolts may be incorporated into the top and bottom of the meeting edge of the inactive leaf of a double doorset, provided that the following maximum dimensions are not exceeded and they are located opposite the leaf edge fitted with intumescent strips:

- 210mm long x 20mm deep x 20mm wide

Flush bolts must be steel or brass and the mortice must be as tight to the mechanism as is compatible with its operation. All edges of the body and keep mortices must be lined with an intumescent gasket (see section 8). See diagram below for example of intumescent protection to flush bolt:



14.7 Pull Handles

Stainless steel, steel or brass (melting point $\geq 800^{\circ}\text{C}$) handles may be surface-fixed or bolted through the door leaf, providing the length is limited to 1200 mm between the fixing points. If through fixed, there must be no more than 1mm clearance between the hole and stud.

14.8 Push Plates/Kick Plates

Steel and stainless steel face-fixed hardware such as push plates and kick plates may be fitted to the doorsets provided that their fitting requires the removal of no part of the door leaf. These items of hardware are permitted up to a maximum of 20% of the door leaf area if mechanically fixed and a maximum of 30% if bonded with a thermo-softening contact adhesive. Plates must not return around the door edges.

14.9 Door Selectors

These may be freely applied, provided that they are not invasive in the leaf edges or door frames. Those that are invasive will require fire resistance test/assessment evidence to support their use. No additional intumescent protection is required unless test evidence dictates otherwise.

14.10 Door Security Viewers

Door security viewers with brass or steel bodies of a diameter less than or equal to 15mm may be used provided that the through-hole is bored tight to the case of the viewer (maximum tolerance +1mm). Lenses must be glass and the item must be bedded in to a tested intumescent acrylic mastic.

14.11 Panic Hardware

Panic hardware may be fitted, provided that its installation does not require the removal of any timber from the leaf, stop or frame reveal and it in no way interferes with the self-closing action of the door leaf.

14.12 Air Transfer Grilles

Air transfer grilles may be fitted providing the product has suitable test evidence to BS 476: Part 22: 1987 or BS EN 1634-1, that demonstrates the required integrity performance when installed within a timber based doorset of comparable thickness. Margins to the leaf edges will remain as detailed for glazing and the position of the unit will be dictated by the pressure regime tested in the proving evidence (normally below mid-height). The area occupied by the air transfer grille must not exceed 0.2m² and must be deducted from the percentage of glazing, if both elements are fitted.

14.13 Environmental Seals

Silicon based flame retardant acoustic, weather and dust seals may be fitted to this doorset design without compromising performance, providing fitting does not interfere with activation of the intumescent seals or hinder the self-closing function of leaves.

14.14 Threshold Seals

The following types of automatic threshold drop seals may be recessed in to the bottom rail of leaves to this design without compromising the performance:

Manufacturer	Product
Lorient Polyproducts Ltd.	LAS8001Si
Lorient Polyproducts Ltd.	IS8005si
Raven Products	RP8Si
Athmer	Schall-Ex Duo L-15
Norsound Ltd.	810
Hafele Ltd.	950.07.546

Alternative products may be used providing they are essentially of the same construction, materials and dimensions.

14.15 Cable-Way

Based on the integrity performance of the doorset construction, with no burn through of the core material, we consider it acceptable to allow provision for a concealed cable-way to facilitate electro-magnetic closing/latching mechanisms. The cable-way must be concealed in the following way:

1. A hole drilled centrally through the leaf of maximum 10mm diameter.
2. The cable for the electronic closing/latching mechanisms must be no more than 2mm smaller in diameter than the hole through the leaf.
3. The electronic closing/latching mechanism cable must be PVC encased.
4. Cable ways are only permitted for use with latched, single leaf, single acting doorsets with maximum leaf dimensions of 2100mm (h) x 900mm (w).
5. The hole must be located below 1500mm from the threshold and must be spaced a minimum of 90mm from any apertures within the leaf, e.g. glazing, air transfer grilles or letter plates, etc.

Approval is subject to the hardware manufacturer having appropriate test evidence for the product for use with this type of 30 minute construction. Test evidence generated in steel doorsets is not acceptable. Any tested intumescent gaskets for the lockset, closing mechanism, receiver plate, cable loops, etc. must be replicated.

14.16 Letter Boxes/Plates

Letter boxes/plates may be fitted providing the product can demonstrate contribution to the required integrity performance of this type of doorset design when tested to BS 476: Part 22: 1987 or BS EN 1634-1, and when installed within a timber based doorset of comparable thickness. Margins to the leaf edges must remain as detailed for glazing. The position of the letter box/plate will be dictated by the pressure regime tested in the proving evidence (normally below mid-height).

15 Door Gaps

For fire resistance performance, door gaps and alignment tolerances must fall within the following range:

Location	Dimensions
Door edge gaps	A minimum of 2mm and a maximum of 4mm
Alignment tolerances	Leaves must not be proud of each other or from the door frame by more than 1mm
Threshold	10mm between bottom of leaf and top of floor covering. See section 19 for ambient smoke control tolerances

16 Structural Surround

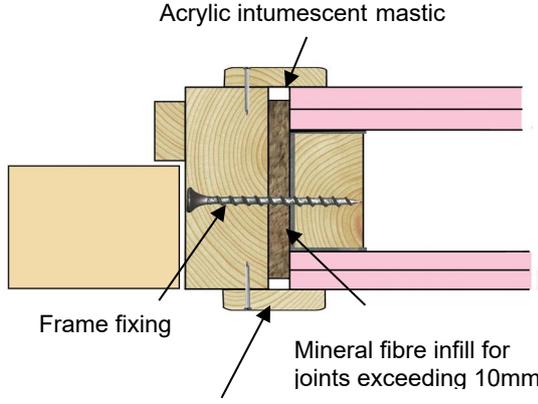
The supporting construction must be capable of staying in place and intact for the full period of fire resistance required from the doorset.

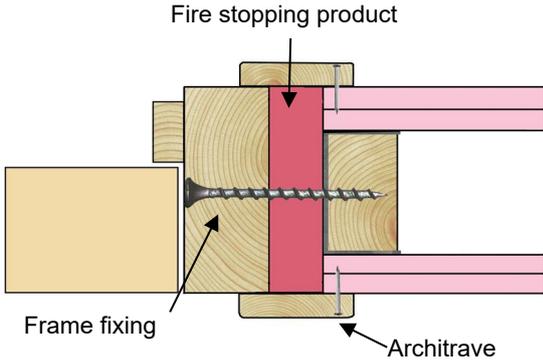
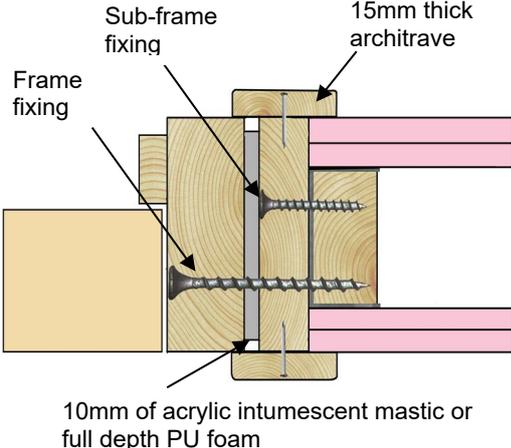
17 Fixings

The frame jambs must be fixed to the supporting construction using steel fixings at 600mm maximum centres. The fixings must be of the appropriate type for the supporting construction and must penetrate to a minimum depth of 40mm. It is not necessary to fix the frame head, although packers must be inserted.

18 Sealing to Structural Opening

The door frame to structural opening gap must be protected using one of the following methods:

<p>1. Gaps up to 10mm must be sealed on both sides with a 10mm depth of acrylic intumescent mastic, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1. Joint must be fitted with 15mm thick architraves overlapping at least 15mm each side.</p>	 <p>Acrylic intumescent mastic</p> <p>Frame fixing</p> <p>Mineral fibre infill for joints exceeding 10mm</p> <p>Architrave for joints not filled with mineral wool and optional for filled joints</p>
<p>2. Gaps between 10mm and 20mm must be tightly packed with mineral fibre capped on both sides with a 10mm depth of acrylic intumescent mastic, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1. Architraves are optional.</p>	

<p>3. Gaps up to 20mm filled with proprietary fire stopping product (e.g. expanding PU foam or preformed compressible intumescent foam). Products must be tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1. Joint must be fitted with 15mm thick architraves overlapping at least 15mm each side.</p>	
<p>4. Timber based or non-combustible sub-frame up to 50mm thick, with gaps up to 10mm between the components filled on both sides with 10mm depth of acrylic intumescent mastic or full depth expanding PU foam, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1. Joint must be fitted with 15mm thick architraves overlapping at least 15mm each side.</p>	

Guidance for various methods of sealing the frame to structural opening gap is also given in BS 8214: 2016, "*Timber-based fire door assemblies. Code of practice*", which may be referred to where appropriate.

19 Insulation

Insulation performance may be claimed for a doorset to this design meeting the following:

Type	Details
Partially insulating	Doorsets incorporating up to 20% of non-insulating glazing
Fully insulating	Doorsets fitted with 30 minute insulating glass (See section 10)

20 Smoke Control

20.1 General

If the doorset design is required to provide a smoke control function to comply with Building Regulations, in the absence of a suitable pressurisation system, the doorset must meet one of the following criteria:

(a) have a leakage rate not exceeding $3\text{m}^3/\text{m}/\text{hour}$ (head and jambs only) when tested at 25Pa under BS 476 *Fire tests on building materials and structures*, Section 31.1 - *Methods for measuring smoke penetration through doorsets and shutter assemblies, Method of measurement under ambient temperature conditions*; or

(b) meet the additional classification requirement of Sa when tested to BS EN 1634-3: 2004 - *Fire resistance tests for door and shutter assemblies, Part 3 – Smoke control doors*.

Smoke seals or combined intumescent/smoke seals that are fitted to the door to achieve the performance requirements specified above, must have been tested in accordance with the associated test method. Providing the smoke seals, any interruptions, door gaps, and the type/configuration of the doorset are consistent with the detail tested, the doorset will comply with current smoke control legislation under Approved Document B; and a suffix 'S' or 'Sa', as appropriate, may be added to the designation. Any other components installed where smoke leakage may occur must also be taken into account.

Note: The incorrect specification and fitting of smoke seals may impair the operation of a doorset and therefore compromise the fire resistance performance. Advice should be sought from the seal manufacturers regarding the correct specification and installation of smoke seals or combined smoke and intumescent seals.

20.2 Further Considerations

Note that there is other guidance available, including BS EN 9999-2017 - *Code of practice for fire safety in the design, management and use of buildings*, which may impose different or additional requirements, such as consideration of the gap between door leaf and threshold.

Responsibility for the appropriate smoke sealing specification and performance of the doors should be agreed between the relevant parties (i.e. specifier, manufacturer, contractor) prior to commencing manufacture and/or installation.

21 Conclusion

If the Egger particleboard core doorset design, constructed in accordance with the specification documented in this Global Assessment, were to be tested in accordance with BS 476: Part 22: 1987, it is our opinion that it would provide a minimum of 30 minutes integrity and insulation (subject to section 19).

22 Declaration by the Applicant for report WF406084

- 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:

KEVIN OWEN

For and on behalf of: EGGER (UK) LTD.

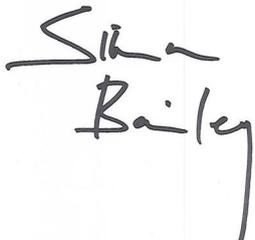
23 Limitations

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, Exova 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.

24 Validity

- 1) The assessment is initially valid for five years from the issue date, after which time it must be submitted to Exova Warringtonfire for technical review and revalidation.
- 2) This assessment report is not valid unless it incorporates the declaration given in Section 22, duly signed by the applicant.

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

Appendix A

Performance Data

Primary Data

Test Reference	Configuration	Leaf Size (mm)	Test Standard	Performance (mins)
Chilt/RF09015	A: ULSASD	2800x915x44	BS 476: Part 22: 1987	32
	B: ULSASD with glazing	2440x1220x44	BS 476: Part 22: 1987	40
Chilt/RF09039	A: ULSADD+OP	2135x935x44 2135x545x44 OP-405x1487x44	BS 476: Part 22: 1987	31 ¹ (latch) 41 (perimeter)
	B: LSASD	2135x915x44	BS 476: Part 22: 1987	42
Chilt/RF09101	ULDADD	2216x931x44	BS 476: Part 22: 1987	47
Chilt/RF10104	B: ULSASD	2135x915x44	BS 476: Pt 22: 1987	44

¹ The perimeter performance has been used for calculating the leaf size envelopes.

Supplementary Data

Test Reference	Configuration	Leaf Size (mm)	Test Standard	Performance (mins)
Chilt/RF13013	ULSADD+OP + side screen	2300x975x44 OP-400x1959x44 Side screen-2670x550x44	BS EN 1634-1 & BS EN 1363-1	28 ¹
WF341550 (Morland Quickfix glazing beads)	Indicative sample	1380 x 608 x 44	BS 476: Part 20: 1987	A: 35
WF342584 (Morland Quickfix glazing beads)	Indicative sample	1380 x 608 x 44	BS 476: Part 20: 1987	A: 35

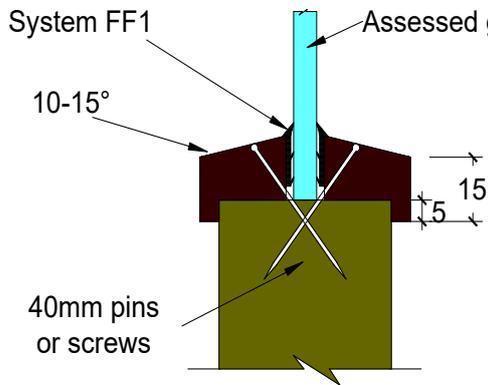
¹ The initial failure of the doorset at 28 minutes was observed at the top hinge position. A secondary failure was observed at 29 minutes above the lockset location at the meeting edges. It is the opinion of Exova Warringtonfire that the test evidence can be used to support the performance of the doorsets for 30 minutes fire resistance integrity for the following reasons:

Assessment Notes:

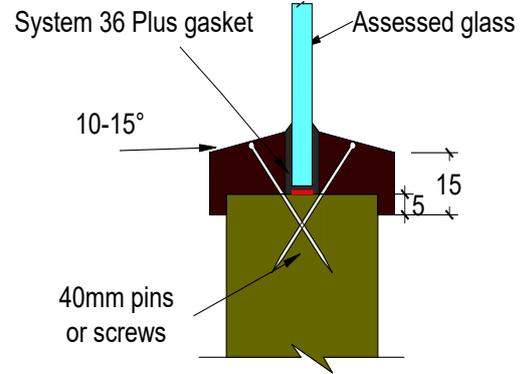
1. This assessment is written in terms of fire resistance performance judged against the BS 476: Part 22: 1987 test standard, which is known to be less severe than the equivalent BS EN 1634-1 test standard.
2. The failure was observed for the hinge fitted to the common separating jamb with the side panel. The side panel was constructed from a section of timber door blank and as a result, would have increased erosion of the door frame at the hinge location. No such failure was observed for the door frame jamb hung adjacent to the plasterboard clad partition. Side panels have not been assessed within this document.
3. The intumescent configuration at the meeting edge comprised of a single 15x4mm strip fully interrupted by a 235mm high forend. The intumescent gasket protection fitted around the lock body and under the forend and keep was not sufficient by itself to maintain integrity at this location. It is therefore proposed to utilise 2No. 10x4mm strips spaced 12mm apart to ensure a portion of intumescent strip runs either side of the forend.

Appendix B

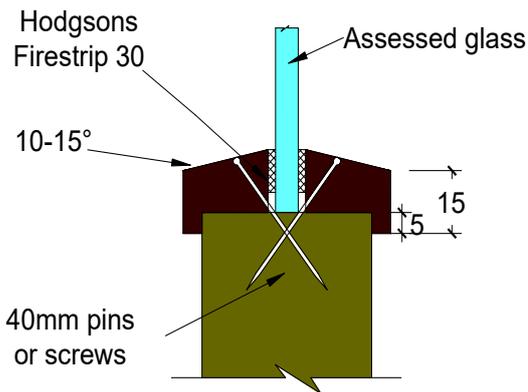
Proprietary 30 Minute Glazing Systems



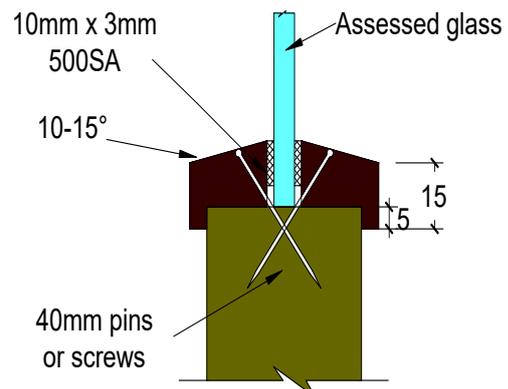
System FF1
Lorient Polyproducts Ltd



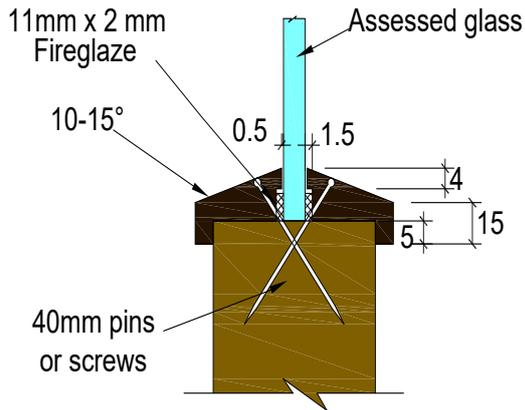
System 36 Plus
Lorient Polyproducts Ltd



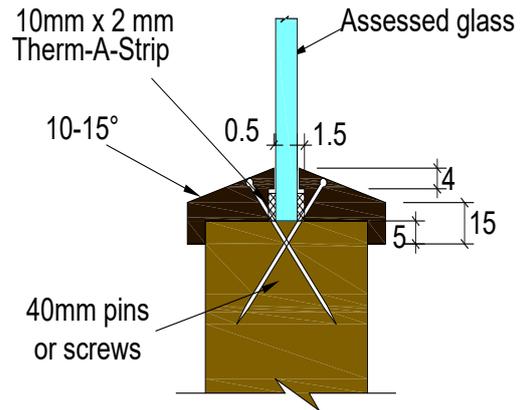
Firestrip 30
Hodgsons Sealants Ltd



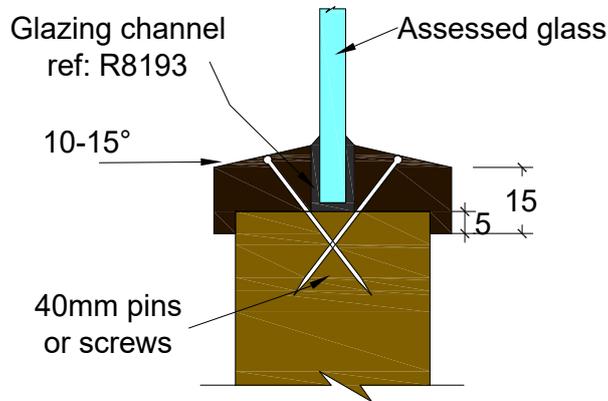
Pyroglaze 30
Mann McGowan Ltd



Fireglaze
 Sealmaster Ltd



Therm-A-Strip
 Intumescent Seals Ltd

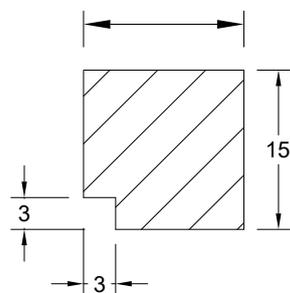


Pyroplex Ltd

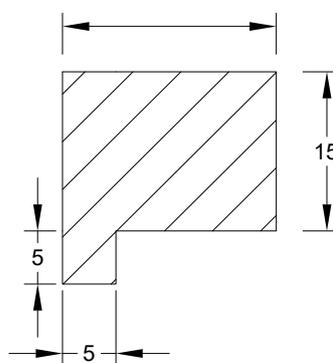
Assessed Square Glazing Bead Profiles

The following square bead profiles may be used as an alternative to the splayed beads detailed above - refer to section 10 for glazing system and glass restrictions.

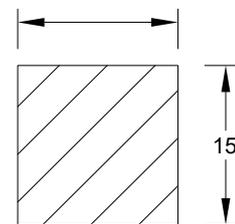
To finish flush with the leaf face



Suited to glass thickness



To finish flush with the leaf face



Appendix C

Revisions

Revision	Exova Warringtonfire Reference.	Date	Description
A	A13160	19/06/2013	Included datasheet covering Pyroplex intumescent seals in latched, single acting, single leaf doors.
B	A15280	03/12/2015	Inclusion of PUR adhesive for ABS lippings and for additional decorative & protective facings.
C	A15314	18/01/2016	Inclusion of Morland Quickfix FD30 Glazing Bead System based on WF341550 & WF342584.
D	WF406084	01/10/2018	Five year technical review and revalidation.

Appendix D

Data Sheets for:

EGGER (UK) Ltd.

Egger 44mm FD30 Door Blank

30 Minutes Fire Resistance

Egger 44mm FD30 Door Blank – Type 617
Latched & Unlatched, Single & Double Acting, Single Doorsets

Leaf Sizes	Configuration	From: To:	Height (mm)		Width (mm)	
				x		
	DASD & ULSASD		2440	x	1525	
			3050	x	1220	
	LSASD		2440	x	1550	
			3100	x	1220	
Maximum Overpanel Height (mm)		Transomed	2000			

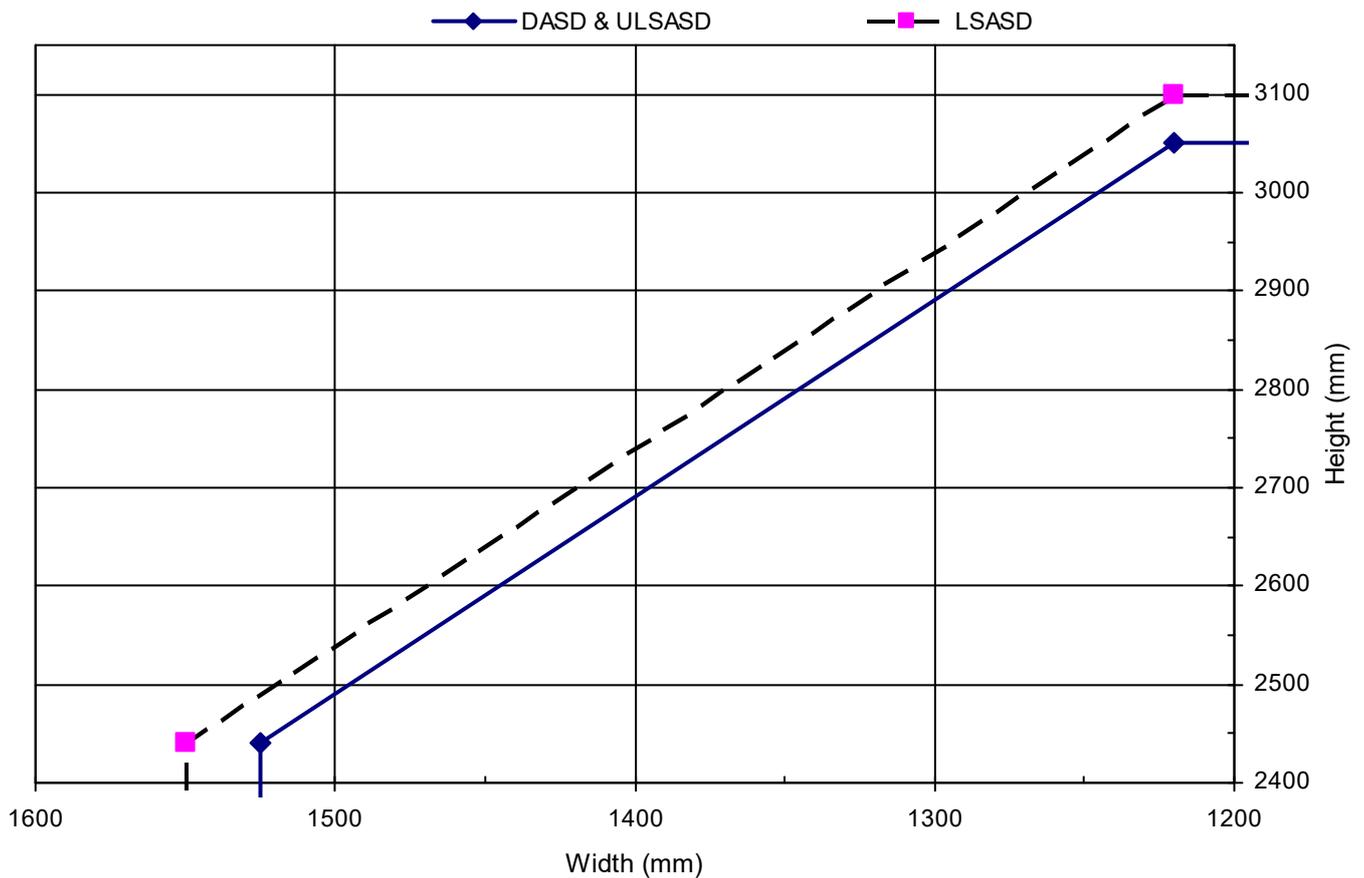
INTUMESCENT MATERIALS: Lorient Polyproducts Ltd. Type 617

HEAD: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal. For leaves over 2440mm high, increase this to 1No. 20x4mm.

JAMBS: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal.

HARDWARE PROTECTION: See section 8. Note, for leaves over 2440mm high, intumescent protection is required under the hinge blades on both leaf and frame.

Maximum Door Leaf Size



Egger 44mm FD30 Door Blank – Type 617
Latched & Unlatched, Single & Double Acting, Single Doorsets

Leaf Sizes	Configuration	From: To:	Height (mm)		Width (mm)	
				x		
	DASD & ULSASD		2216	x	1372	
			3246	x	931	
	LSASD		2216	x	1397	
			3296	x	931	
Maximum Overpanel Height (mm)		Transomed	2000			

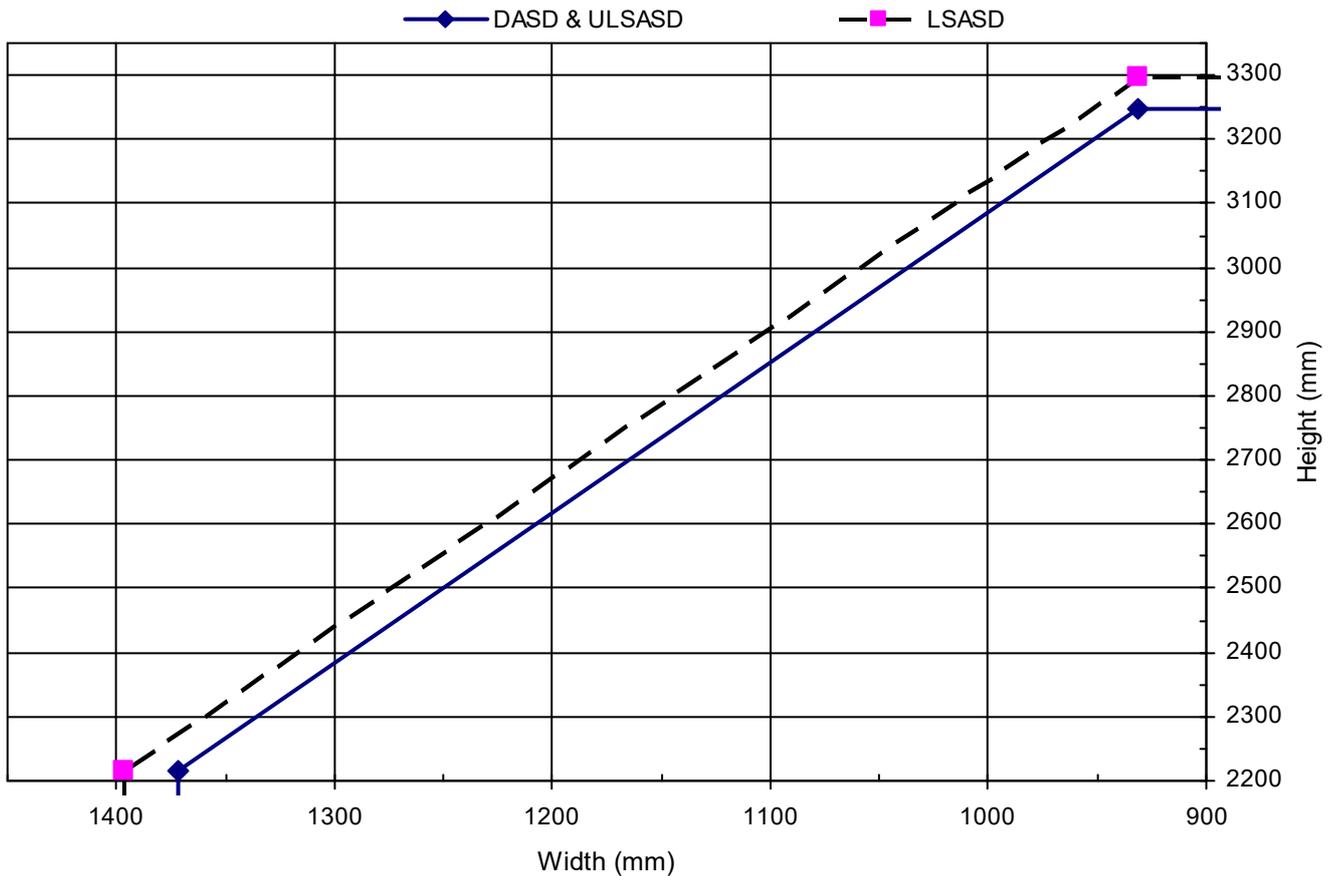
INTUMESCENT MATERIALS: Lorient Polyproducts Ltd. Type 617

HEAD: 1No. 15x4mm centrally fitted in the leaf or frame head. For leaves over 2440mm high, increase this to 1No. 20x4mm.

JAMBS: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal.

HARDWARE PROTECTION: See section 8. Note, for leaves over 2440mm high, intumescent protection is required under the hinge blades on both leaf and frame.

Maximum Door Leaf Size



Egger 44mm FD30 Door Blank – Pyrostrip 100P
Latched & Unlatched, Single & Double Acting, Single Doorsets

Leaf Sizes	Configuration	From: To:	Height (mm)		Width (mm)	
	DASD & ULSASD		2135 3011	x x	1337 935	
LSASD	From: To:	2135	x	1362		
		3061	x	935		
Maximum Overpanel Height (mm)		Transomed	2000			

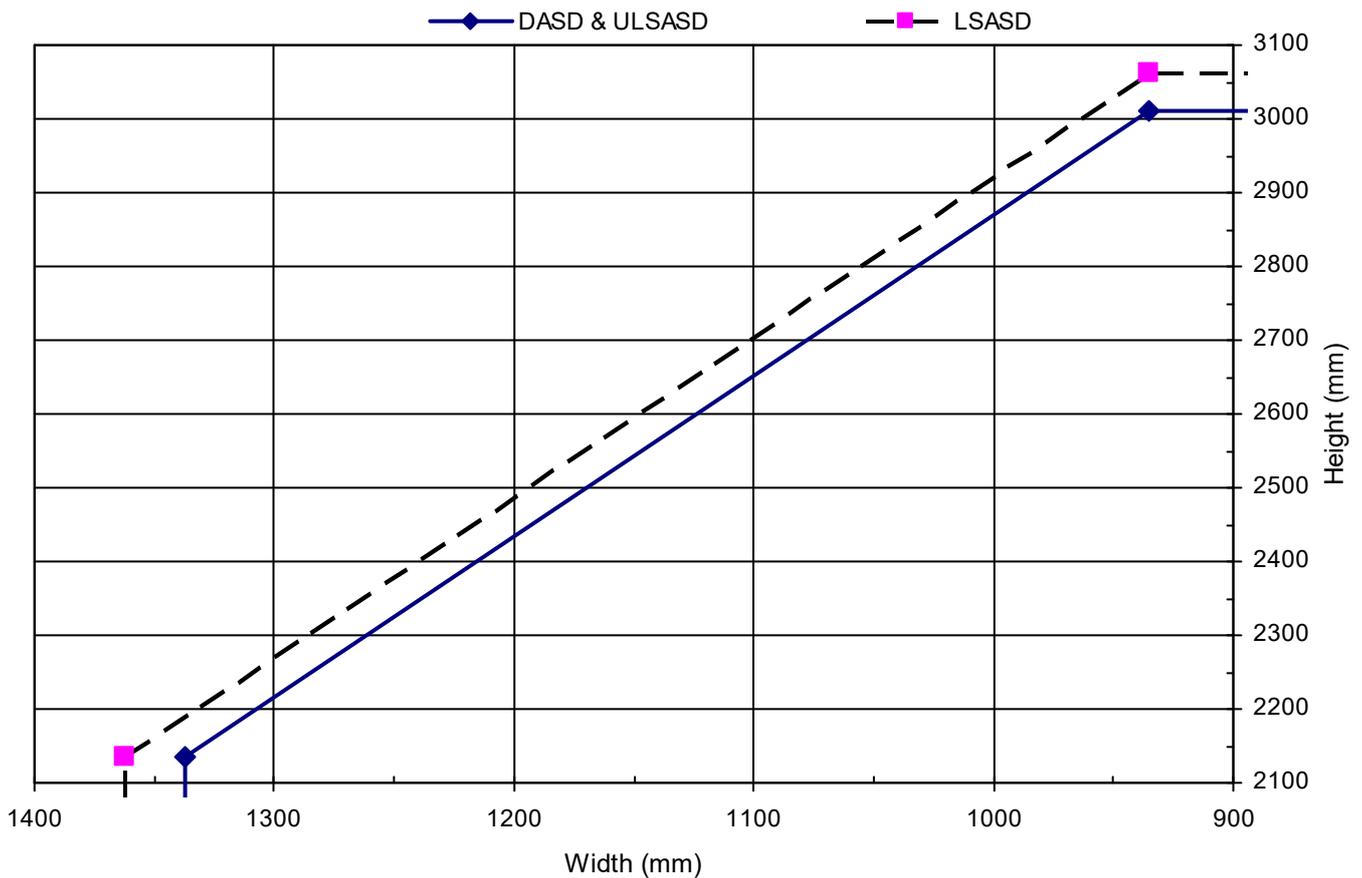
INTUMESCENT MATERIALS: Mann McGowan Ltd. – Pyrostrip 100P

HEAD: 1No. 15x4mm centrally fitted in the leaf or frame head. For leaves over 2440mm high, increase this to 1No. 20x4mm.

JAMBS: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal.

HARDWARE PROTECTION: See section 8. Note, for leaves over 2440mm high, intumescent protection is required under the hinge blades on both leaf and frame.

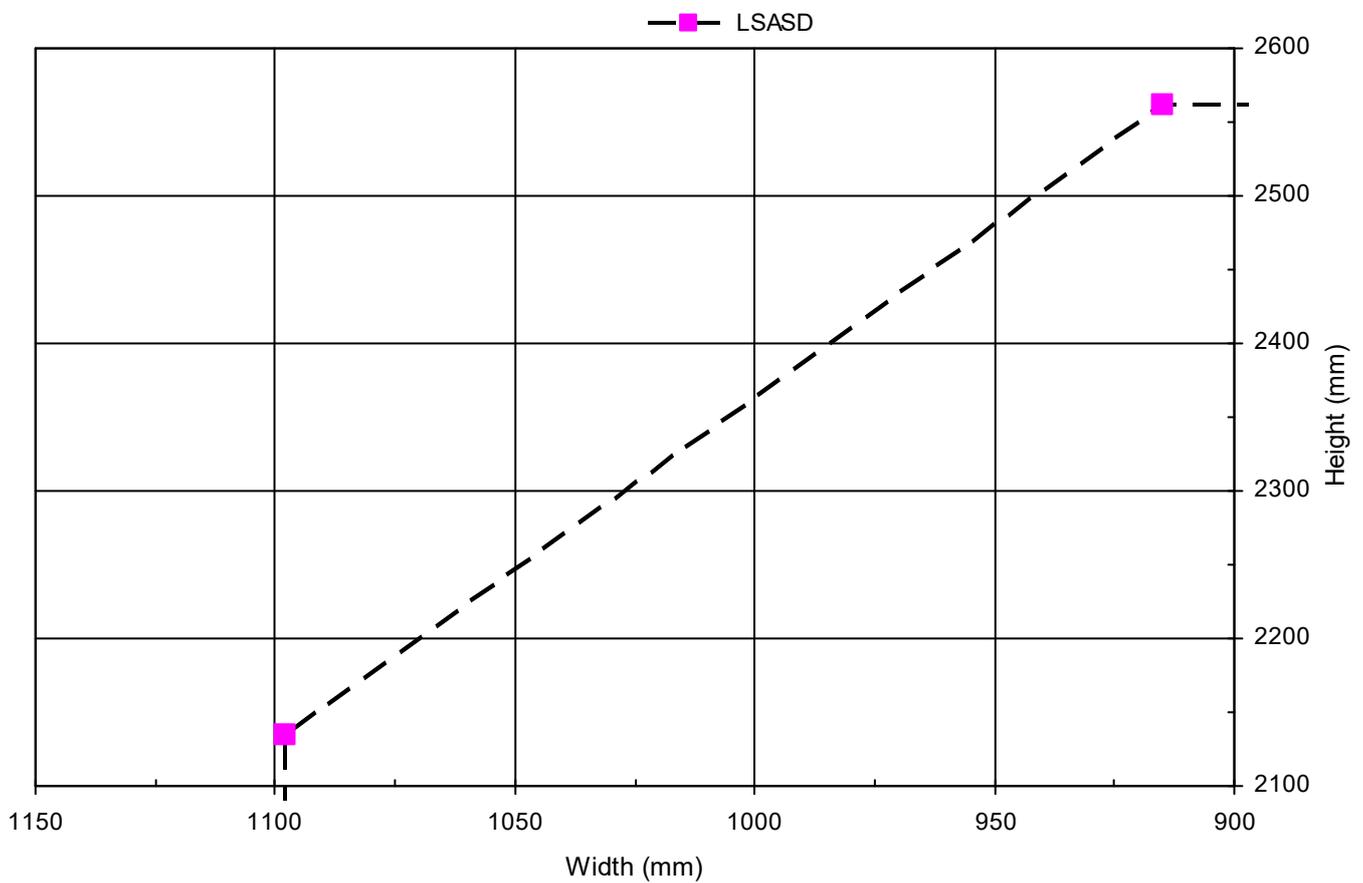
Maximum Door Leaf Size



Egger 44mm FD30 Door Blank – Pyroplex Latched, Single Acting, Single Doorsets

Leaf Sizes	Configuration	From: To:	Height (mm)		Width (mm)	
	LSASD			2135	x	1098
			2562	x	915	
Maximum Overpanel Height (mm)	Transomed		2000			
INTUMESCENT MATERIALS: Pyroplex Ltd. – Pyroplex Rigid Box Seals						
HEAD: 1No. 10x4mm strip exposed and centrally fitted in the leaf or frame head. Increase seal to 20x4mm for leaves over 2300mm high.						
JAMBS & OVERPANEL: 1No. 10x4mm strip centrally fitted in the leaf edge or frame reveal.						
HARDWARE PROTECTION: See section 8.						

Maximum Door Leaf Size



Egger 44mm FD30 Door Blank – Pyroplex
Latched & Unlatched, Single & Double Acting, Single Doorsets

Leaf Sizes	Configuration	From: To:	Height (mm)		Width (mm)	
	DASD & ULSASD	From:	2300	x	1125	
		To:	2600	x	975	
	LSASD	From:	2300	x	1150	
		To:	2650	x	975	
Maximum Overpanel Height (mm)		Transomed	2000			

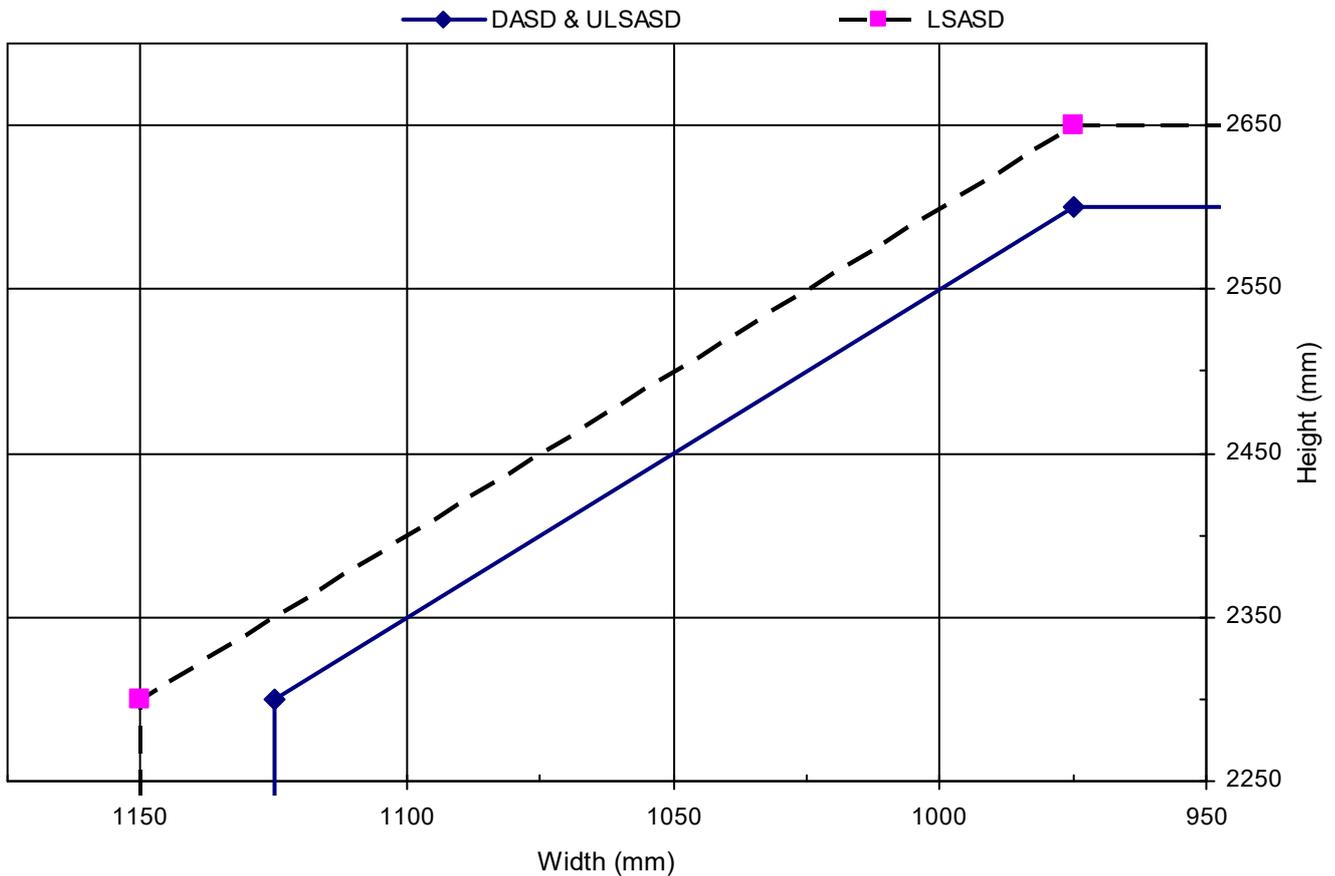
INTUMESCENT MATERIALS: Pyroplex Ltd. – Pyroplex Rigid Box Seals

HEAD: 1No. 20x4mm centrally fitted in the leaf head or frame reveal.

JAMBS: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal.

HARDWARE PROTECTION: See section 8. Note, for leaves over 2440mm high, intumescent protection is required under the hinge blades on both leaf and frame.

Maximum Door Leaf Size



Egger 44mm FD30 Door Blank – Pyrostrip 100P
Latched & Unlatched, Single Acting, Single Doorsets + Overpanels

Leaf Sizes	Configuration	From: To:	Height (mm)		Width (mm)	
	ULSASD+OP		2135 2911	x x	1287 935	
Leaf Sizes	LSASD+OP	From: To:	2135	x	1312	
			2961	x	935	
Maximum Overpanel Height (mm)		2000				

INTUMESCENT MATERIALS: Mann McGowan Ltd. – Pyrostrip 100P

HEAD:

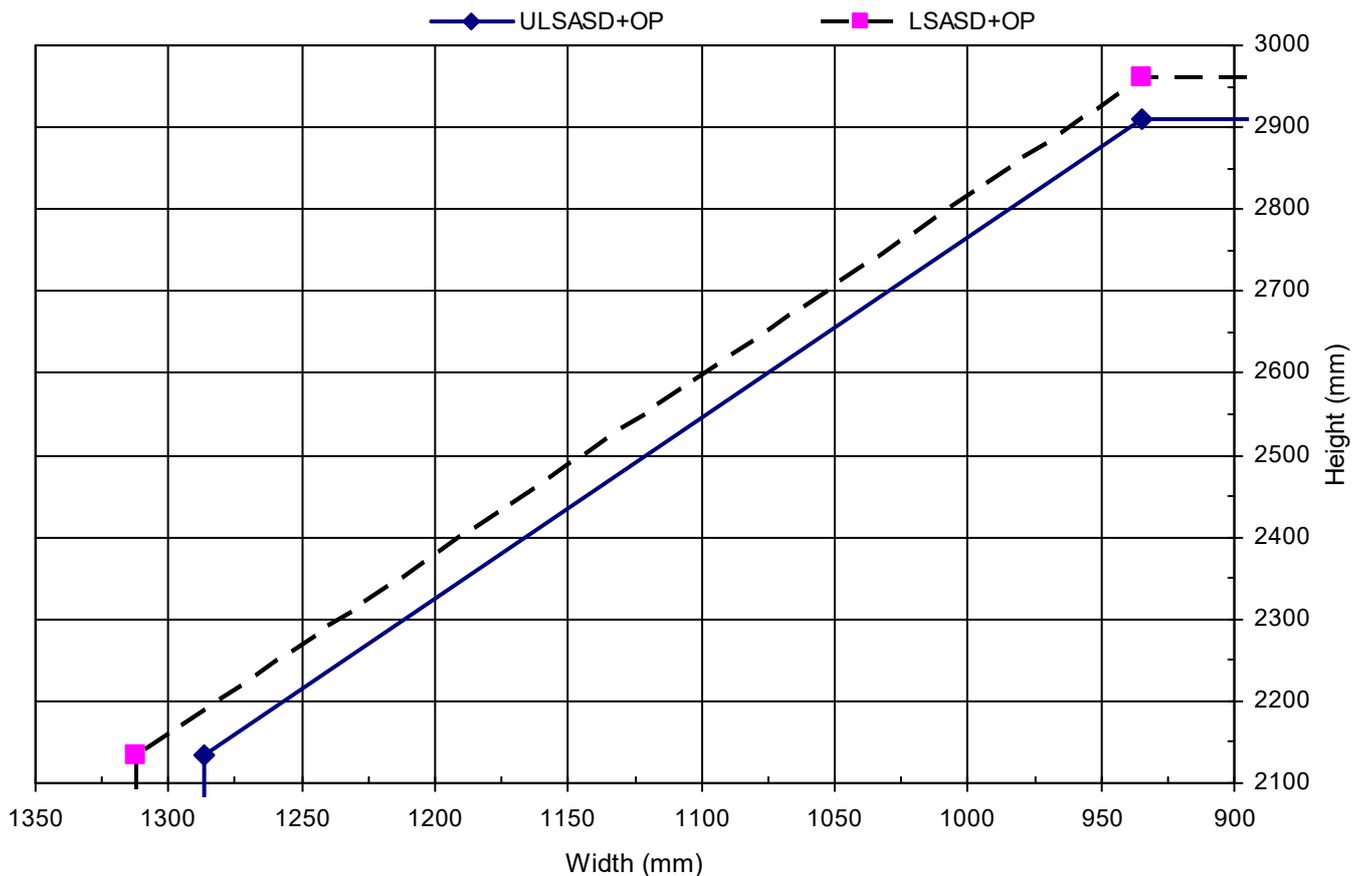
Square: 2No. 10x4mm spaced 10mm apart and centrally fitted in the leaf head and fitted in the rebate of the overpanel 6mm from the unexposed face. For leaves over 2440mm high, increase this to 2No. 15x4mm.

Rebated: 2No. 10x4mm with one seal centrally fitted in the bottom of the leaf rebate and one seal in the opposite rebate. For leaves over 2440mm high, increase this to 2No. 15x4mm.

JAMBS: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal.

HARDWARE PROTECTION: See section 8. Note, for leaves over 2440mm high, intumescent protection is required under the hinge blades on both leaf and frame.

Maximum Door Leaf Size



Egger 44mm FD30 Door Blank – Pyroplex
Latched & Unlatched, Single Acting, Single Doorsets + Overpanels

Leaf Sizes	Configuration	From: To:	Height (mm)		Width (mm)	
	ULSASD+OP	From:	2300	x	1075	
		To:	2500	x	975	
	LSASD+OP	From:	2300	x	1100	
		To:	2550	x	975	
Maximum Overpanel Height (mm)			2000			

INTUMESCENT MATERIALS: Pyroplex Ltd. – Pyroplex Rigid Box Seals

HEAD:

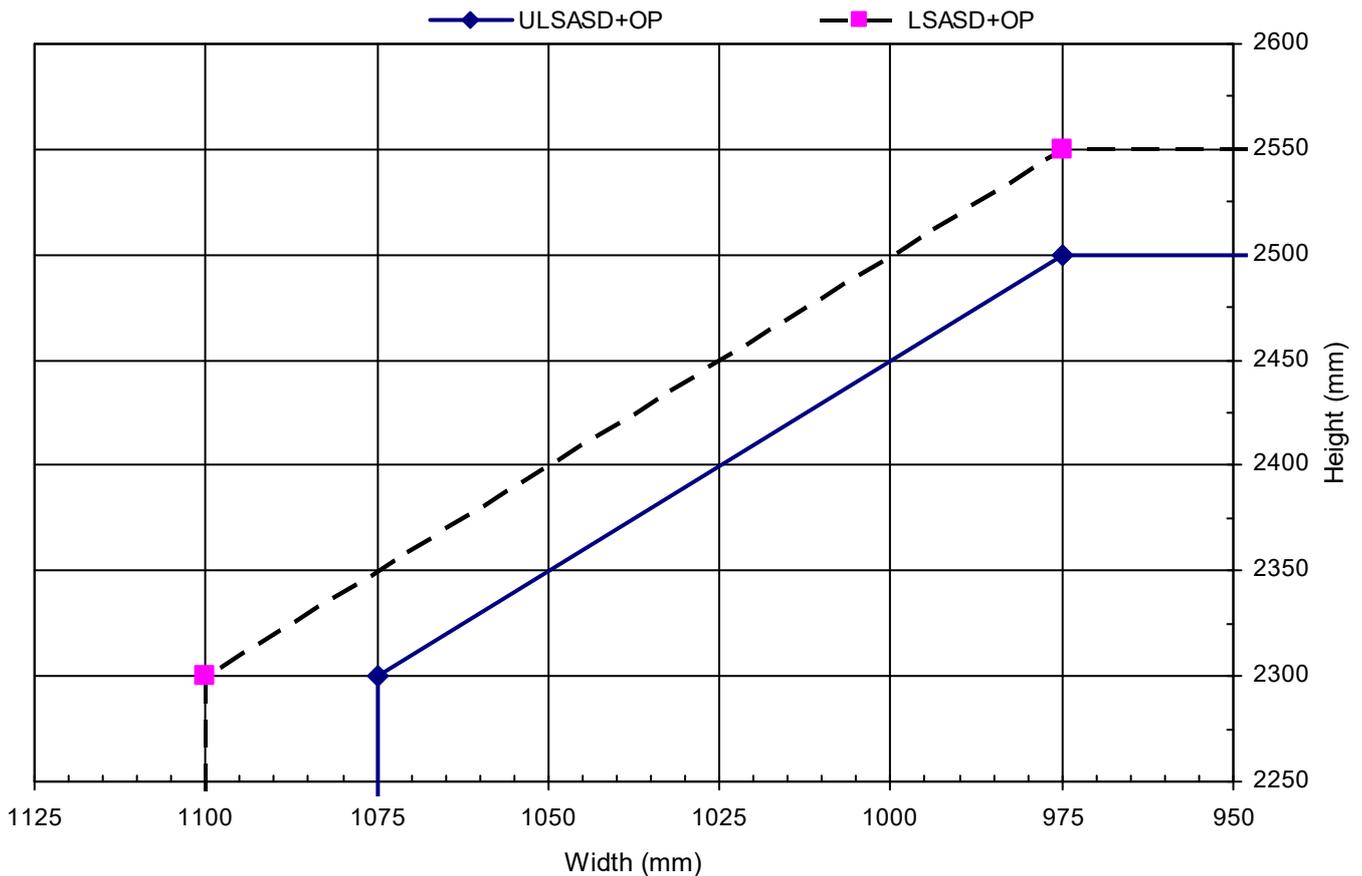
Square: 2No. 15x4mm spaced 7mm apart and centrally fitted in the bottom of the overpanel, or in the leaf head.

Rebated: 2No. 15x4mm with one seal centrally fitted in the bottom of the leaf rebate and one seal in the opposite rebate.

JAMBS: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal.

HARDWARE PROTECTION: See section 8. Note, for leaves over 2440mm high, intumescent protection is required under the hinge blades on both leaf and frame.

Maximum Door Leaf Size



Egger 44mm FD30 Door Blank – Pyrostrip 100P
Latched & Unlatched, Single & Double Acting, Double Doorsets

Leaf Sizes	Configuration	From: To:	Height (mm)		Width (mm)	
	DADD & ULSADD		2135 2811	x x	1237 935	
LSADD	From: To:	2135	x	1262		
		2861	x	935		
Maximum Overpanel Height (mm)		Transomed	1500			

INTUMESCENT MATERIALS: Mann McGowan Ltd. – Pyrostrip 100P

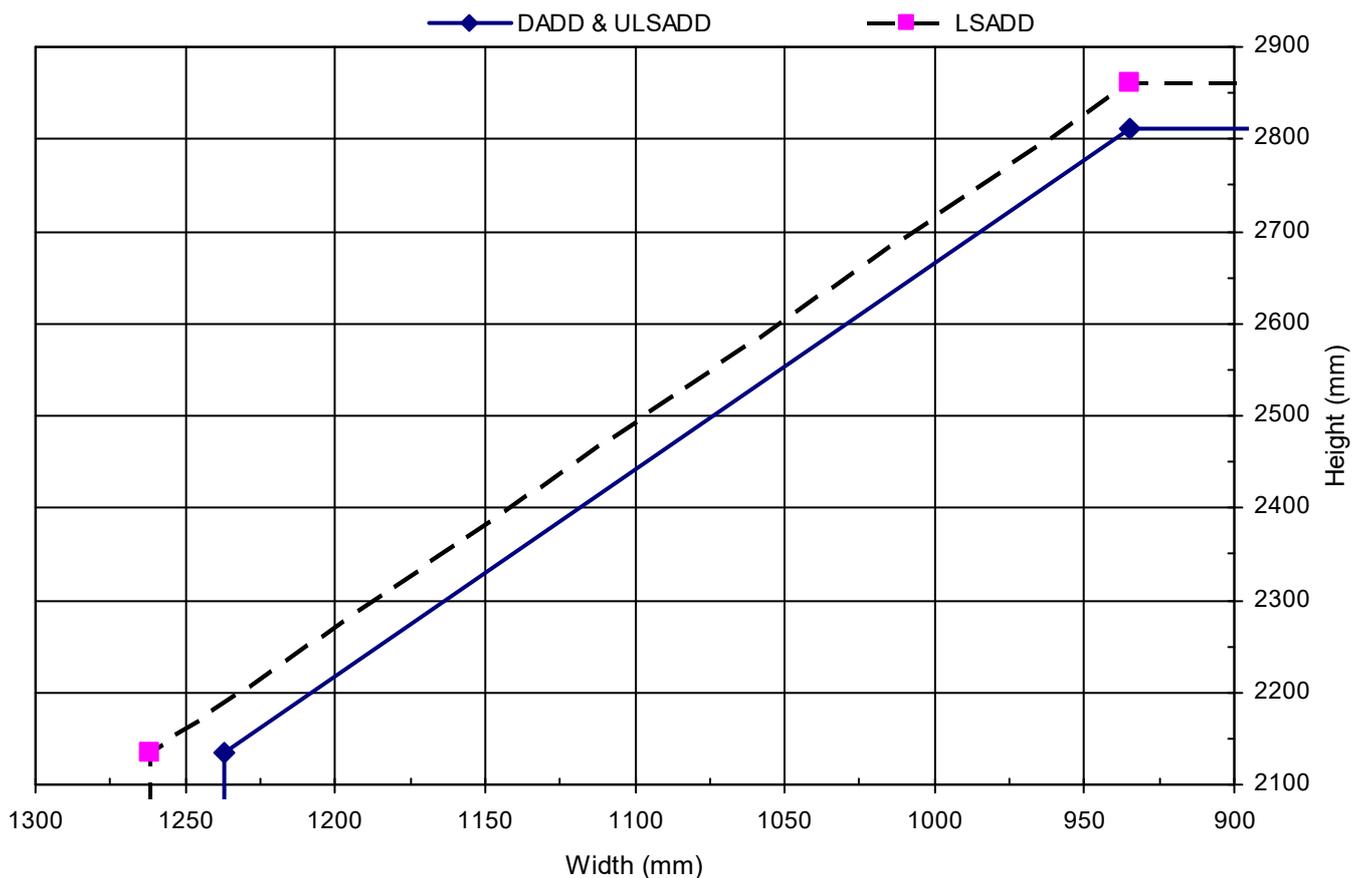
HEAD: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal. For leaves over 2440mm high, increase this to 1No. 20x4mm.

MEETING EDGES: 1No. 15x4mm centrally fitted in the meeting edge of one leaf only.

JAMBS: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal.

HARDWARE PROTECTION: See section 8. Note, for leaves over 2440mm high, intumescent protection is required under the hinge blades on both leaf and frame.

Maximum Door Leaf Size



Egger 44mm FD30 Door Blank – Type 617

Latched & Unlatched, Single & Double Acting, Double Doorsets

Leaf Sizes	Configuration	From: To:	Height (mm)		Width (mm)	
				x		
	DADD & ULSADD		2216	x	1322	
			3146	x	931	
	LSADD		2216	x	1347	
			3196	x	931	
Maximum Overpanel Height (mm)		Transomed	1500			

INTUMESCENT MATERIALS: Lorient Polyproducts Ltd. – Type 617

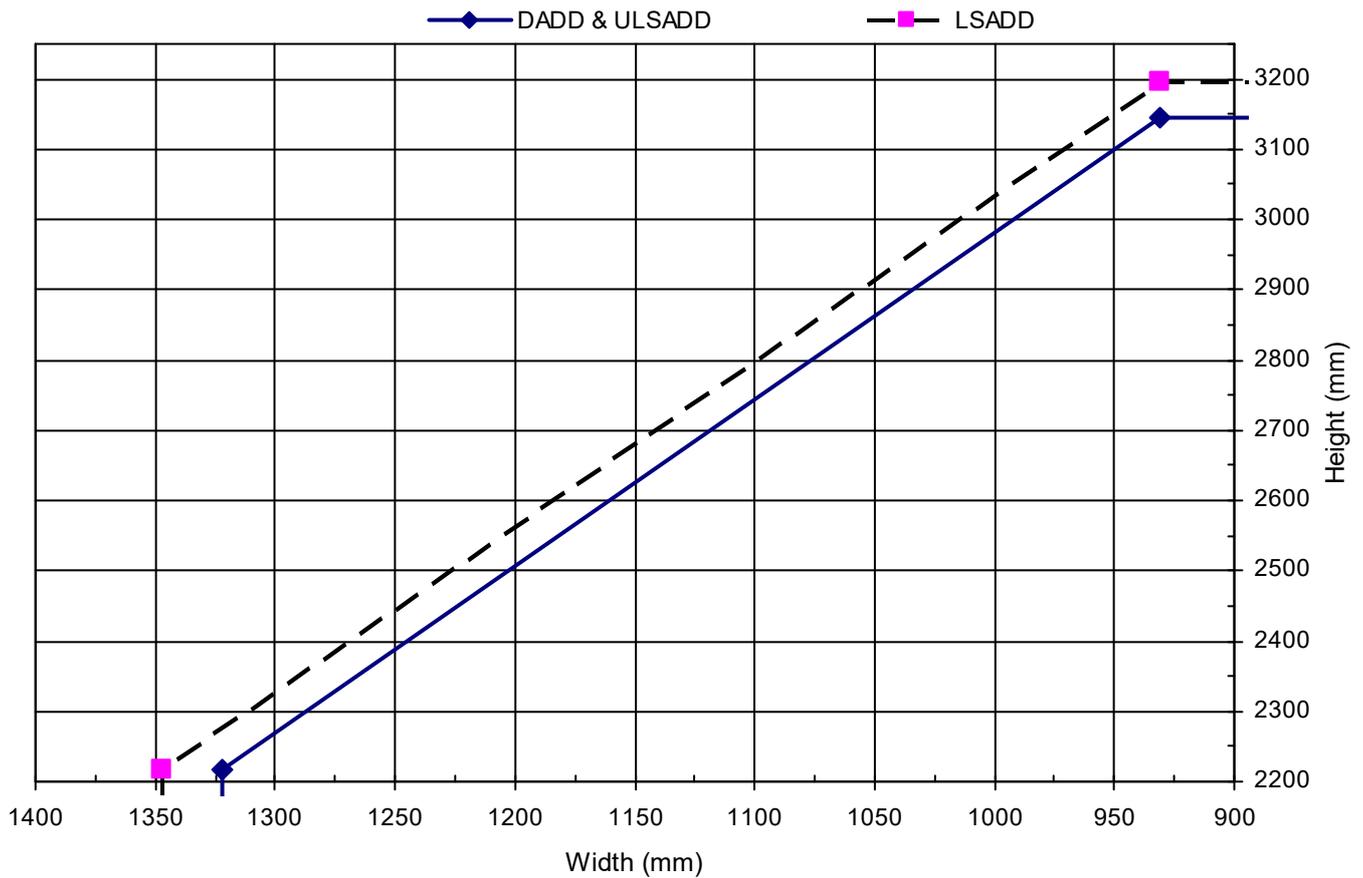
HEAD: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal. For leaves over 2440mm high, increase this to 1No. 20x4mm.

MEETING EDGES: 1No. 15x4mm centrally fitted in the meeting edge of one leaf only.

JAMBS: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal.

HARDWARE PROTECTION: See section 8. Note, for leaves over 2440mm high, intumescent protection is required under the hinge blades on both leaf and frame.

Maximum Door Leaf Size



Egger 44mm FD30 Door Blank – Pyroplex

Latched & Unlatched, Single & Double Acting, Double Doorsets

Leaf Sizes	Configuration	From: To:	Height (mm)		Width (mm)	
	DADD & ULSADD		2300 2400	x x	1025 975	
LSADD	From: To:	2300	x	1050		
		2450	x	975		
Maximum Overpanel Height (mm)		Transomed	1500			

INTUMESCENT MATERIALS: Pyroplex Ltd. – Pyroplex Rigid Box Seals

HEAD:

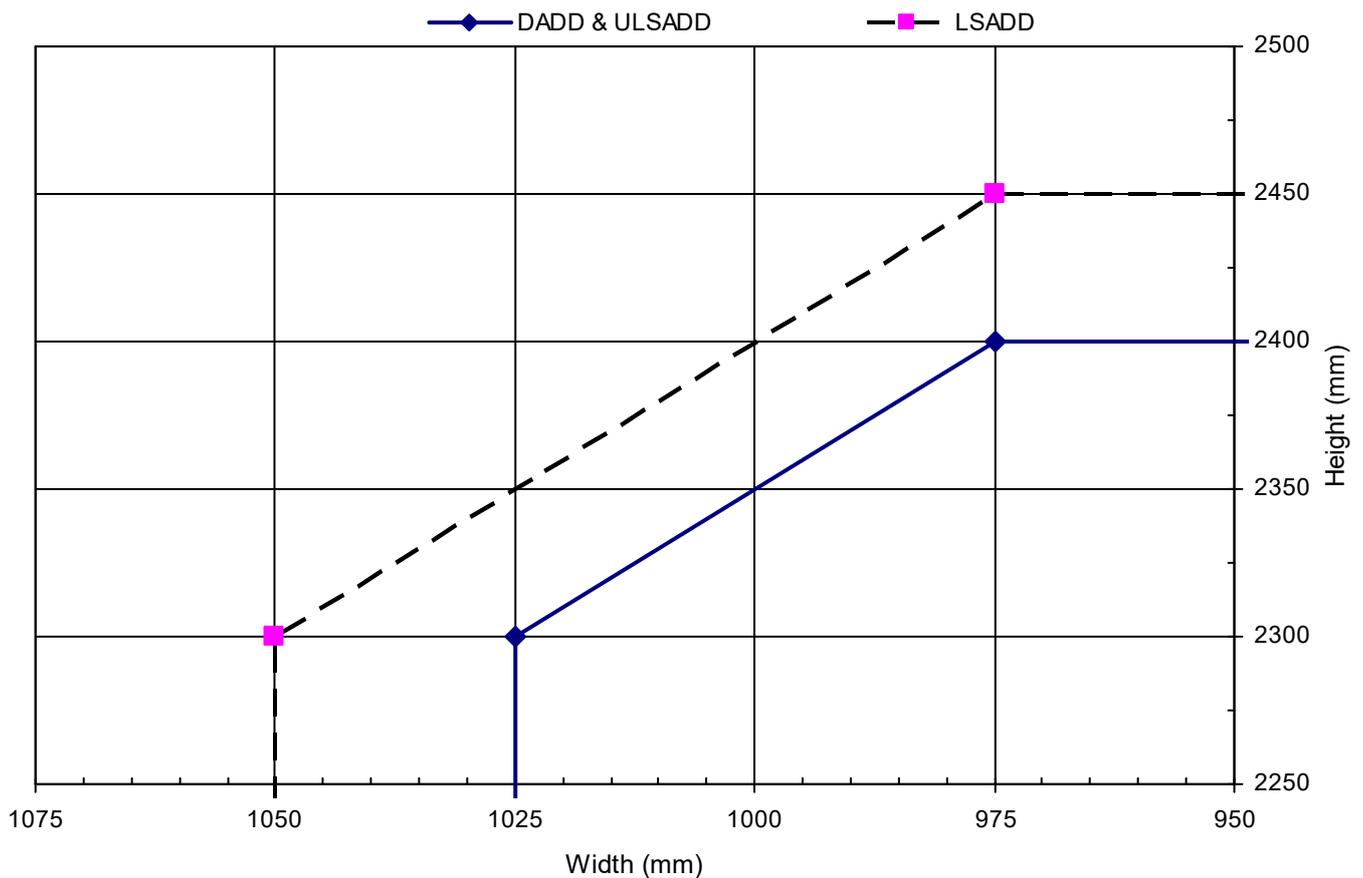
Square: 1No. 20x4mm centrally fitted in the leaf head or frame reveal.

MEETING EDGES: 2No. 10x4mm spaced 12mm apart in the meeting edge of one leaf only.

JAMBS: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal.

HARDWARE PROTECTION: See section 8. Note, for leaves over 2440mm high, intumescent protection is required under the hinge blades on both leaf and frame.

Maximum Door Leaf Size



Egger 44mm FD30 Door Blank – Pyroplex
Latched & Unlatched, Single Acting, Double Doorsets + Overpanels

Leaf Sizes	Configuration	Max: From: To:	Height (mm)		Width (mm)		
	ULSADD+OP		2300	x	975		
LSADD+OP			2300	x	1000		
			2350	x	975		
Maximum Overpanel Height (mm)				1500			

INTUMESCENT MATERIALS: Pyroplex Ltd. – Pyroplex Rigid Box Seals

HEAD:

Square: 2No. 15x4mm spaced 7mm apart and centrally fitted in the bottom of the overpanel, or in the leaf head.

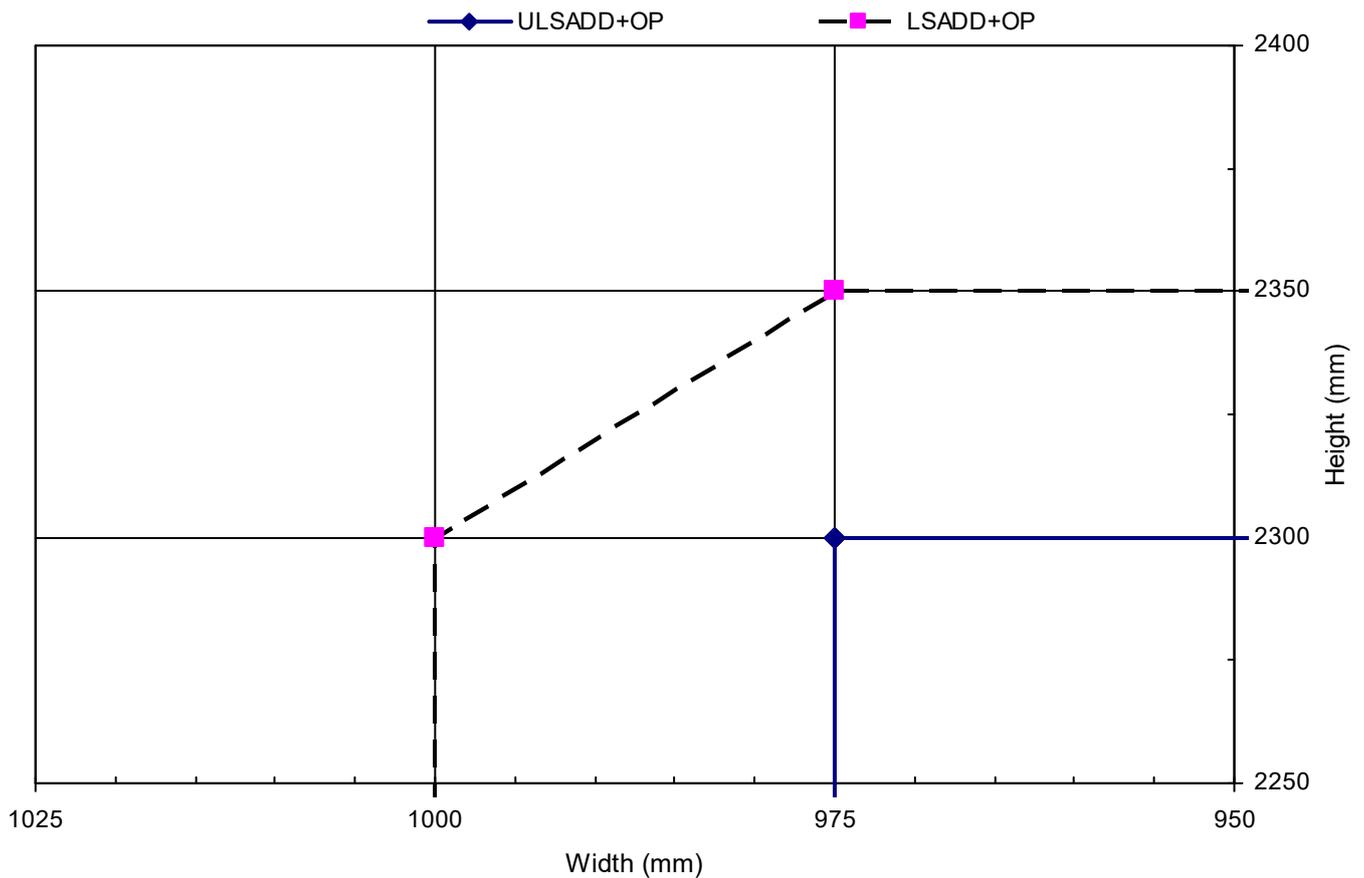
Rebated: 2No. 15x4mm with one seal centrally fitted in the bottom of the leaf rebate and one seal in the opposite rebate.

MEETING EDGES: 2No. 10x4mm spaced 12mm apart in the meeting edge of one leaf only.

JAMBS: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal.

HARDWARE PROTECTION: See section 8.

Maximum Door Leaf Size



Egger 44mm FD30 Door Blank – Pyrostrip 100P
Latched & Unlatched, Single Acting, Double Doorsets + Overpanels

Leaf Sizes	Configuration	From: To:	Height (mm)		Width (mm)	
	ULSADD+OP		2135 2711	x x	1187 935	
LSADD+OP	From: To:	2135	x	1212		
		2761	x	935		
Maximum Overpanel Height (mm)			1500			

INTUMESCENT MATERIALS: Mann McGowan Ltd. – Pyrostrip 100P

HEAD:

Square: 2No. 10x4mm spaced 10mm apart and centrally fitted in the bottom of the overpanel, or in the leaf head. For leaves over 2440mm high, increase this to 2No. 15x4mm.

Rebated: 2No. 10x4mm with one seal centrally fitted in the bottom of the leaf rebate and one seal in the opposite rebate. For leaves over 2440mm high, increase this to 2No. 15x4mm.

MEETING EDGES: 1No. 15x4mm centrally fitted in the meeting edge of one leaf only.

JAMBS: 1No. 15x4mm centrally fitted in the leaf edge or frame reveal.

HARDWARE PROTECTION: See section 8. Note, for leaves over 2440mm high, intumescent protection is required under the hinge blades on both leaf and frame.

Maximum Door Leaf Size

