



CERTIFICATE OF APPROVAL

No CF 284

This is to certify that, in accordance with
TS00 General Requirements for Certification of Fire Protection Products
The undermentioned products of

Dixon International Group Ltd
(Intumescent Seals)
The Old Brewery, Pampisford, Cambridge CB22 3EW
United Kingdom
Tel: 01223 832758 Fax: 01223 837215

Have been assessed against the requirements of the Technical Schedule(s)
denoted below and are approved for use subject to the conditions
appended hereto:

CERTIFIED PRODUCT

Therm-a-Bead 30
Therm-a-Glaze 30
Therm-a-Glaze 30 Plus
Therm-a-Glaze 45
Therm-a-Glaze 60
Therm-a-Glaze 90
Therm-a-Seal 10 x 4

TECHNICAL SCHEDULE

TS25 Fire Resistant Glass,
Glazing Systems and Materials

Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited

Paul Duggan
Certification Manager

Issued: 11th June 2002
Reissued: 21st July 2025
Valid to: 10th June 2030



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CERTIFICATE No CF 284
Dixon International Group Ltd
(Intumescent Seals)

INTUMESCENT SEALS GLAZING SYSTEMS

This Certificate of Approval relates to the contribution to fire resistance of the Intumescent Seals Therm-a-Bead 30, Therm-a-Glaze 30, Therm-a-Glaze 30 Plus, Therm-a-Glaze 45, Therm-a-Glaze 60, Therm-a-Glaze 90, Therm-a-Seal 10 x 4 Glazing Systems when used in timber door leaves and screens, for periods of 30, 60 and 90 minutes integrity, as defined in BS 476: Part 22: 1987 subject to the undermentioned conditions.

This product is approved on the basis of:

- a) Initial type testing
- b) A design appraisal against TS25
- c) Audit Testing in accordance with TS25
- d) Certification of quality management system to BS EN ISO 9001: 2008.
- e) Inspection and surveillance of factory production control

This Certificate of Approval must be read in conjunction with CERTIFIRE Technical Schedule TS25, Fire Resistant Glass, Glazing Systems and materials. The systems covered by this certificate are as follows:

Seal Type	Application	Fire Resistance Performance (mins)		Page No.
		Integrity	Insulation	
Therm-a-Bead 30	Timber based doorsets	30	0	3

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Therm-a-Glaze 30	Timber based doorsets	30	0	4
Therm-a-Glaze 30 Plus	Timber based doorsets	30	0	5
Therm-a-Glaze 45	Timber based doorsets	30	0/30	8
Therm-a-Glaze 45 & Therm-a-Bead 30	Timber screens	30	0/30	10
Therm-a-Seal 10 x 4	Timber based doorsets	30	0	13
Therm-a-Glaze 60	Timber based doorsets	60	0/30/60	14
Therm-a-Glaze 60	Timber based doorsets	60	0	15
Therm-a-Glaze 90	Timber based doorsets	90	0	16
Therm-a-Glaze 60	Timber based screens	60	0/30/60	19

General Requirements

There is no restriction to the direction of exposure for the glazing systems i.e. the systems are symmetrical.

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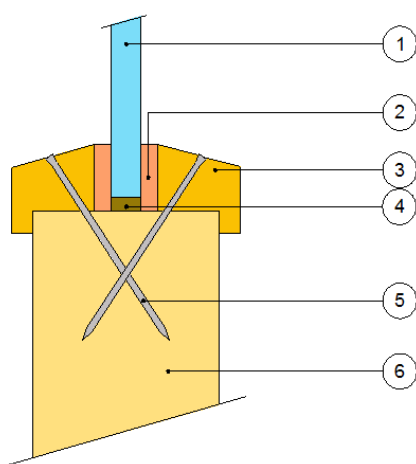
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CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Bead 30 for use in timber doors for periods of 30 minutes fire resistance

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Glass (see Table 1 below)
- 2 Therm-a-Bead 30 glazing system (15 x 4 mm)
- 3 Hardwood glazing beads (min. density 650 kg/m³) 20 mm high x 19.5 mm wide overall including 5 mm x 5 mm bolection return, chamfered by approximately 15°
- 4 Non-combustible/hardwood or Therm-a-Line setting blocks
- 5 Steel pins, 50 mm long x 2.5 mm diameter at 150 mm centres, fixed at 35° to glass
- 6 Nominally 44 mm thick FD30 door leaf

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 1 below, when used in conjunction with the Therm-a-Bead 30 glazing system:

Table 1

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m ²)
Pyrosec EW30/7	1645	406	0.535
	1076	801	0.690
Pyrodur Plus 7 mm	1645	406	0.535
	1076	801	0.690
Pyrobelite 7 mm	1645	406	0.535
	1076	801	0.690

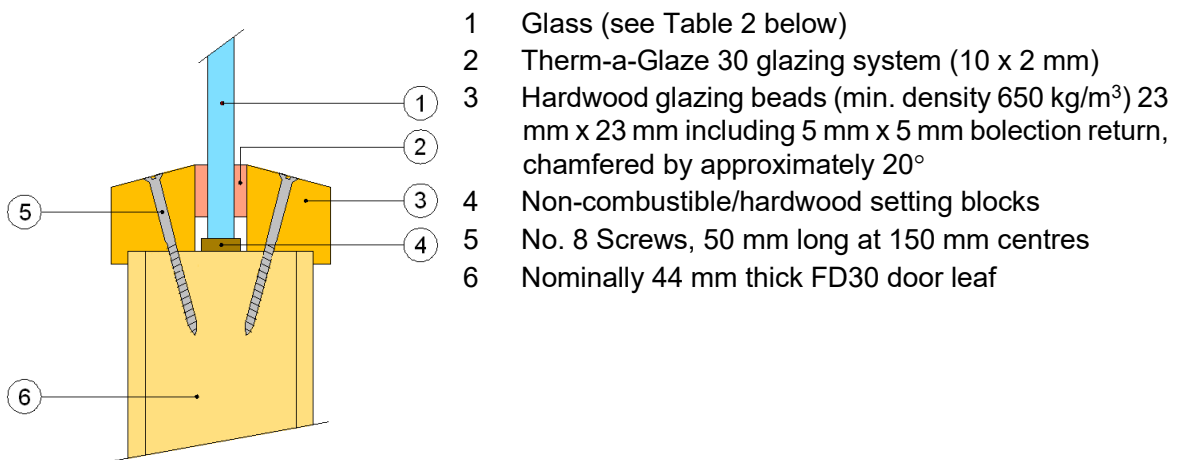
The aspect ratio of the glass may be unlimited within these pane dimensions

CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 30 for use in timber doors for periods of 30 minutes fire resistance

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Glass (see Table 2 below)
- 2 Therm-a-Glaze 30 glazing system (10 x 2 mm)
- 3 Hardwood glazing beads (min. density 650 kg/m³) 23 mm x 23 mm including 5 mm x 5 mm bolection return, chamfered by approximately 20°
- 4 Non-combustible/hardwood setting blocks
- 5 No. 8 Screws, 50 mm long at 150 mm centres
- 6 Nominally 44 mm thick FD30 door leaf

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 2 below, when used in conjunction with the Therm-a-Glaze 30 glazing system:

Table 2

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m ²)
Pyroshield™ 2	900	600	0.54
Pyrostem	900	600	0.54
Pyran S 6 mm	900	600	0.54
Pyrodur Plus 7 mm	875	600	0.525
Pyrobelite 7 mm	900	600	0.54

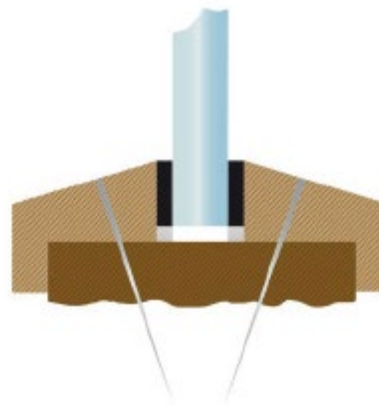
The aspect ratio of the glass may be unlimited within these pane dimensions

CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 30 Plus for use in timber doors for periods of 30 minutes fire resistance

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification (please refer to Table 1 for glass specific requirements):

- Glass (see Tables 1 for type and allowable dimensions and specific glass based variations to the specification given below)
- Therm-a-Glaze 30 Plus – 10mm x 2mm
- Ø1.6 x 40mm / Ø2mm x 50 mm long steel gun fired pins or No. 8 x 40/50 mm long screws at 150 mm maximum centres and 50mm from corners (fixed at 45° to glass).
- 15 mm beads use 40 mm pins/screws,
- 20 mm beads use 50 mm pins/screws
- Bolection – 5mm x 5mm minimum.
- Nominally 44 mm thick timber based FD30 door leaf*
- Glazing Bead from:
Softwood: min. density 510kg/m³, 20° chamfer
Hardwood: min. density 620kg/m³, 20° chamfer
MDF: min. density 700kg/m³, 15° chamfer



System may be used with and without non-combustible setting blocks. Care must be taken to ensure edge cover and expansion allowances for each specific glass are complied with. For Pyroclear modified toughened glass a minimum expansion gap of 5 mm should be provided. For Firesafe modified toughened glass expansion allowance should be 3 mm at the side edges and 4 mm at the top.

The Therm-a-Glaze 30 Plus can be used on a wide range of uninsulated glasses. Refer to Table 3 – Approved Fire Resistant Glass Types for guidance on the field of application.

* The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions. Only solid cored timber based or cellulosic (i.e. flaxboard/chipboard) cores are suitable for being glazed with this system and if desirable may include a timber/MDF liner. Note: Firesafe glass requires the use of a 6 mm thick hardwood aperture liner. **Core incorporating voids or hollow tubes should not be glazed using this system unless a 6 mm hardwood aperture liner is fitted within the perimeter of the aperture.**

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Therm-a-Glaze 30 Plus for use in timber doors for periods of 30 minutes fire resistance (continued)

This Certificate of Approval relates to the sizes of various glass types as shown in Table 1 below, when used in conjunction with the above system. Maximum pane dimensions are also subject to the limitations given.

Glass	Bead Height / Tape Dimension (mm)	Maximum Glass Height (mm)	Maximum Glass Width (mm)	Maximum Glass Area (m ²)
Pyroguard UK Ltd Pyrostem	15 / 10x2	2288	889	1.63
Pilkington UK Ltd Pyroshield 2	15 / 10x2	2288	889	1.63
Schott UK Ltd Pyran S – 6, 8, 10 & 12 mm	15 / 10x2	2288	889	1.63
Pyroguard UK Ltd 7 mm Pyroguard EW30 IMPACT	15 / 10x2	1680	610	0.85
		1846*	760*	1.31*
Pilkington UK Ltd Pyrodur Plus 30-104 (7 mm)	15 / 10x2	2288	889	1.63
Pilkington UK Ltd Pyrodur 30-201 (10 mm)	15 / 10x2	2288	889	1.63

Table 3. Maximum Permitted Glass Dimensions

*hardwood beads only (min. density 620 kg/m³)

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Therm-a-Glaze 30 Plus for use in timber doors for periods of 30 minutes fire resistance (continued)

Glass	Bead Height / Tape Dimension (mm)	Maximum Glass Height (mm)	Maximum Glass Width (mm)	Maximum Glass Area (m ²)
AGC UK Ltd Pyrobelite 7 & Pyrobelite 10	15 / 10x2	2300*	890*	2.05
		1400	1032	1.44
Fire Glass UK Ltd Firesafe 30-7	15 / 10x2	2288	889	1.63
Fire Glass UK Ltd Firesafe 30-9 2B2		1632	800	1.31
Fire Glass UK Ltd Firesafe 60-11		1632	800	1.31
Promat UK Ltd Pyrosec 7/30	15 / 10x2	2300*	890*	2.05
		1400	1032	1.44

Table 3 (continued). Maximum Permitted Glass Dimensions

*hardwood beads only (min. density 620 kg/m³)

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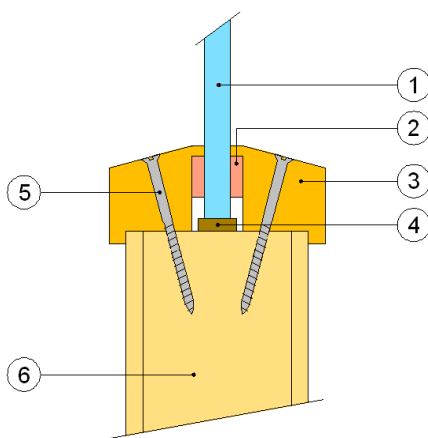
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CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 45 for use in timber doors for periods of 30 minutes fire resistance

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Glass (see Table 4 below)
- 2 Therm-a-Glaze 45 glazing system (10 x 2 mm)
- 3 Softwood or hardwood (min. density 460 kg/m³) glazing beads 20 mm wide by x 15 mm high, may be chamfered by approximately 20° or square, bolection return optional.
- 4 Non-combustible/hardwood setting blocks
- 5 No. 8 Screws or steel pins, 38 mm long at 200 mm centres
- 6 Nominally 44 mm thick FD30 door leaf or thicker if required to accommodate beads and glass at the required dimensions

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions. The apertures may be cut directly into a solid core or lined with softwood or hardwood.

CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 45 for use in timber doors for periods of 30 minutes fire resistance (continued)

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 4 below, when used in conjunction with the Therm-a-Glaze 45 glazing system:

Table 4

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m ²)
Pyroshield™ 2	2318 (at 754 wide)	931 (at 1855 high)	1.72
Pyrostem	1980 (at 706 wide)	818 (at 1707 high)	1.40
Pyran S 6 mm	1940 (at 720 wide)	800 (at 1750 high)	1.40
Pyrodur Plus 7mm	875 (at 750 wide)	800 (at 800 high)	0.66
Pyrobelite 7 mm	2300 (at 747 wide)	890 (at 1932 high)	1.72
Pyroguard Clear & Wired 7 mm	2125 (at 301 wide)	610 (at 1049 high)	0.64
Pyroguard Clear & Wired 11 mm	2125 (at 301 wide)	610 (at 1049 high)	0.64
Pyroguard 7 mm/ toughened glass IGU ⁽¹⁾	1210 (at 610 wide)	610 (at 1210 high)	0.74
Pyrodur 10 mm	875 (at 750 wide)	800 (at 800 high)	0.66
Fireswiss Foam ⁽²⁾	2125 (at 300 wide)	800 (at 800 high)	0.64

Circular apertures up to 500 mm in diameter using any of the above glasses are approved. Beads shall be made up of no more than 8 sections and shall be tongue and groove jointed, stapled and glued.

The aspect ratio of the glass may be unlimited within these pane dimensions

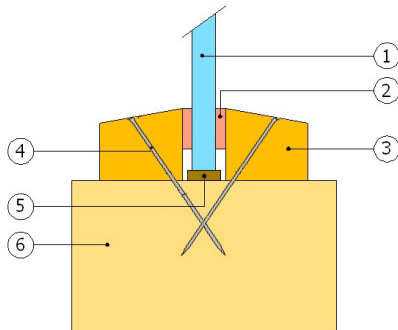
- (1) For this system the glazing beads shall be hardwood of minimum density 650 kg/m³, sections, 16.5 mm wide by 25 mm high with a 5 mm by 5 mm bolection return, chamfered by approximately 15° and fixed using, 40 mm long steel pins or screws at a maximum of 150mm centres and angled at 30°. A secondary 6 mm thick hardwood liner (min. density 500 kg/m³) shall be used to line apertures cut within all substrates.
- (2) For this system the glazing beads shall be hardwood of minimum density 500 kg/m³, sections, 25 mm wide by 23 mm high with a 5 mm by 5 mm bolection return, chamfered by approximately 15° and fixed using, 38 mm long steel pins or screws at a maximum of 150mm vertical and 100 mm horizontal centres and angled at 15°. A secondary 6 mm thick hardwood liner (min. density 500 kg/m³) shall be used to line apertures cut within all substrates.

CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 45 or Therm-a-Bead 30 for use in timber screens for periods of 30 minutes fire resistance

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Glass (see Table 5 below)
- 2 Therm-a-Glaze 45 or Therm-a-Bead 30 glazing system
- 3 Hardwood (min. density 650 kg/m³) glazing beads 20 mm wide by x 15 mm high, chamfered by approximately 20°
- 4 No. 8 Screws or steel pins, 38 mm long at 150 mm centres
- 5 Non-combustible/hardwood setting blocks
- 6 Hardwood (min. density 650 kg/m³) section 25 mm x 80 mm minimum

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 5 below, when used in conjunction with the Therm-a-Glaze 45 or Therm-a-Bead 30 glazing system:

Table 5

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m ²)
Pyroshield™2	3308 (at 1000 wide)	1200 (at 2757 high)	3.30
Pyran S 6 mm	3308 (at 1000 wide)	1200 (at 2757 high)	3.30
Pyrodur Plus 7 mm	2050 (at 1200 wide)	1200 (at 2050 high)	2.46
Pyrobelite 7 mm	2900 (at 840 wide)	1200 (at 2483 high)	2.98
Pyrostop 15 mm	3000 (at 1750 wide)	2291 (at 2291 high)	5.25

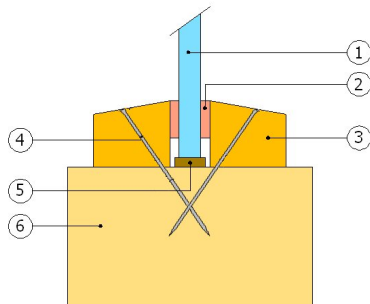
The aspect ratio of the glass may be unlimited within these pane dimensions

CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 45 or Therm-a-Bead 30 for use in timber screens for periods of 30 minutes fire resistance (continued)

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Glass (see Table 6 below)
- 2 Therm-a-Glaze 45 or Therm-a-Bead 30 glazing system
- 3 Glazing beads (see Table 5 below)
- 4 Screws or pins (see Table 5 below)
- 5 Non-combustible/hardwood setting blocks
- 6 Hardwood frame (see Table 5 below)

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 6 below, when used in conjunction with the Therm-a-Glaze 45 or Therm-a-Bead 30 glazing system:

Table 6

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m ²)
Pyroguard clear & wired 7 mm ⁽¹⁾	2000 (at 1200 wide)	1200 (at 2000 high)	2.40
Pyroguard clear & wired 11 mm ⁽²⁾	2100 (at 1575 wide)	1575 (at 2100 high)	3.30
Fireswiss Foam 60/30 ⁽³⁾	2600 (at 500 wide)	2600 (at 500 high)	1.30
Pyroguard/ toughened IGU ⁽¹⁾	2000 (at 1200 wide)	1200 (at 2000 high)	2.40
Pyrostem ⁽⁴⁾	2288 (at 1228 wide)	1353 (at 2077 high)	2.81
Pyrodur 10 mm ⁽⁵⁾	2000 (at 1400 wide) Or 1673 (1673 wide)	1400 (at 2000 high) Or 1673 (1673 wide)	2.80
Pyrodur 10 mm IGU ⁽⁵⁾			
Pyrodur 13 mm ⁽⁵⁾			
Pyrodur 15/18 mm ⁽⁵⁾			
Pyrostop 15/18 mm IGU ⁽⁵⁾			
Pyranova 30 ⁽⁶⁾	3610	2900	8.41
The aspect ratio of the glass may be unlimited within these pane dimensions			

CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 45 or Therm-a-Bead 30 for use in timber screens for periods of 30 minutes fire resistance (continued)

Table 6

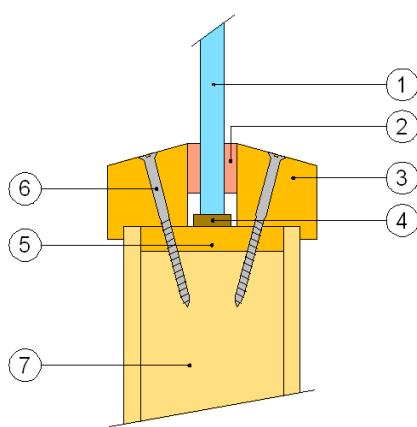
(1)	The glazing beads shall be of hardwood with a minimum density of 610 kg/m ³ , sections, 40mm wide by 20mm high, square or chamfered and fixed using minimum no. 8, 38mm long steel screws at a maximum of 200mm centres and angled to pass under the face of the glass. The frame section shall be 63 mm by 105 mm (minimum) hardwood of minimum density 530 kg/m ³
(2)	The glazing beads shall be of hardwood with a minimum density of 610 kg/m ³ , sections, 36.5mm wide by 20mm high, square or chamfered and fixed using minimum no. 8, 38mm long steel screws at a maximum of 200mm centres and angled to pass under the face of the glass. The frame section shall be 63 mm by 105 mm (minimum) hardwood of minimum density 530 kg/m ³
(3)	The glazing beads shall be of hardwood with a minimum density of 640 kg/m ³ , sections, 23mm wide by 20mm high, square or chamfered and fixed using minimum M4, 50mm long steel screws at a maximum of 200mm centres and angled to pass under the face of the glass. The frame section shall be 45 mm by 92 mm (minimum) softwood/hardwood of minimum density 450 kg/m ³
(4)	The glazing beads shall be of hardwood with a minimum density of 650 kg/m ³ , sections, 34mm wide by 20mm high, chamfered by 20° and fixed using minimum no. 8, 38mm long steel screws at a maximum of 200mm centres and angled to pass under the face of the glass. The frame section shall be 40 mm by 80 mm (minimum) hardwood of minimum density 650 kg/m ³
(5)	The glazing beads shall be of softwood/hardwood with a minimum density of 510 kg/m ³ , sections, 25mm wide by 15mm high, chamfered by 25° and fixed using minimum 50 mm pins or screws, 150 mm centres, fixed at 35°. The frame section shall be 45 mm by 95 mm (minimum) softwood/hardwood of minimum density 510 kg/m ³
(6)	The glazing beads shall be of softwood/hardwood with a minimum density of 450 kg/m ³ , sections, 20mm wide by 18mm high, square or chamfered by up to 10° and fixed using minimum 40 mm long steel screws at 400 mm centres (30° to glass). The frame section shall be 20 mm by 68 mm (minimum) softwood/hardwood of minimum density 450 kg/m ³

CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Seal 10 x 4 for use in timber doors for periods of 30 minutes fire resistance

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Glass (see Table 7 below)
- 2 Therm-a-Seal 10x4 mm glazing system
- 3 Hardwood (min. density 650 kg/m³) glazing beads 25 mm wide by x 23 mm high including a 5 x 5 mm bolection return, chamfered by approximately 20°
- 4 Non-combustible/hardwood setting blocks
- 5 15 mm softwood liner (min. density 450 kg/m³)
- 6 No. 8 Screws, 50 mm long at 225 mm centres
- 7 Nominally 44 mm thick FD30 door leaf

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 7 below, when used in conjunction with the Therm-a-Seal 10x4 mm glazing system:

Table 7

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m ²)
Pyroshield™2	968 (at 225 wide)	281 (at 775 high)	0.21
Pyran S 6 mm	968 (at 225 wide)	281 (at 775 high)	0.21
Pyrodur Plus 7 mm	875 (at 240 wide)	281 (at 747 high)	0.21
Pyrobelite 7 mm	968 (at 225 wide)	281 (at 775 high)	0.21

The aspect ratio of the glass may be unlimited within these pane dimensions

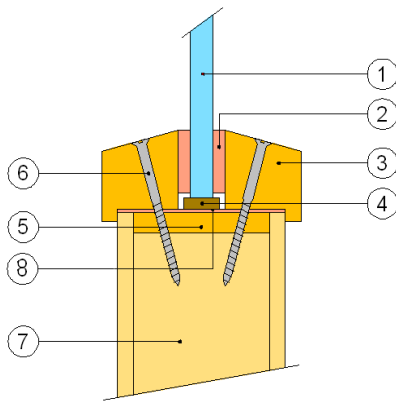
CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 60 for use in timber doors for periods of 60 minutes fire resistance

Therm-a-Glaze 60 comprises Therm-a-Bead intumescent glazing seal and Therm-a-Line intumescent liner

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Glass (see Table 8 below)
- 2 Therm-a-Bead intumescent glazing seal 25 x 4 mm
- 3 Hardwood (min. density 650 kg/m³) glazing beads 30 mm wide by x 25 mm high incorporating a 5 x 5 mm bolection return, chamfered by approximately 20°
- 4 Non-combustible/hardwood setting blocks
- 5 16 mm hardwood (min density 650 kg/m³) liner
- 6 No. 8 Screws, 50 mm long at 150 mm centres
- 7 Nominally 54 mm thick FD60 door leaf
- 8 54 x 2 mm Therm-a-Line intumescent liner or as required to accommodate beads and glass at the required dimensions

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 8 below, when used in conjunction with the Therm-a-Glaze 60 glazing system:

Table 8

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m ²)
Pyroshield™2	1700 (at 240 wide)	632 (at 595 high)	0.408
Pyroguard 11 mm	1400 (at 400 wide)	460 (at 1250 high)	0.575
Fireswiss Foam 60/30	1400 (at 400 wide)	460 (at 1250 high)	0.575
Fireswiss Foam 60/30	1400 (at 400 wide)	460 (at 1250 high)	0.575

Circular apertures up to 450 mm in diameter using any of the above glasses are approved. Beads shall be made up of no more than 5 sections and shall be tongue and groove jointed, stapled and glued.

The aspect ratio of the glass may be unlimited within these pane dimensions

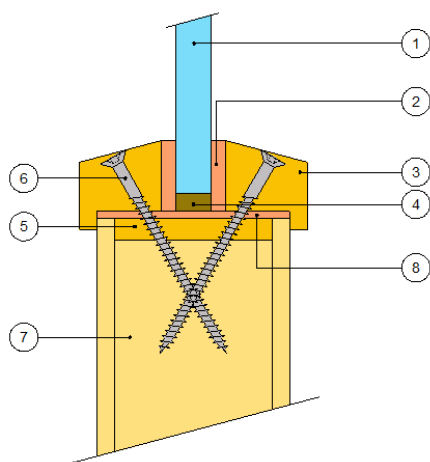
CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 60 for use in timber doors for periods of 60 minutes fire resistance

Therm-a-Glaze 60 comprises Therm-a-Bead intumescent glazing seal and Therm-a-Line intumescent liner

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Glass (see Table 9 below)
- 2 Therm-a-Bead intumescent glazing seal 20 x 4 mm
- 3 Hardwood (min. density 650 kg/m³) glazing beads 33 mm wide by x 25 mm high overall incorporating a 5 x 5 mm bolection return, chamfered by approximately 15°
- 4 Therm-a-Line setting blocks 25 mm long by 10 mm wide by 4 mm thick, 50 mm in from corners
- 5 Optional hardwood liner (min density 650 kg/m³)
- 6 No. 8 Screws, 75 mm long, at 150 mm centres, 30° to glass
- 7 Nominally 54 mm thick FD60 door leaf
- 8 54 x 2 mm Therm-a-Line intumescent liner or as required to accommodate beads and glass at the required dimensions

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 9 below, when used in conjunction with the Therm-a-Glaze 60 glazing system:

Table 9

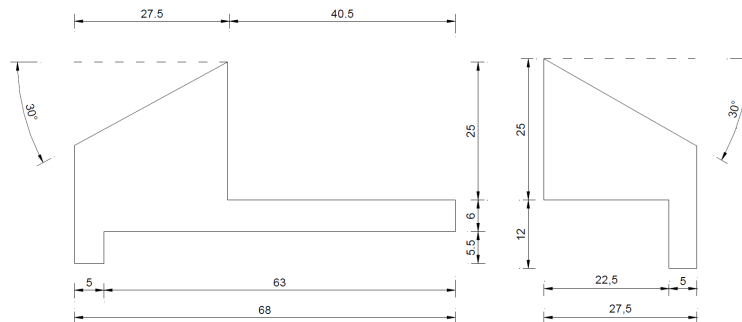
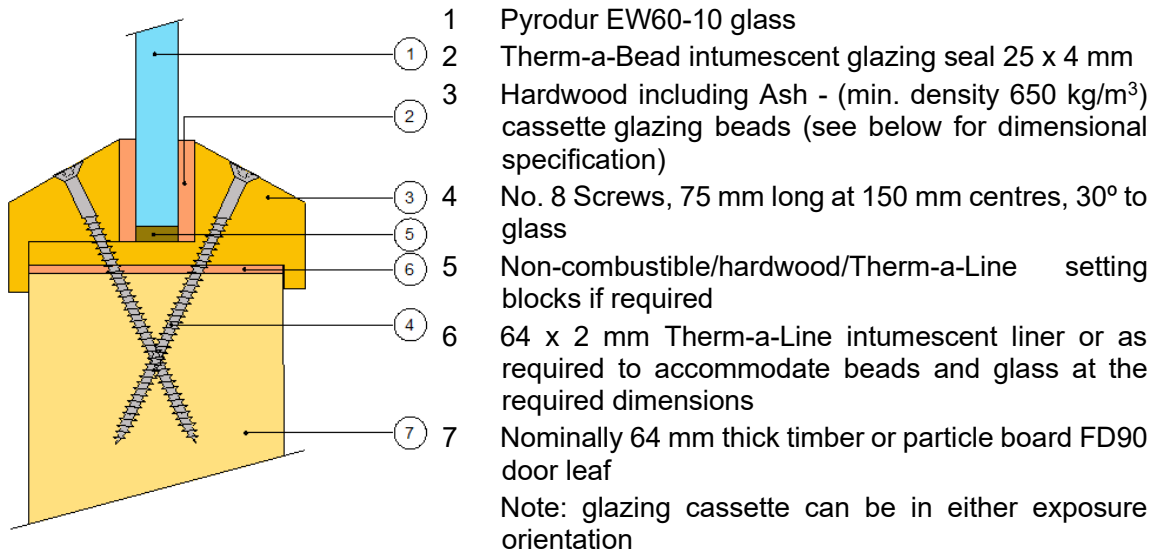
Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m ²)
Pyrodur EW60-10	911	678	0.580
	1524	348	0.482
The aspect ratio of the glass may be unlimited within these pane dimensions			

CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 90 for use in timber doors for periods of 90 minutes fire resistance (Pyrodur EW60-10 only) – CASSETTE Glazing System

Therm-a-Glaze 90 comprises Therm-a-Bead intumescent glazing seal and Therm-a-Line intumescent liner.

For this application the following conditions shall apply: The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions. This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 10 below, when used in conjunction with the Therm-a-Glaze 90 glazing system:

Table 10

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m ²)
Pyrodur EW60-10	1764	297	0.432
The aspect ratio of the glass may be unlimited within these pane dimensions			

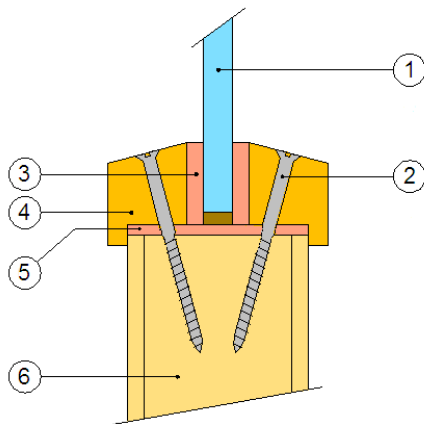
CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 90 for use in timber doors for periods of 90 minutes fire resistance (Pyrodur EW60-10 only)

Therm-a-Glaze 90 comprises Therm-a-Bead intumescent glazing seal and Therm-a-Line intumescent liner.

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Pyrodur EW60-10 glass
- 2 No. 8 Screws, 75 mm long at 150 mm centres, 30° to glass
- 3 Therm-a-Bead intumescent glazing seal 25 x 4 mm
- 4 Hardwood (min. density 650 kg/m³) glazing beads 31 mm high by x 28 mm wide overall incorporating a 5 x 5 mm bolection return, chamfered by approximately 30°
- 5 64 x 2 mm Therm-a-Line intumescent liner or as required to accommodate beads and glass at the required dimensions
- 6 Nominally 64 mm thick timber or particle board FD90 door leaf
- 7 Non-combustible/hardwood/Therm-a-Line setting blocks if required. Note: Fireglaze compound around the perimeter of the glass and the glazing liner is required for certain glass dimensions

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.



CERTIFICATE No CF 284
Dixon International Group Ltd
(Intumescent Seals)

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 11 below, when used in conjunction with the Therm-a-Glaze 90 glazing system:

Table 11

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m²)
Pyrodur EW60-10	1020	268	0.252
	1504*	264*	0.384*

The aspect ratio of the glass may be unlimited within these pane dimensions
***Note:** Fireglaze compound around the perimeter of the glass and the glazing liner is required

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CERTIFICATE No CF 284
Dixon International Group Ltd
(Intumescent Seals)

INTUMESCENT SEALS GLAZING SYSTEMS IN TIMBER DOORSETS

This Certificate of Approval relates to timber based door leaf constructions consisting of timber faces coupled with timber or other cellulosic cores of not less than 44 mm overall leaf thickness for periods of 30 minutes fire resistance performance and not less than 54 mm overall leaf thickness for periods of 60 minutes fire resistance performance and not less than 64 mm overall leaf thickness for periods of 90 minutes fire resistance performance.

The glazing systems described in this approval may be fitted in the manner described in this Certificate of Approval, to previously tested door leaves provided that the particular aspects of the door assembly are maintained. These are described below but are not exhaustive:

1. The doorset, including door frame and associated building hardware, should have achieved at least 30 or 60 or 90 minutes integrity when tested or subsequently assessed by one of the laboratories approved by CERTIFIRE as acceptable for this purpose to BS 476: Part 22: 1987.
2. If the proposed doorset is to be used in double-leaf configuration, the test or assessment evidence should be applicable to double-leaf configurations.
3. Likewise, if the proposed doorset is to be used in the unlatched configuration the available evidence should be applicable to unlatched doorsets.
4. The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
5. When used to glaze CERTIFIRE approved doorsets which have smaller apertures than allowed in this certificate, the aperture sizes specified in the doorset certificate shall take precedence.

If glazed in this way the proposed installation of the Intumescent Seals Glazing Systems is not expected to affect the fire resistance performance of the leaf.

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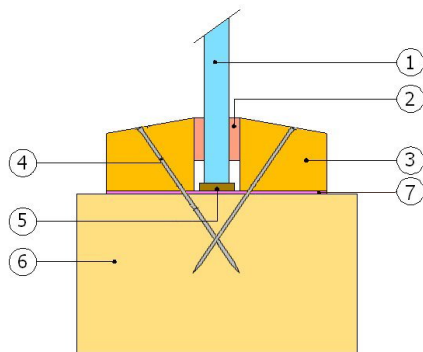
CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 60 for use in timber screens for periods of 60 minutes fire resistance

Therm-a-Glaze 60 comprises Therm-a-Bead intumescent glazing seal and Therm-a-Line intumescent liner

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Glass (see Table 12 below)
- 2 Therm-a-Glaze 60 glazing system
- 3 Glazing beads (see Table 9 below)
- 4 Non-combustible/hardwood setting blocks
- 5 Screws or pins (see Table 9 below)
- 6 Hardwood frame (see Table 9 below)
- 7 63 x 2 mm Therm-a-Line intumescent liner or as required to accommodate beads and glass at the required dimensions

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 11 below, when used in conjunction with the Therm-a-Glaze 60 glazing system:

Table 12

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m ²)
Fireswiss Foam 60/30 ⁽¹⁾	2500 (at 1200 wide)	1500 (at 2000 high)	3.00
Fireswiss Foam 60/60 ⁽²⁾	2500 (at 1400 wide)	1871 (at 1871 high)	3.50
IGU Pyrostop 15/18 mm ⁽³⁾	2820 (at 1216 wide)	1850 (at 1850 high)	3.43
Pyranova 60 ⁽⁴⁾	3067 (at 1500 wide)	2145 (at 2145 high)	4.60
The aspect ratio of the glass may be unlimited within these pane dimensions			

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CERTIFICATE No CF 284 Dixon International Group Ltd (Intumescent Seals)

Therm-a-Glaze 60 for use in timber screens for periods of 60 minutes fire resistance
(continued)

Table 12

(1)	The glazing beads shall be of hardwood with a minimum density of 580 kg/m ³ , sections, 36.5mm wide by 22mm high, square or chamfered (up to 10°) and fixed using minimum 50 mm long steel screws at 200 mm centres (45° to glass). The frame section shall be 45 mm by 92 mm (minimum) hardwood of minimum density 580 kg/m ³ . A 50 x 2 mm GL60 liner is also required around the aperture.
(2)	The glazing beads shall be of hardwood with a minimum density of 640 kg/m ³ , sections, 30mm wide by 20mm high, square or chamfered (up to 10°) and fixed using minimum 50 mm long steel screws at 200 mm centres (30° to glass). The frame section shall be 45 mm by 92 mm (minimum) hardwood of minimum density 640 kg/m ³
(3)	The glazing beads shall be of hardwood with a minimum density of 705 kg/m ³ , sections, 30mm wide by 20mm high, square or chamfered (up to 15°) and fixed using minimum M4, 50mm long steel screws at a maximum of 200mm centres (20° to glass). The frame section shall be 40 mm by 82 mm (minimum) hardwood of minimum density 640 kg/m ³
(4)	The glazing beads shall be of hardwood with a minimum density of 600 kg/m ³ , sections, 30mm wide by 20mm high, square and fixed using minimum 78 mm long steel screws at a maximum of 200mm centres (30° to glass). The frame section shall be 40 mm by 100 mm (minimum) hardwood of minimum density 600 kg/m ³

This certification is provided to the client for their own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.