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## CERTIFICATE OF APPROVAL

### No CF 221

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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 (SEALMASTER)

Brewery Road, Pampisford, Cambridge CB22 3HG, United Kingdom  
Tel: 01223 832851 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:

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#### CERTIFIED PRODUCT

FireGlaze Compound  
FireGlaze G30 or LP15 Strip  
FireGlaze GL60 Liner  
FireGlaze 2000

#### 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: 23<sup>rd</sup> May 2001  
Re-issued: 25<sup>th</sup> October 2023  
Valid to: 17<sup>th</sup> January 2024





## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

#### FIREGLAZE GLAZING METHODS

This Certificate of Approval relates to the fire resistance of FireGlaze glazing methods when used in timber screens and door leaves, for periods of 30 and 60 minutes fire resistance, as defined in BS 476: Part 22: 1987 subject to the undermentioned conditions.

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.

This product is approved on the basis of:

- i) Initial type testing.
- ii) A design appraisal against TS25.
- iii) Certification of quality management system to BS EN ISO 9001: 2008.
- iv) Inspection and surveillance of factory production control
- v) Audit testing

This Certificate of Approval must be read in conjunction with CERTIFIRE Technical Schedule TS25, Fire Resistant Glass, Glazing Systems and Materials.

The methods covered by this certificate are as follows:

<b>FireGlaze Compound</b>	for use in timber doors and hardwood screens for periods of 30 minutes fire resistance
<b>FireGlaze G30 or LP15 Strip</b>	for use in timber doors and softwood screens for periods of 30 minutes fire resistance
<b>FireGlaze Compound and GL60 Liner</b>	for use in timber doors and hardwood screens for periods of 60 minutes fire resistance
<b>FireGlaze 2000 and GL60 Liner</b>	for use in timber doors and softwood or hardwood screens for periods of 60 minutes fire resistance

#### General Requirements

Where the system and glass is installed in a timber or steel framed screen, the orientation of the screen shall be no more than  $\pm 10^\circ$  from the vertical.

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

The glazing methods shall not be fitted into partitioning systems at a distance higher than 4000mm from finished floor level.

Any number of panes may be included in the screens/door leaves covered below providing the framing system/door leaf is capable of supporting this principle.

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## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

#### FireGlaze Compound in timber door leaves for periods of 30 minutes fire resistance

The glazing material shall be FireGlaze Compound 2mm thick between glass and the beads, full height of the beads. Hardwood or non-combustible material setting blocks shall be used to achieve the required edge cover. The glazing beads shall be of hardwood sections, 25mm wide by 15mm high, chamfered by 20° and fixed using No 8 wood screws 50mm long or 38mm steel pins at a maximum of 150mm centres.

The apertures may be cut directly into a solid core or lined with softwood or hardwood.

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 1 below, when used in conjunction with FireGlaze Compound glazing method:

Table 1

Glass type	Maximum Pane dimension (mm) at any aspect ratio other than 1:1	Maximum Pane dimension (mm) at an aspect ratio of 1:1	Maximum Pane Area (m²)
Pilkington UK Ltd Pyroshield 2	824	741	0.55
Pyroguard Ltd Pyrostem	824	741	0.55
Schott UK Ltd Pyran S	824	741	0.55
Ceramic Glass Ltd Firelite	824	741	0.55
Pilkington UK Ltd 7 mm Pyrodur Plus 30-104*	824	741	0.55
Pilkington UK Ltd Pyrodur 30-201*	824	741	0.55
AGC UK Ltd Pyrobelite 7*	824	741	0.55
Pilkington UK Ltd 15 mm Pyrostop 30/10*	824	741	0.55
AGC UK Ltd Pyrobel 16*	824	741	0.55
* Reduce width of beads accordingly but beads fixed with screws only			
The aspect ratio of the glass may be unlimited within these pane dimensions			

For this application, the following conditions shall also apply:

1. The doorset, including door frame and associated building hardware, should have achieved at least 30 minutes fire resistance when tested, or subsequently assessed by one of the laboratories approved by CERTIFIRE as acceptable for this purpose, to BS 476: Part 22: 1987.



## **CERTIFICATE No CF 221**

### **DIXON INTERNATIONAL GROUP LTD (SEALMASTER)**

**FireGlaze Compound in timber door leaves for periods of 30 minutes fire resistance**

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. Likewise, if the proposed doorset is to be used in the unlatched configuration, the available evidence should be applicable to unlatched doorsets.
3. The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
4. 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.
5. The door leaves shall consist of timber faces coupled with timber or other cellulosic cores of minimum overall leaf thickness, 44 mm.

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## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

#### FireGlaze Compound in timber framed screens for periods of 30 minutes fire resistance

For this application the following conditions shall apply:

Where the framing system is to be **hardwood** sections, the beads shall be 25mm wide by 15mm high, chamfered by 15° and fixed using either 38mm long No 8 wood screws or steel pins 32mm long.

The timber for the screen and beads shall have a minimum density of 600kg/m<sup>3</sup> with a minimum section size of 80mm by 25mm. Ash and beech are not acceptable.

The fixings shall be at a maximum of 150mm centres.

The glass shall be glazed into the screen using FireGlaze compound 15mm by 2mm intumescent material, between the glass and the beads. Hardwood or non-combustible material setting blocks shall be used to achieve the required edge cover.

This certificate of approval relates to apertures of the sizes and the glasses shown in Table 2 below when used in conjunction with FireGlaze compound glazing method.

Table 2

Glass type	Maximum Pane dimension (mm) at any aspect ratio other than 1:1	Maximum Pane dimension (mm) at an aspect ratio of 1:1	Maximum Pane Area (m²)
Pilkington UK Ltd Pyroshield 2	3500	2835	8.04
Pyroguard UK Ltd Pyrostem	3500	2835	8.04
Schott UK Ltd Pyran S	3000	2835	8.04
Pilkington UK Ltd Pyrodur 30-201	2000	1673	2.8
Pilkington UK Ltd 7mm Pyrodur Plus 30-104	2000	1673	2.8
AGC UK Ltd Pyrobelite 7	2000	1673	2.8
Pilkington UK Ltd 15 mm Pyrostop 30/10*	3000	2291	5.25
AGC UK Ltd Pyrobel 16	2300	1661	2.76
Ceramic Glass Ltd Firelite	2000	1673	2.8
The aspect ratio of the glass may be unlimited within these pane dimensions.			



## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

#### FireGlaze G30 or LP15 Strip in timber door leaves for periods of 30 minutes fire resistance

The glazing material shall be FireGlaze G30 or LP15 Strip 15mm by 2mm between the glass and the beads. Hardwood or non-combustible material setting blocks shall be used to achieve the required edge cover. The glazing beads shall be of hardwood sections, 25mm wide by 15mm high, chamfered by 20° and fixed using No 8 wood screws 50mm long or 38mm steel pins at a maximum of 150 mm centres.

The apertures may be cut directly into a solid core or lined with softwood or hardwood.

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 3 below when used in conjunction with FireGlaze G30 or LP15 glazing method:

Table 3

Glass type	Maximum Pane dimension (mm) at any aspect ratio other than 1:1	Maximum Pane dimension (mm) at an aspect ratio of 1:1	Maximum Pane Area (m²)
Pilkington UK Ltd Pyroshield 2	824	741	0.55
Pyroguard Ltd Pyrostem	824	741	0.55
Schott UK Ltd Pyran S	824	741	0.55
Ceramic Glass Ltd Firelite	824	741	0.55
Pilkington UK Ltd 7mm Pyrodur Plus 30-104*	824	741	0.55
Pilkington UK Ltd Pyrodur 30-201*	824	741	0.55
AGC UK Ltd Pyrobelite 7*	824	741	0.55
Pilkington UK Ltd 15 mm Pyrostop 30/10*	824	741	0.55
AGC UK Ltd Pyrobel 16*	824	741	0.55
* Reduce width of beads accordingly but beads fixed with screws only			
The aspect ratio of the glass may be unlimited within these pane dimensions			

For this application, the following conditions shall also apply:

1. The doorset, including door frame and associated building hardware, should have achieved at least 30 minutes fire resistance when tested, or subsequently assessed by one of the laboratories approved by CERTIFIRE as acceptable for this purpose, to BS 476: Part 22: 1987.

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## **CERTIFICATE No CF 221**

### **DIXON INTERNATIONAL GROUP LTD (SEALMASTER)**

#### **FireGlaze G30 or LP15 Strip in timber door leaves for periods of 30 minutes fire resistance**

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. Likewise, if the proposed doorset is to be used in the unlatched configuration, the available evidence should be applicable to unlatched doorsets.
3. The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
4. 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.
5. The door leaves shall consist of timber faces coupled with timber or other cellulosic cores of minimum overall leaf thickness, 44 mm.

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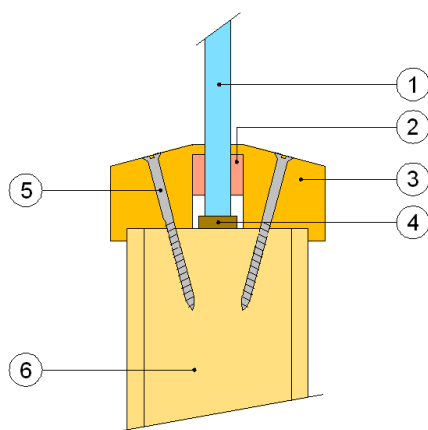
## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

**FireGlaze G30 or LP15 Strip 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 3 below)
- 2 FireGlaze G30 or LP15 Strip glazing system (10x2 mm)
- 3 Softwood or hardwood (min. density 460 kg/m<sup>3</sup>) 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 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

**FireGlaze G30 or LP15 Strip 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 3 below, when used in conjunction with the FireGlaze G30 or LP15 Strip glazing system:

**Table 3**

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m <sup>2</sup> )
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 <sup>(1)</sup>	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 <sup>(2)</sup>	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/m<sup>3</sup>, 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/m<sup>3</sup>) 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/m<sup>3</sup>, 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/m<sup>3</sup>) shall be used to line apertures cut within all substrates.



## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

#### FireGlaze G30 or LP15 Strip in timber frames screens for periods of 30 minutes fire resistance

The timber for the screen shall have a minimum density of 510kg/m<sup>3</sup> with a minimum section size of 95mm by 45mm. The beads shall be a minimum size of 25mm wide by 15mm high, chamfered by 20° and fixed using steel pins or screws 50mm long.

The fixings shall be at a maximum of 150mm centres.

The glass shall be glazed into the screen using FireGlaze G30 or LP15 strip 15 by 2mm intumescent material, between the glass and the beads. Hardwood or non-combustible material setting blocks shall be used to achieve the required edge cover.

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 4 below, when used in conjunction with FireGlaze G30 or LP15 Strip glazing method:

Table 4

Glass type	Maximum Pane dimension (mm) at any aspect ratio other than 1:1	Maximum Pane dimension (mm) at an aspect ratio of 1:1	Maximum Pane Area (m <sup>2</sup> )
Pilkington UK Ltd Pyroshield 2	3500	2835	8.04
Pyroguard UK Ltd Pyrostem	3500	2835	8.04
Schott UK Ltd Pyran S	3000	2835	8.04
Pilkington UK Ltd Pyrodur 30-201	2000	1673	2.8
Pilkington UK Ltd 7mm Pyrodur Plus 30-104	2000	1673	2.8
AGC UK Ltd Pyrobelite 7	2000	1673	2.8
Pilkington UK Ltd 15 mm Pyrostop 30/10*	3000	2291	5.25
AGC UK Ltd Pyrobel 16	2300	1661	2.76
Ceramic Glass Ltd Firelite	2000	1673	2.8
The aspect ratio of the glass may be unlimited within these pane dimensions.			

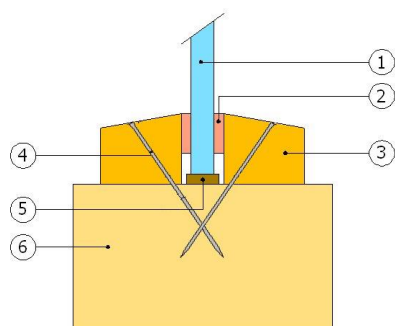
## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

**FireGlaze G30 or LP15 Strip 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 4 below)
- 2 FireGlaze G30 or LP15 Strip glazing system
- 3 Hardwood (min. density 650 kg/m<sup>3</sup>) 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/m<sup>3</sup>) section 25 mm x 80 mm minimum

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 FireGlaze G30 or LP15 Strip glazing system:

**Table 4**

Glass type	Maximum Height (mm)	Maximum Width (mm)	Maximum Area (m <sup>2</sup> )
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			

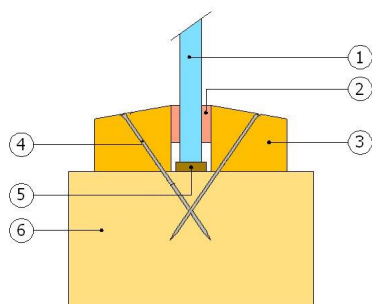
## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

**FireGlaze G30 or LP15 Strip 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 5 below)
- 2 FireGlaze G30 or LP15 Strip 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 5 below, when used in conjunction with the FireGlaze G30 or LP15 Strip glazing system:

**Table 5**

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



## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

FireGlaze G30 or LP15 Strip for use in timber screens for periods of 30 minutes fire resistance  
(continued)

Table 5

(1)	The glazing beads shall be of hardwood with a minimum density of 610 kg/m <sup>3</sup> , 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 <sup>3</sup>
(2)	The glazing beads shall be of hardwood with a minimum density of 610 kg/m <sup>3</sup> , 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 <sup>3</sup>
(3)	The glazing beads shall be of hardwood with a minimum density of 640 kg/m <sup>3</sup> , 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 <sup>3</sup>
(4)	The glazing beads shall be of hardwood with a minimum density of 650 kg/m <sup>3</sup> , 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 <sup>3</sup>
(5)	The glazing beads shall be of softwood/hardwood with a minimum density of 510 kg/m <sup>3</sup> , 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 <sup>3</sup>
(6)	The glazing beads shall be of softwood/hardwood with a minimum density of 450 kg/m <sup>3</sup> , 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 <sup>3</sup>



## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

#### FireGlaze Compound and GL60 Liner in timber door leaves for periods of 60 minutes integrity

The glazing beads shall be of dark red hardwood sections of minimum density 600 kg/m<sup>3</sup>, 24mm wide by 28mm high, chamfered by 20° and fixed using No 8 wood screws 50mm long at a maximum of 150mm centres.

The apertures shall be lined with FireGlaze GL60 Liner 54mm by 2mm.

The glazing system shall be FireGlaze compound to full height of the beads by 4mm thick between the glass and the beads. Hardwood or non-combustible material setting blocks shall be used to achieve the required edge cover.

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 5 below when used in conjunction with FireGlaze Compound and GL60 Liner glazing method:

Table 5

Glass type	Maximum Pane dimension (mm) at any aspect ratio other than 1:1	Maximum Pane dimension (mm) at an aspect ratio of 1:1	Maximum Pane Area (m <sup>2</sup> )
Pilkington UK Ltd Pyroshield 2	824	741	0.55
Pyroguard UK Ltd Pyrostem	824	741	0.55
Schott UK Ltd Pyran S	824	741	0.55
Ceramic Glass Ltd Firelite	824	741	0.55
Pilkington UK Ltd 10mm Pyrodur 60-10* 13mm Pyrodur 60-20*	824	741	0.55
AGC UK Ltd Pyrobelite 12*	824	741	0.55
Pilkington UK Ltd 15 or 18 mm Pyrostop 30/10 or 30/20*	824	741	0.55
AGC UK Ltd Pyrobel 16 & 16EG*	824	741	0.55
AGC UK Ltd Pyrobel 25 & 25EG*	824	741	0.55
* Reduce width of beads accordingly			
The aspect ratio of the glass may be unlimited within these pane dimensions			



## **CERTIFICATE No CF 221**

### **DIXON INTERNATIONAL GROUP LTD (SEALMASTER)**

#### **FireGlaze Compound and GL60 Liner in timber door leaves for periods of 60 minutes integrity**

For this application, the following conditions shall also apply:

1. The doorset, including door frame and associated building hardware, should have achieved at least 60 minutes fire resistance 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. Likewise, if the proposed doorset is to be used in the unlatched configuration, the available evidence should be applicable to unlatched doorsets.
3. The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
4. 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.
5. The door leaves shall consist of timber faces coupled with timber or other cellulosic cores of minimum overall leaf thickness, 54 mm.





## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

#### FireGlaze Compound and GL60 Liner in timber framed screens for periods of 60 minutes fire resistance

The timber for the screen shall have a minimum density of  $600\text{kg/m}^3$  with a minimum section size of 90mm by 45mm. Ash and beech are not acceptable

The beads shall be a minimum of 36mm high for Pyroshield™2 Glass and 20 mm high for all other acceptable glasses. The beads shall be 28mm deep, chamfered by  $25^\circ$  and fixed using 75mm long No 8 wood screws offset by 15mm from the opposite face screws at a maximum of 200mm centres.

The aperture shall be lined with FireGlaze Liner 63mm x 2mm for Pyroshield™2 and 54mm x 2mm for all other acceptable glasses.

The glass shall be glazed into the screen using FireGlaze Compound to full height of the beads by 4mm thick between the glass and the beads. Hardwood or non-combustible material setting blocks shall be used to achieve the required edge cover.

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 6 below when used in conjunction with FireGlaze Compound and Liner glazing method:

Table 6

Glass type	Maximum Pane dimension (mm) at any aspect ratio other than 1:1	Maximum Pane dimension (mm) At an aspect ratio of 1:1	Maximum Pane Area (m <sup>2</sup> )
Pilkington UK Ltd Pyroshield 2	3057	2034	4.14
Pyroguard UK Ltd Pyrostem	3057	2034	4.14
Schott UK Ltd Pyran S	3000	2034	4.14
AGC UK Ltd Pyrobel 16 & 16EG	2300	1660	2.76
AGC UK Ltd Pyrobel 25 & 25EG	2300	1660	2.76
Pilkington UK Ltd 23 mm Pyrostop 60-101 27mm Pyrostop 60-201	3000	2300	5.25
Pilkington UK Ltd 10mm Pyrodur 60-10 13mm Pyrodur 60-20	2000	1673	2.8
Ceramic Glass Ltd Firelite	2000	1673	2.8
The aspect ratio of the glass may be unlimited within these pane dimensions			





## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

#### FireGlaze 2000 and Liner in timber door leaves for periods of 60 minutes fire resistance

The glazing beads shall be of dark red hardwood sections, minimum density 600 kg/m<sup>3</sup>, 24mm wide by 28mm high, chamfered by 20° and fixed using No 8 wood screws 50mm long and fixed at a maximum of 150mm centres.

The apertures shall be lined with a FireGlaze GL60 Liner 54mm by 2mm.

The glazing material shall be FireGlaze 2000 25mm by 5mm thick between the bead and the glass. Hardwood or non-combustible material setting blocks shall be used to achieve the required edge cover.

This Certificate of Approval relates to apertures of the sizes and using the glasses shown in Table 7 below when used in conjunction with FireGlaze 2000 and Liner glazing method:

Table 7

Glass type	Maximum Pane dimension (mm) at any aspect ratio other than 1:1	Maximum Pane dimension (mm) at an aspect ratio of 1:1	Maximum Pane Area (m <sup>2</sup> )
Pilkington UK Ltd Pyroshield 2	824	741	0.55
Pyroguard UK Ltd Pyrostem	824	741	0.55
Schott UK Ltd Pyran S	824	741	0.55
Ceramic Glass Ltd Firelite	824	741	0.55
Pilkington UK Ltd 10mm Pyrodur 60-10* 13mm Pyrodur 60-20*	824	741	0.55
AGC UK Ltd Pyrobelite 12*	824	741	0.55
Pilkington UK Ltd 15 or 18 mm Pyrostop 30/10 or 30/20*	824	741	0.55
AGC UK Ltd Pyrobel 16 & 16EG*	824	741	0.55
AGC UK Ltd Pyrobel 25 & 25EG*	824	741	0.55
* Reduce width of beads accordingly			
The aspect ratio of the glass may be unlimited within these pane dimensions			



## **CERTIFICATE No CF 221**

### **DIXON INTERNATIONAL GROUP LTD (SEALMASTER)**

#### **FireGlaze 2000 and Liner in timber door leaves for periods of 60 minutes fire resistance**

For this application, the following conditions shall also apply:

1. The doorset, including door frame and associated building hardware, should have achieved at least 60 minutes fire resistance 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. Likewise, if the proposed doorset is to be used in the unlatched configuration, the available evidence should be applicable to unlatched doorsets.
3. The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
4. 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.
5. The door leaves shall consist of timber faces coupled with timber or other cellulosic cores of minimum overall leaf thickness, 54 mm.

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## CERTIFICATE No CF 221

### DIXON INTERNATIONAL GROUP LTD (SEALMASTER)

#### FireGlaze 2000 and Liner in timber framed screens for periods of 60 minutes fire resistance

The timber for the screen shall have a minimum density of 490kg/m<sup>3</sup> with a minimum section size of 90mm by 40mm. Ash and beech are not acceptable.

The beads shall be a minimum of 37mm high by 28mm deep for Pyroshield™2 and 20mm high for all other acceptable glasses, chamfered by 25° and fixed using 75mm long No 8s angled wood screws offset by 15mm from the opposite face screws and fixed at a maximum of 180mm centres.

The glass shall be glazed into the screen using FireGlaze 2000 intumescent strip 34mm by 5mm (uncompressed), between the glass and the beads. A FireGlaze Liner, 63mm by 2mm is required to line the apertures. Hardwood or non-combustible material setting blocks shall be used to achieve the required edge cover.

This Certificate of Approval relates to apertures of the sizes and using glasses shown in Table 8 below when used in conjunction with FireGlaze 2000 and Liner glazing method:

Table 8

Glass type	Maximum Pane dimension (mm) at any aspect ratio other than 1:1	Maximum Pane dimension (mm) at an aspect ratio of 1:1	Maximum Pane Area (m <sup>2</sup> )
Pilkington UK Ltd Pyroshield 2	3209	2150	4.61
Pyroguard UK Ltd Pyrostem	3209	2150	4.61
Schott UK Ltd Pyran S	3209	2150	4.61
AGC UK Ltd Pyrobel 16 & 16EG	2300	1660	2.76
AGC UK Ltd Pyrobel 25 & 25EG	2300	1660	2.76
Pilkington UK Ltd 23 mm Pyrostop 60-101 27 mm Pyrostop 60-201	3000	2300	5.25
Pilkington UK Ltd 10mm Pyrodur 60-10 13mm Pyrodur 60-20	60-202000	1673	2.8
Ceramic Glass Ltd Firelite	2000	1673	2.8

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



## **CERTIFICATE No CF 221**

### **DIXON INTERNATIONAL GROUP LTD (SEALMASTER)**

#### **FIREGLAZE GLAZING SYSTEMS**

##### **Framing Systems - alternatives**

Where possible, the applications detailed in CF221 describe generic framing systems that have achieved the relevant period of fire resistance when tested in conjunction with FireGlaze Glazing Methods. There are a number of alternative framing systems available which are also suitable for use with FireGlaze Glazing Methods, which may not have specific test evidence.

These systems are those listed in the CERTIFIRE Product Register as suitable for use with intumescent based glazing systems and up to the maximum sizes listed for the specific system. When the framing system is determined as suitable using this method, and the system shows sizes smaller than allowable by this certificate, the aperture sizes specified in the framing system certificate shall take precedence.

##### **Production**

This approval relates to on going production. Product and/or its immediate packaging is identified with the manufacturer's name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application when appropriate.

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