Pyroguard Rapide Plus SWS
Technical guidance document

Contents

1 Introduction

This document summarises the installation details for Pyroguard Rapide Plus SWS and its approved glazing products. This information is valid only for application in the UK while Pyroguard's Certifire CF437 remains valid. Pyroguard Rapide Plus is part of the Pyroguard Infinity range; these glasses are used to construct glazed partitions with butt jointed glasses.

The following terms are used:

- SWS – Structural Wall System
- INT – Internal
- EXT – External

Pyroguard Rapide Plus consists of Pyroguard EI30 INT, Pyroguard EI30 EXT, Pyroguard EI60 INT and Pyroguard EI60 EXT. They are cuttable float multi-laminate fire rated glasses.

Users of this document should consult the original approvals before proceeding to specification and installation. In general, the constructions detailed in this document may be installed as 'infinite' screens or as single 'punch out' walls; the screens may be repeated without restriction (see Figure 1). The approved height of the construction is directly related to the approved height of the glazing, plus the necessary framing.
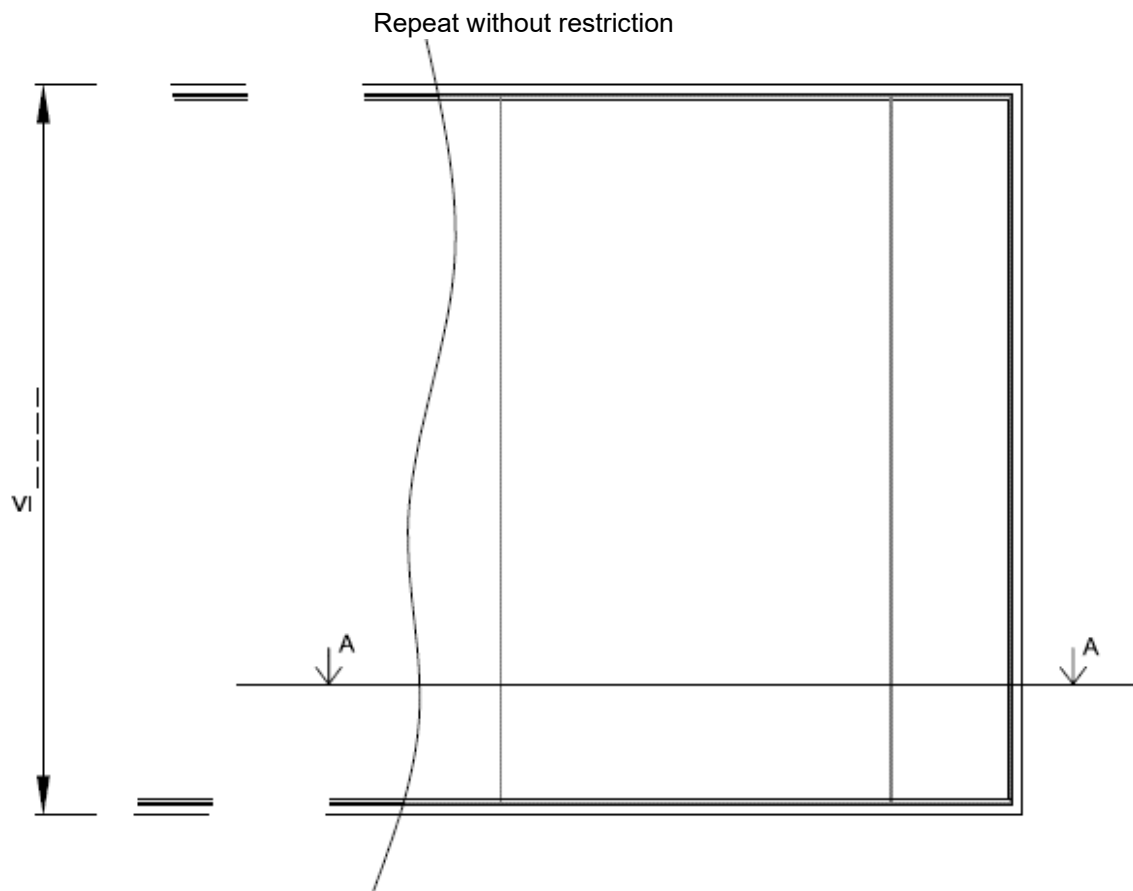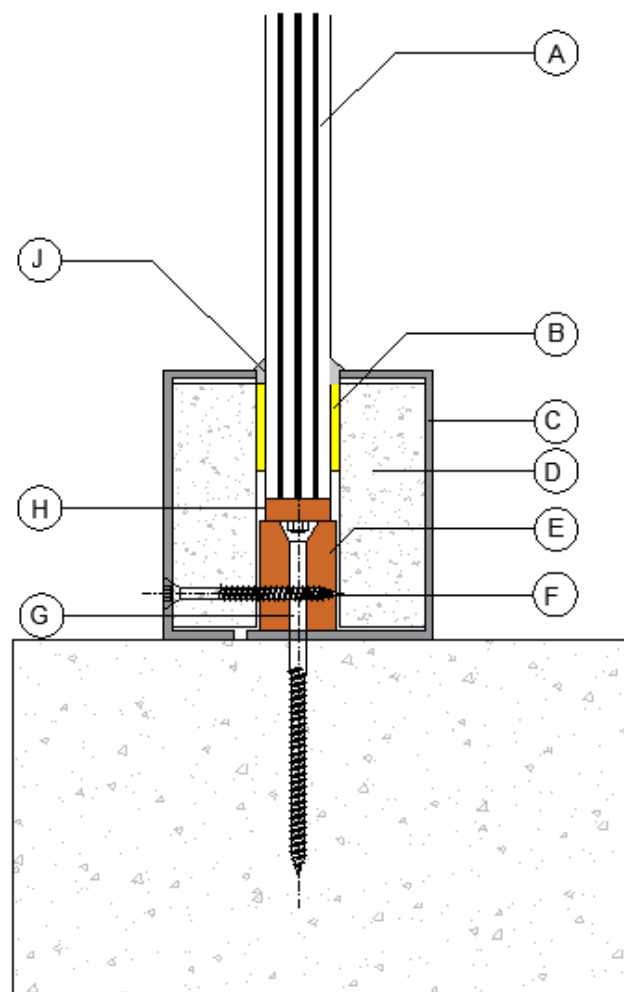
Repeat without restriction

VI

A

A

Figure 1 Illustration of a repeating SWS partition (a.k.a. infinite screen)

2 EI30 system

2.1 Vertical section

(A) Pyroguard EI30 INT / EXT

(B) Glazing tape: 20 mm x 3 mm ceramic fibre based glazing tape (eg Pyrotape CF [MMG] between glass and insulation both sides.

(C) Profile: 60 mm x 43 mm x 2 mm thick steel screen framing.
60 mm x 21 mm x 2 mm thick steel screen framing

(D) Insulation: 55 mm x 19 mm calcium silicate board

(E) Support: 25 mm x 17 mm deep central fixing core, density 640 kg/m³. width adjusted to suit glass makeup

(F) Fixings: Bead 32 mm long self drilling screws at 300 mm centres

(G) Fixings: Frame 80 mm long steel wood screws at 300 mm centres.

(H) Setting Block: 15 mm x 5 mm x 60 mm Hardwood width adjusted to suit glass makeup

(J) Seal: 2 mm to 3 mm silicone sealant to both faces [Kerafix Fire Rated Silicone]

Glazing details as described in Chiltern, Chilt/RF11097
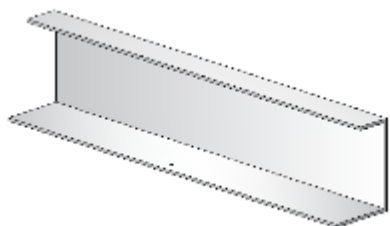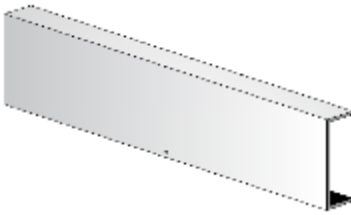
2.2   Horizontal section
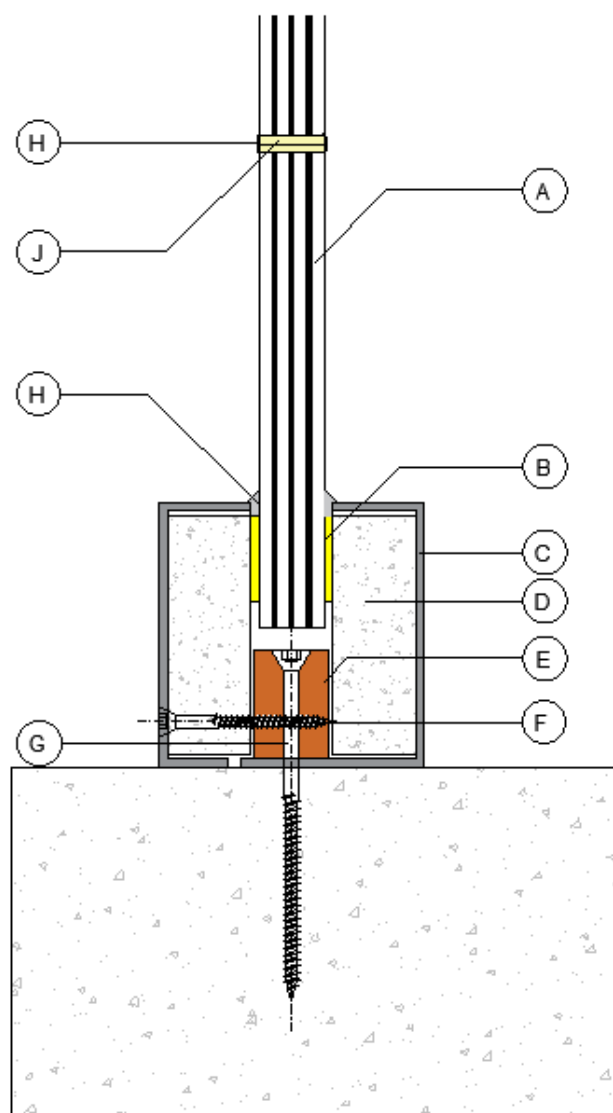

A) Pyroguard EI30 INT / EXT

B) Glazing tape: 20 mm x 3 mm
ceramic fibre based glazing tape (eg
Pyrotape CF [MMG] between glass
and insulation both sides.

C) Profile: 60 mm x 43 mm x 2 mm
thick steel screen framing.
60 mm x 21 mm x 2 mm thick steel
screen framing

D) Insulation: 55 mm x 19 mm calcium
silicate board

E) Support: 25 mm x 17 mm deep
central fixing core, density 640 kg/m^3
width adjusted to suit glass makeup

F) Fixings: Bead 32 mm long self
drilling screws at 300 mm centres

G) Fixings: Frame 80 mm long steel
wood screws at 300 mm centres.

H) Seal: 2 mm to 3 mm silicone sealant
to both faces Kerafix Fire Rated
Silicone [Kuhn]

J) Joint Interdens: 15 mm x 2 mm
interdens strip between edges of
glazing

Glazing details as described in
Chiltern, Chilt/RF11097

Pyroguard EI30 INT	**Pyrogard EI30 EXT**
Kerafix fire rated silicone (KUHN)	MONOLUX® Medium density calcium silicate insulation board (Promat)	60 mm x 43 mm x 2 mm steel frame (mild steel or stainless)
60 mm x 21 mm x 2 mm steel frame (mild steel or stainless)	80 mm Easydrive screws	32 mm self-drilling screws
25 mm (h) x __mm (w) hardwood central core width adjusted to suit glass makeup	Pyrotape CF 20 mm x 3 mm ceramic fibre tape (Mann McGowan)	

2.4 Installation

Prior to installation, ensure all components are clean and free from any burs or protrusions.

Ensure the timber 'central fixing core' is the correct width to suit the glass being used.

2.4.1 Glass

1. Pyroguard EI30 INT. Thickness - 15 mm
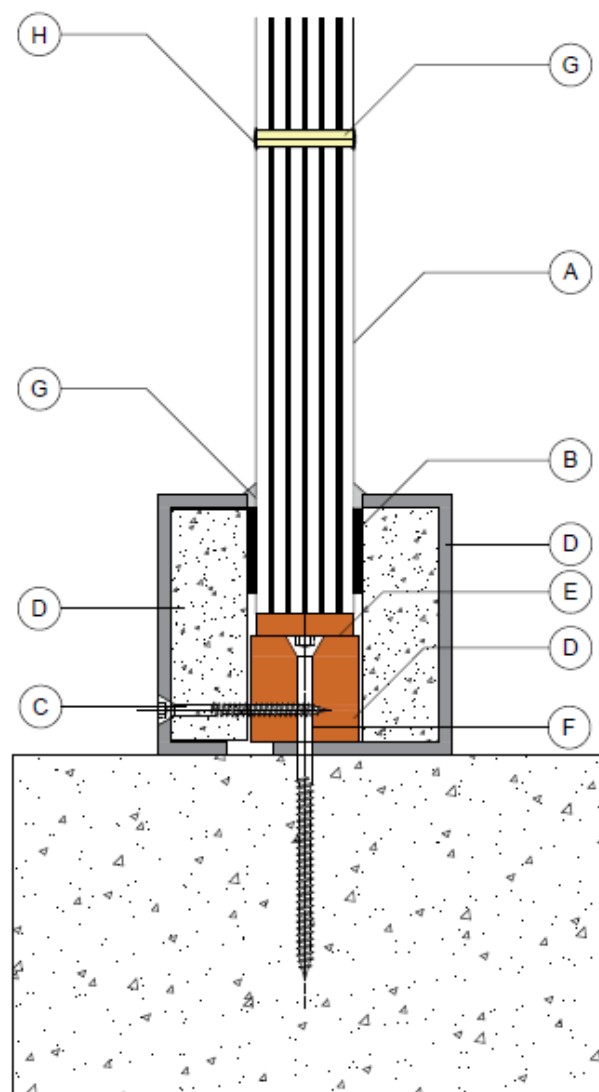2. Pyroguard EI30 EXT. Thickness - 19 mm

2.4.2 Fixing core

1. Pyroguard EI30 INT – 25 mm (h) x 17 mm (w)
2. Pyroguard EI30 EXT – 25 mm (h) x 21 mm (w)

2.4.3 Vertical joint interdens

1. Pyroguard EI30 INT – interdens 2No 15 mm x 2 mm
2. Pyroguard EI30 EXT – interdens 2No 19 mm x 2 mm

3 EI60 system

3.1   Vertical

A	Pyroguard EI60 INT / EXT
B	Glazing tape: 20 mm x 3 mm ceramic fibre based glazing tape (eg Pyrotape CF [MMG] between glass and insulation both sides.
C	Fixings: Bead 40 mm long self drilling screws at 300 mm centres.
D	Section: 61 mm x 42 mm x 3 mm thick steel screen framing. 61 mm x 21 mm x 3 mm thick steel screen framing 54 mm x 18 mm calcium silicate board 25 mm x 25 mm deep central fixing core, Sapele width adjusted to suit glass makeup.
E	Setting Block: 23 mm x 5 mm x 50 mm Hardwood width adjusted to suit glass makeup.
F	Fixings: Frame 80 mm long steel wood screws at 450 mm centres.
G	15 mm x 2 mm interdens strip between edges of glazing
H	Seal: 2 mm to 3 mm silicone sealant to both faces [Kerafix Fire Rated Silicone]

Glazing details as described in Chiltern, Chilt/rf11047

Pyroguard EI60 INT		Pyrogard EI60 EXT
Kerafix fire resistant silicone [KUHN]	Calcium silicate board Monolux (PROMAT)	61 mm x 42 mm x 3 mm steel frame (mild steel or stainless)
61 mm x 21 mm x 3 mm steel frame (mild steel or stainless)	80 mm Easydrive screws	40 mm self-drilling screws
25 mm (h) x __ mm (w) hardwood central core width adjusted to suit glass makeup	20 mm x 3 mm ceramic glazing tape (eg Pyrotape [Mann McGowan])	

3.2　Installation

Prior to installation, ensure all components are clean and free from any burs or protrusions.

Ensure the timber 'central fixing core' is the correct width to suit the glass being used.

3.2.1　Glass

3. Pyroguard EI60 INT. Thickness - 23 mm
4. Pyroguard EI60 EXT. Thickness - 27 mm

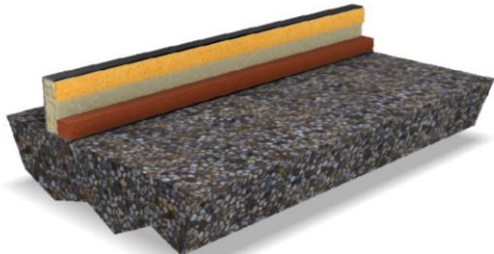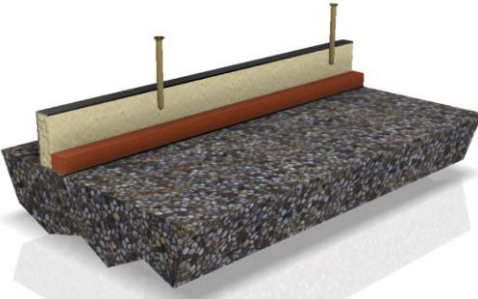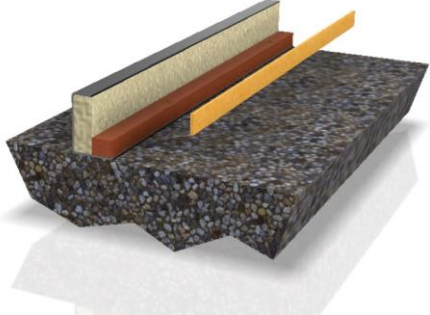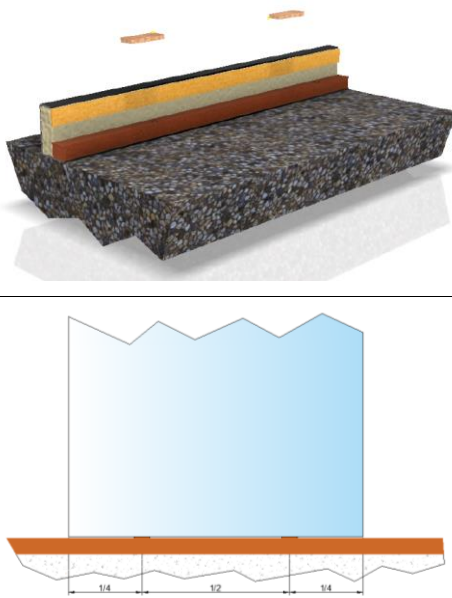### 3.2.2　Fixing core
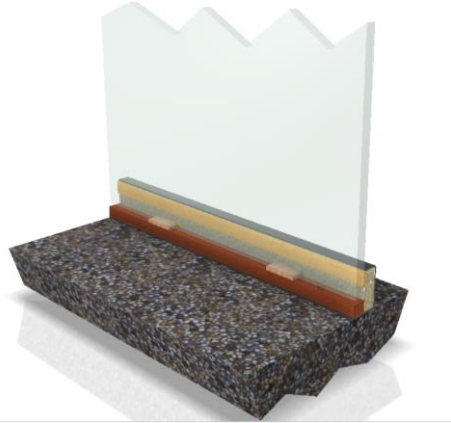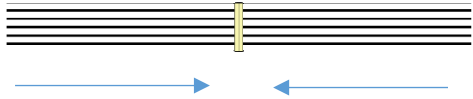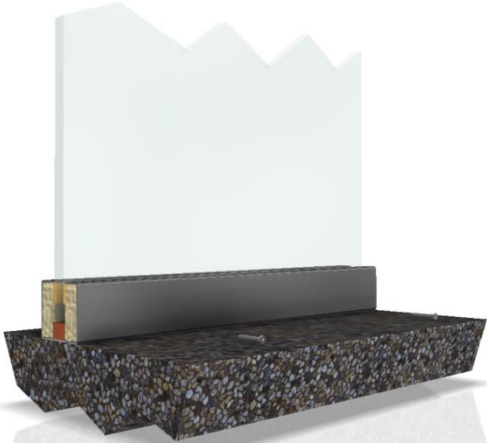
3. Pyroguard EI60 INT – 25 mm (h) x 25 mm (w)
4. Pyroguard EI60 EXT – 25 mm (h) x 29 mm (w)

3.2.3　Vertical joint interdens

3. Pyroguard EI60 INT – interdens 2 No 25 mm x 2 mm
4. Pyroguard EI60 EXT – interdens 2 No 29 mm x 2 mm

4 Installation process

1. Align, level and position upper and lower steel profiles to initial side: 61 x 42 x 3 mm. 2. Insert frame insulation and position hardwood central fixing core. Monolux (PROMAT)	
3. With the steel profile, insulation and core in position, pre-drill holes for structural fasteners. 4. Secure the profile and core using 80 mm long anchors at a maximum of 300 mm centres.	
5. Apply the self-adhesive glazing tape to the frame insulation – frame tapes listed above (eg, Pyrotape (MMG)).	
6. With the tapes secured in the setting blocks, it ensures the glass will be correct. Position the setting blocks at quarter points. Only ever use 2 setting blocks per pane.	

7. With setting blocks in position, lower the glass insert ensuring it has the correct edge cover for both upper and lower profiles. 8. Check the vertical edge for a true vertical. This needs to be done to ensure the adjacent glass will be parallel and give an even vertical joint. 9. If the joint is not even adjust the glass by modifying the packing shims to suit.	
10. With the glass secured in place, the size specific interdens need to be inserted between the vertical glass joints. 11. Push the two panes together.	
12. Prepare the opposite steel profile for assembly, 61 mm x 21 mm x 3 mm. Insert the insulation into the profile and apply the ceramic tape ready for assembly. 13. Offer the assembly into position, checking for even contact between the glass and the ceramic tapes. 14. When the position is correct, screw the frame to the central core using 40 mm self-drilling screws, at a maximum of 300 mm centres.	
15. With the partition in place, secured and level, a silicone seal is required between the steel profiles and the glass, also covering the interdens at the vertical joint.	

16. Clean façade ready for handover.	
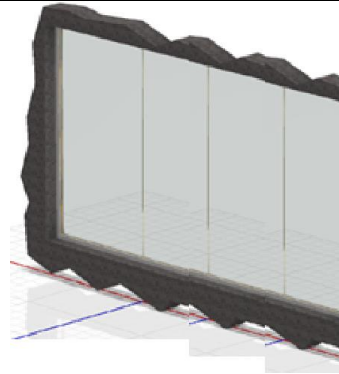
5 Summary of approvals

Approvals are based on test reports and interpolation according to the TS25 Certifire rules. These conform to PFPF guidelines.

5.1.1 EI30 CF437

5.1.1.1 SWS screen

Width	Height	Smax M
1845	3592[1]	5.39

5.1.1.2 Single frame

Width	Height	Smax M
1845	3592[2]	5.39

5.1.2 EI60 CF437

5.1.2.1 SWS screen

Width	Height	Smax M
1605	3124[3]	4.69 m^2

5.1.2.2 Single frame

Width	Height	Smax M
1605	3124[4]	4.69 m^2

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[1] Maximum stock sheet size is 2125 x 3100
[2] Maximum stock sheet size is 2125 x 3100
[3] Maximum stock sheet size is 2125 x 3100
[4] Maximum stock sheet size is 2125 x 3100

6 Installation of SWS glazing

This installation guide provides instructions that will assist Pyroguard Rapide Plus SWS installers to construct a structural wall for all fire resistant classifications claimed. The installer must verify the application conditions for the building in advance. The assembly of Pyroguard Infinity glazing shall only be performed by suitably trained specialist staff. This document does not fully constitute a training document.

In the building exterior envelope or atria, which are subject to the influences of sun, wind and weather, the function of the joints and glazing may vary from that under normal interior conditions. Seek technical approval from the sealant supplier and Pyroguard UK Ltd before planning such an installation.

Furthermore, the function in case of fire cannot be ensured if the installation deviates from that described in this document. Only the recommended types of sealants, which have been fire tested in conjunction with the glazing and materials, are approved to be used for application with Pyroguard Rapide Plus SWS. Unfortunately, in the event of defects, the warranty shall be void with the use of other silicones, solvents, intumescent or other materials, the disregard of generally recognised technical guidelines, or failure to follow these instructions. Additionally, Pyroguard UK Ltd do not warrant the installation or the structural safety of the installation only the glass itself according to the product standard EN14449.

The recommendations for application of sealants are given, these are to be followed by the installer.

Pyroguard Rapide Plus SWS panes are frequently of considerable weight and of large dimensions and must therefore be handled according to industry guidelines (refer to the Glass and Glazing Federation for details), to ensure they are installed without any damage and within regional safety at work guidelines

6.1   Choosing sealants

The sealants listed in these documents cannot be substituted for near equivalents unless a specific choice of sealants has been approved. In this case, choose the sealant most suitable to the installation site.

6.1.1　Kerafix® Fire Rated Silicone

Kerafix® fire-rated silicone is a flame-retardant, neutral curing single component sealant for indoor and outdoor use. The material is weather resistant, elastic and has excellent adhesion properties. It is supplied in a single cartridge, and is available in black, white and grey.

6.2　Two cloth cleaning method (ref 'Dow Corning Americas Technical Manual')

"Two-Cloth" Cleaning Method: clean, soft, absorbent, lint-free cloths, along with the appropriate choice of solvent, must be used to remove excess sealant from the substrate surface. The "two-cloth" cleaning method consists of a solvent wipe followed by a dry cloth wipe to lift and remove the solvent and contaminants suspended in the solvent. Multiple cleanings may be required to properly clean a substrate.

1. Pour or dispense an acceptable cleaning-grade solvent onto the cloth. A plastic (solvent-resistant) squeeze bottle works best for organic cleaning solvents. Do not dip the cloth into the container of solvent, as this will contaminate the cleaning agent.

2. Wipe vigorously to remove contaminants. Check the cloth to see if it has picked up contaminants. Rotate the cloth to a clean area and re-wipe until no additional dirt is picked up.

3. Immediately wipe the cleaned area with a separate clean, dry cloth before the solvent has evaporated. This technique will allow dirt and contaminants suspended in the solvent to be lifted and removed with the second dry cloth. Multiple cleanings may be required to adequately clean a substrate. Organic solvents must be removed with the dry cloth before the solvent evaporates or the cleaning will be less effective. Some surfaces or weather conditions will allow a small amount of residual organic solvent to remain. If this is the case, the surface must be allowed to dry before continuing with the sealant installation.

7 Disclaimer

The configurations mentioned in these documents show materials/products that Pyroguard UK Ltd has successfully used in its own fire tests. Nevertheless, Pyroguard UK Ltd does not guarantee durability, tightness, fitness, or quality of the joint when using the shown materials/products. Pyroguard UK Ltd highly recommends that customers carry out their own tests to verify the durability, tightness, fitness, or quality of the joint.

Pyroguard's TechLibrary summarises the approved glazing, glazing dimensions and approved framing system/glazing assembly. All dimensions are given in millimetres (mm) unless otherwise stated. All glass dimensions are given width first and height second. All glass sizes are maximum allowable dimensions and either/both dimensions may be reduced but not increased. Where a 'max area' is shown the glass size may be taken to the maximum dimension in either width or height as long as the size used for the second dimension does not take it above the maximum area allowed. Where no maximum area is shown then both dimensions may be taken to the maximum allowed.

To fully comply with the approval, the original document referenced should be studied. All components of the glazing assemblies installed must be as described in the original test reports, classification reports, national approvals, global assessments, or other certification. If there is an option given in the assembly drawing for any of the components used in the glazing assembly then only these options given can be used.

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8 Warranty

Pyroguard UK Ltd. warrants that its products will be free of substantial obstruction of vision from dust or other foreign substances due to defective materials or workmanship for a period of ten years from the date of delivery. Full details of the Limited 10-year warranty are available on request.
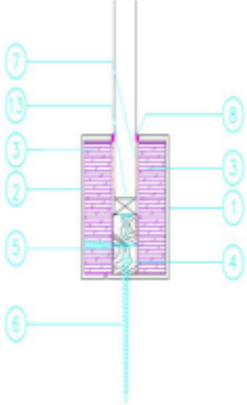
9 Annex

9.1   EI30 approval

certifire

CERTIFICATE No CF 437
PYROGUARD UK LIMITED

Pyroguard EI30 INT or Pyroguard EI30 EXT, glass in butt jointed steel framed screens for periods of 30 minutes integrity and insulation

The perimeter of the system is to comprise a previously fire tested or CERTIFIRE approved insulated steel framing system using pressure plate glazing, screw fixed or clip-on retaining beads, utilising the following basic specification:

1. 60 mm wide by 43 mm deep by 2 mm thick, steel screen framing
2. 60 mm wide by 21 mm deep by 2 mm thick, steel screen framing
3. 55 mm wide by 19 mm deep calcium silicate board
4. 25 mm wide by 17 mm deep central fixing core, density 640 kg/m3
5. 32 mm long self drilling screws at 300 mm centres
6. 80 mm long steel wood screws at 300 mm centres
7. 20 mm wide by 3 mm thick ceramic fibre based glazing tape (eg. 'K' tape) between glass and insulation on both sides, 15 mm x 2 mm Interdens strip between edges of glazing
8. 2 mm to 3 mm wide silicon sealant on both faces
13. 23 mm wide by 5 mm high by 50 mm long hardwood fitted at the bottom edge of the glass

This Certificate of Approval relates to the sizes of Pyroguard EI30 INT or Pyroguard EI30 EXT, glass shown in Figure 42 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.
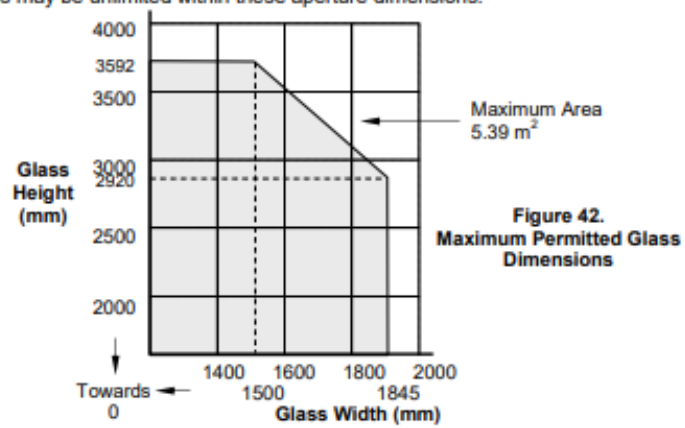
Maximum Area 5.39 m^2

**Figure 42.
Maximum Permitted Glass Dimensions**

The maximum usable stock sheet size of this product is 2075mm x 3050mm

Page 59 of 61 Signed
E/056

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Reissued: 24th February 2021
Valid to: 23rd February 2026

9.2   EI60 approval

certifire

CERTIFICATE No CF 437
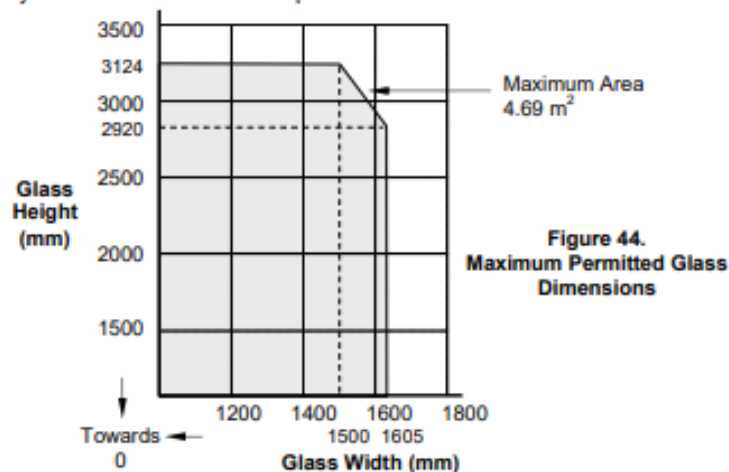## PYROGUARD UK LIMITED

Pyroguard EI60 INT or Pyroguard EI60 EXT, glass in butt jointed steel framed screens for periods of 60 minutes integrity and insulation

The perimeter of the system is to comprise a previously fire tested or CERTIFIRE approved insulated steel framing system using pressure plate glazing, screw fixed or clip-on retaining beads, utilising the following basic specification:
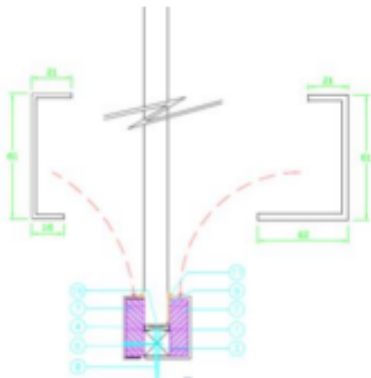
1. Exposed steel screen framing at head and base edges – see diagram
3. 25 mm wide by 25 mm deep central fixing core
4. Unexposed face frame beading at head and base edges– see diagram
6. 40 mm long steel wood screws at 300 mm centres, density 640 kg/m3
7. 54 mm high by 18 mm thick calcium silicate board fitted on both faces, density 875 kg/m3
8. 80 mm long steel masonry fixings fitted at 450 mm centres on top and bottom edges and at 300 mm from head and base on the left edge
9. 15 mm wide by 3 mm thick ceramic fibre based glazing tape (eg. 'K' tape) at top and bottom, 20 mm x 2 mm Interdens strip between glass and insulation
11. Ø 5 fillet of Kerafix fire resistant silicon
16. 23 mm wide by 5 mm high by 50 mm long hardwood fitted at the bottom edge of the glass

This Certificate of Approval relates to the sizes of Pyroguard EI60 INT or Pyroguard EI60 EXT glass shown in Figure 44 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

Figure 44.
Maximum Permitted Glass Dimensions

Maximum Area 4.69 m²

Glass Height (mm)

Glass Width (mm)

The maximum usable stock sheet size of this product is 2075mm x 3050mm

Page 61 of 61 Signed
E/056

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Valid to: 23rd February 2026

![Pyroguard logo]
Pyroguard
A Saverto Company

Pyroguard UK Ltd
Headquarters - International House
Millfield Lane - Haydock - St. Helens
Merseyside - WA11 9GA - United Kingdom

T: +44 (0) 1942 710 720
E: info@pyroguard.eu

www.pyroguard.eu

Pyroguard France SARL - Parc d'activités communautaire n°1
145 rue des Roseaux - 57455 Seingbouse - France
T: +33 (0)3 87 00 28 15   **F:** +33 (0)3 87 00 28 11   **E:** info.france@pyroguard.eu

Pyroguard Netherlands B.V. - ESP 260 C - 5633
AC Eindhoven - The Netherlands
T: +31 (0) 40 2888 525   **E:** info.nl@pyroguard.eu

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