

Pyroguard Balustrades

Technical guidance document

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Introduction

Pyroguard Balustrades and Pyroguard Balustrades *Evo* are CE marked fire rated laminates with superior reaction to fire properties than conventional laminated balustrade glasses.

Pyroguard Balustrades is a fire safety glass, provided for balustrade application where the reaction to fire properties are required to be of the highest standard. It is classified A2 s1, d0 according to BS EN 13501-1.

The new Pyroguard Balustrades *Evo* range has been introduced to meet the growing demand for cost-effective, environmentally responsible glazed balustrade products – without compromising performance or aesthetic appeal. Suitable for both new commercial installations or retrofit projects, the range offers a competitively priced alternative to aluminium railing style solution.

Pyroguard Balustrades *Evo* reduces the interlayer thickness from 3 mm to 1.5 mm, matching overall glass thicknesses of standard laminate equivalents – while delivering superior load capabilities. The range includes streamlined options such as 13.5 mm, 17.5 mm, 21.5 mm for kN/m line loads 0.74 and 25.5 mm for 1.5 kN/m line loads – with a weight saving when compared to that of Pyroguard Balustrades of up to 6%.

The new range also offers a light transmission improvement compared to the existing Pyroguard Balustrades range and an embodied carbon improvement of up to 7.5%. Existing Pyroguard Balustrades glass thicknesses will continue to be available.

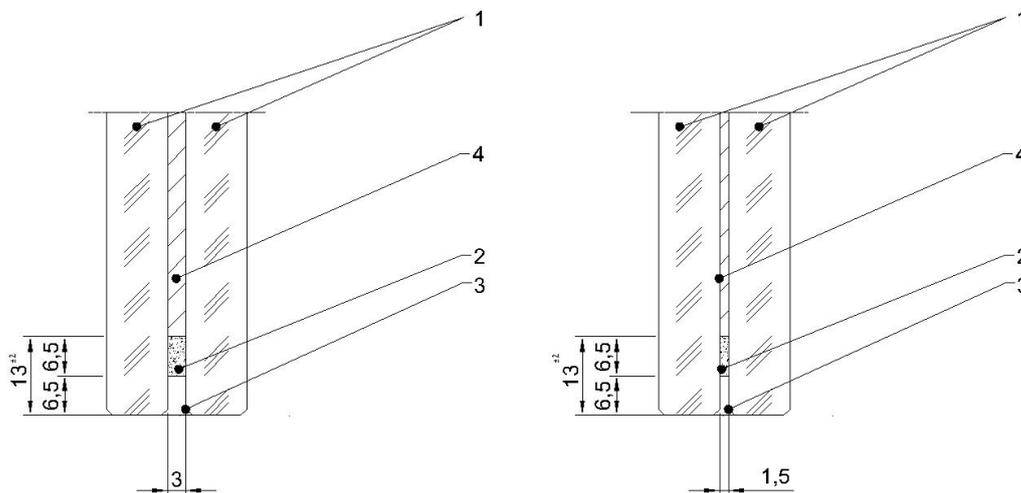
Additionally, the product is tested to the highest rating following the impact standard EN 12600, achieving 1B1.

What is Pyroguard Balustrades?

The product consists of toughened glass, conforming to EN12150, laminated with an A2-s1-d0 interlayer made from a nanocomposite silica.



The product thickness can be modified depending on the loading protection required.

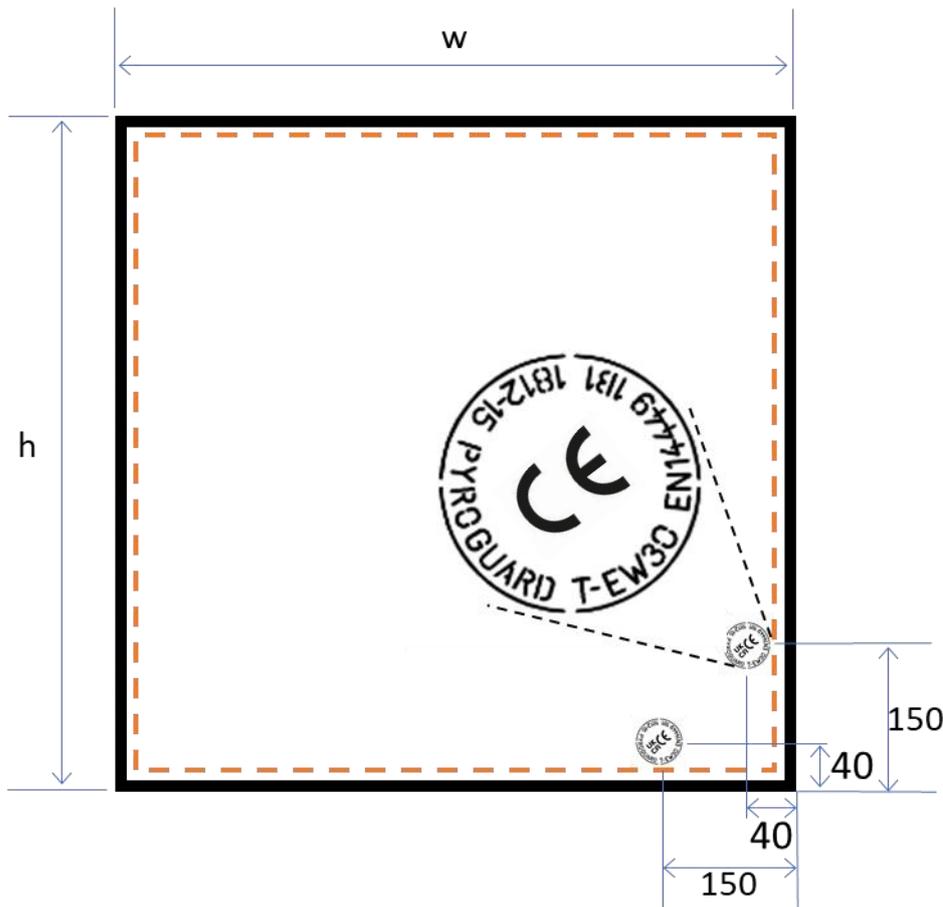


- [1] Toughened glass, heat soaking available as an option
- [2] Spacer
- [3] Sealant
- [4] Nanocomposite silica interlayer

The test results for loading are specific to the system that it is glazed in.

Pyroguard Balustrades glass ordering

Stamp positions:



Product thickness:

Pyroguard Balustrades

T-EW/19-1 BAL

T-EW/23-1 BAL

T-EW/25-1 BAL

Pyroguard Balustrades Evo

T-EW/11.5 BAL

T-EW/13.5 BAL

T-EW/17.5 BAL

T-EW/21.5 BAL

T-EW/25.5 BAL

Stamp location (x,y)

40 x 150

40 x 40

Other (_____, _____)

Points to note:

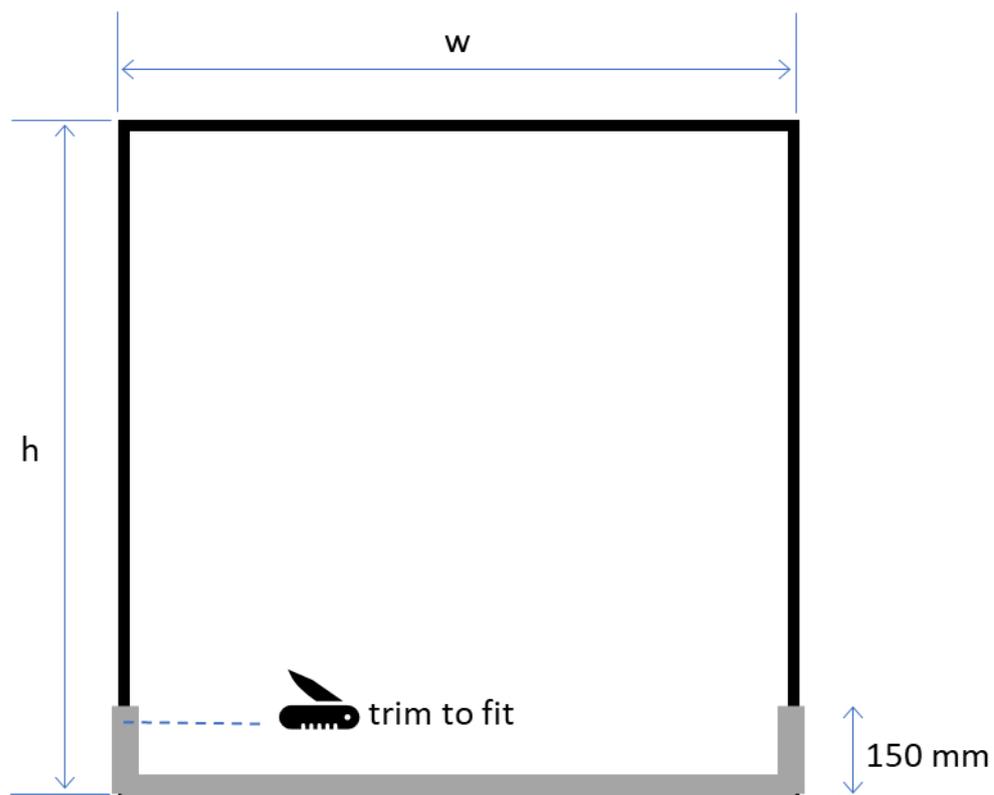
1. 13 mm border (see above ) is black and must be shielded from direct UV with an appropriate U channel.
2. Provide drawing detailing stamp location x, y (mm). Standard Pyroguard location is x, y 40 x 40 (mm). Standard balustrade is location is x, y 40 x 150 (mm).
3. Inclusions, bubbles, and defects within the 18 mm border (see above ) are not considered faults.
4. The appearance of the laminated glass is based on the criteria detailed in BS EN ISO 12543-6:2011 "Glass in Building. Laminated Glass and Laminated Safety Glass. Evaluation of Conformity/Product Standard" and in BS EN 14449:2005 "Glass in Building. Laminated Glass and Laminated Safety Glass. Evaluation of Conformity / Product Standard".

Wet bonded or grouted systems

Any side of the pane likely to be in contact with a sealant (wet bonded or grouted in) should be taped with an approved tape before installation—surcharges apply. POA.

Taping (see below ) will be done as standard on the base of the glass and on uprights to 150 mm – trim the tape to match the depth of trench in use.

Alternatively, compatible sealant can be used (see overleaf).



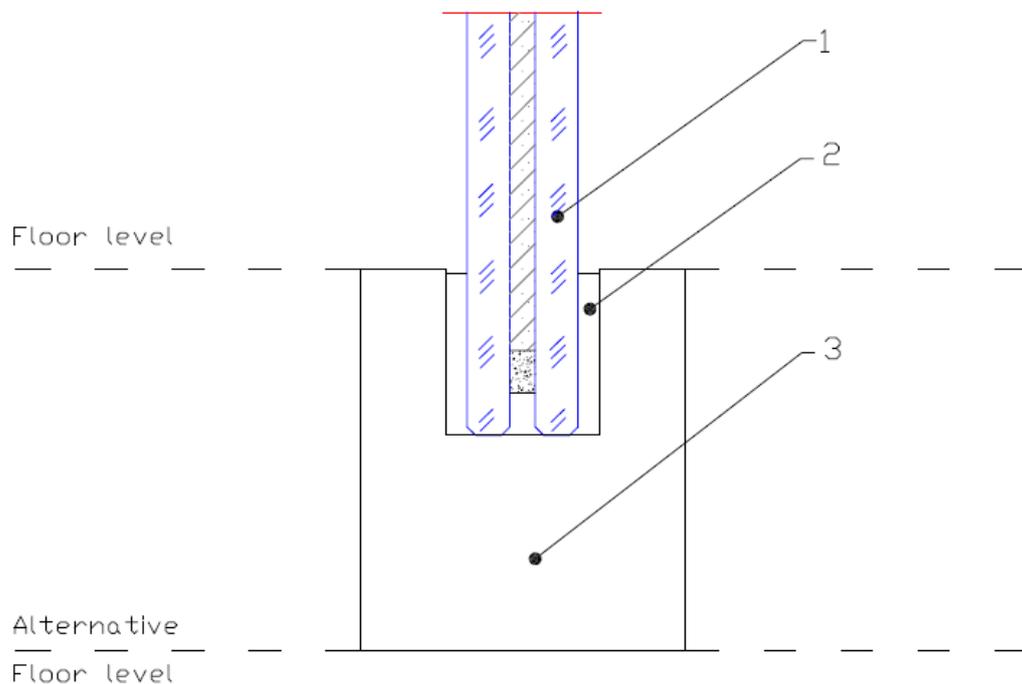
Compatible sealants

Sealant: Only the bonding sealant listed here are proven compatible with the glass edge sealant. Installers must independently satisfy themselves of the compatibility with the surrounding of the install.

Name	Type of material	Manufacturer
GD 823 N	Silicone	KÖMMERLING
GD 826 N	Silicone	KÖMMERLING
Ködisil N	Silicone	KÖMMERLING
Körapur 125	Polyurethane	KÖMMERLING
Ködiglaze P	Polyurethane	KÖMMERLING
Ottoseal S7, S9, S10	Silicone	Otto Chemie
Ottoseal S110, S120	Silicone	Otto Chemie
EGO Silicon 333, 360, 460	Silicone	EGO
Sika WT 470, WT 480	Silicone	SIKA
Sikasil WS 605 S	Silicone	SIKA
Sikaseal SG20, SG500	Silikon	SIKA
DC W 15 LM	Silicone	Dow Corning
DC 794 N	Silicone	Dow Corning
DC 3540	Silicone	Dow Corning
DC 791, 795, 790, 895	Silicone	Dow Corning
DC 756 SMS	Silicone	Dow Corning
DC 790, 797	Silicone	Dow Corning
DC 995	Silicone	Dow Corning
MultiSil	Silicone	Remmers
Cosmopur K1 PUR Montageklebstoff	Polyurethane	Weiss Chemie
Neutral 120	Silicone	Ramsauer
Alkoxy 130	Silicone	Ramsauer
Multiflex 131	Silicone	Ramsauer
Fassade 350	Silicone	Ramsauer
2K Kleber 670	Silicone	Ramsauer
Perennator FA 101, transparent	Silicone	Tremco Illbruck
Tremco FA 151, transparent	Silicone	Tremco Illbruck
Soudaseal 240 FC	Silicone	Soudal
Modesil N°11	Silicone	LAKMA
2H Sil Premium	Silicone	Heller

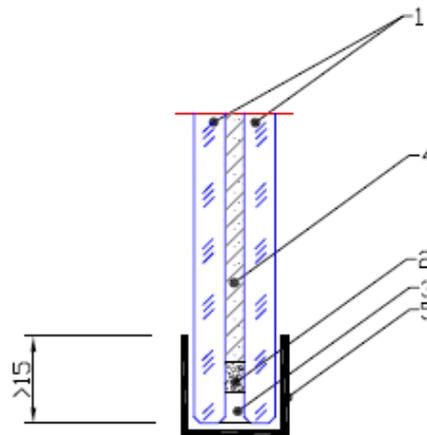
Pyroguard Balustrades do's and don'ts

DO THIS!



- [1] Laminate
- [2] Packer
- [3] U-channel 'shoe'

- Install in a load tested system. Suitable for installation freestanding in a U channel 'shoe' or in Juliet style.
- Conceal the edge sealant in a stiff steel or aluminium U-shaped channel on exposed edges.
- The edges must be covered (fully-framed), glass edges taped where in contact with non-compatible sealants (i.e. anything but the specified sealant), or use of an approved sealant.
- The shoe must be drained to avoid the glass sitting in standing water.



- [1] Tempered glass
- [2] Spacer
- [3] Sealant
- [4] Nanocomposite silica interlayer
- [5] Edge concealing U-channel

- Glaze the Pyroguard glass with the stamp installed at the bottom edge as the sticker below indicates.



- Apply Vitominium PET tape to the edges if it is unavoidable for the Pyroguard T glass to be in contact with a non-approved sealant.

DON'T DO THIS!

- Don't bond in the glass with a non-approved sealant
- Don't install with edge sealant exposed to direct sunlight
- Don't grout seal
- Don't install into an undrained channel

Important information

- Failure to follow the above guidance will render the warranty void.
- The optical properties of fire-resistant laminated glass, unlike in standard laminated glass, are dependent on the type and number of constituents (glass, interlayers, laminate PVB, etc.). These constituents may have a detrimental effect on the optical qualities of the laminate. The primary function of fire-resistant laminated glass is to provide protection from fire and to allow light through, and therefore any reduction in optical quality must be accepted as a consequential effect.

Warranty

Warranty information can be found at <https://www.pyroguard.eu/downloads/our-guidance-documentation/#>

Datasheets

[Pyroguard Balustrades](#)

[Pyroguard Balustrades Evo](#)



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