

Pilkington Planar™ System Information

Pilkington Planar™ Integral



Pilkington Planar™ Integral – Laminated Safety Glass
Performance of typical combinations with clear interlayer

Outer Heat Strengthened Leaf	Inner Pilkington T glass Plus Leaf	Light Transmittance LT	Light Reflectance LR	Total Solar Radiant Heat Transmittance	Total Shading Coefficient	U Value (W/m²K)	R _w Value (dB)
Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear						
4mm	10mm	0.85	0.08	0.69	0.79	5.4	39
4mm	12mm	0.84	0.08	0.68	0.78	5.4	40
6mm	10mm	0.84	0.08	0.68	0.78	5.4	40
6mm	12mm	0.84	0.08	0.66	0.76	5.3	41
Pilkington Optiwhite™	Pilkington Optiwhite™						
4mm	10mm	0.90	0.08	0.82	0.94	5.4	39
4mm	12mm	0.90	0.08	0.81	0.93	5.4	40
6mm	10mm	0.90	0.08	0.81	0.93	5.4	40
6mm	12mm	0.90	0.08	0.81	0.93	5.3	41

Determined in accordance with EN 410 and EN 673

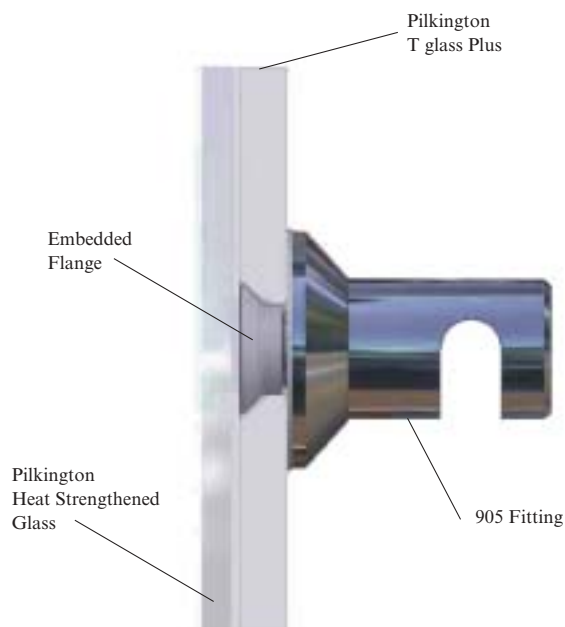
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Glass Type	Colour	4mm	6mm	10mm	12mm	15mm	19mm	Notes
Pilkington Optifloat™	Clear	✓	✓	✓	✓	✓	✓	
Pilkington Optifloat™	Grey	✓	✓	✓				
	Bronze	✓	✓	✓				
	Green	✓	✓	✓				
Pilkington Optiwhite™		✓	✓	✓	✓	✓		
Pilkington Arctic Blue™	Blue	✓	✓	✓				
Pilkington K Glass™		✓	✓					
Pilkington Decorative Glass Screen Printed		✓	✓	✓	✓			Maximum screened area 2000 x 3600mm (See enclosed data sheet for further details)

For Pilkington Texture Glass availability, please contact Pilkington Architectural.

Pilkington Planar™ Integral

A fully tested and patented method of fixing laminated glass panels to a backup structure without any exterior bolts, caps or washers. All fixings are embedded within the laminated glass. This fixing system allows a much wider variety of glass types, including decorative and textured glass, to be used in a structural glass application. Integral allows us to horizontally glaze an entire roof or canopy without any fasteners in the exterior glass.



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Specification – Pilkington **Planar**TM Integral

Composition

The countersunk glass will be to single Pilkington **Planar**TM standards and reference should be made to the single Pilkington **Planar**TM specification.

Indicative Glass combinations

6mm or 4mm + 10mm
6mm or 4mm + 12mm
6mm or 4mm + 15mm
6mm or 4mm + 19mm

Pilkington **Planar**TM Laminated Safety Glass

Interlayer: 1.5 - 2mm (nominal)

There may be a step on each side up to 3mm

Glass size – rectangles

Maximum (4mm): 2000 x 3600mm 0 + 4mm

Maximum (6-19mm): 2000 x 3600mm 0 + 4mm

Minimum: 360 x 900mm 0 + 4mm

Aspect ratio: 10:1 Maximum

Larger glass sizes and weights greater than 350kg subject to enquiry.

Shape capability

Rectangles and simple shapes. All tolerances will vary depending on the complexity of shape.

Glass Edge condition

Smooth ground edges giving a flat profile with small ground arris. Shells or chips at edges will be ground out prior to toughening and do not constitute reason for rejection. Corners may be dubbed.

Some variation in edgework may be discernible on exposed edges where different machines and/or hand forming is a requirement for manufacture. Such variations shall be kept to a minimum.

Hole drilling – rectangles

Diameter: 19mm ±1mm Countersunk

Position: Normally 60mm from glass edge at corners and sometimes along edge. Other configurations subject to confirmation.

Tolerance: ±2mm from one datum point.

Number: Up to 10

Method of production

Cast-in-place or PVB.

Tempering

10/12/15/19mm glass: Pilkington T glass Plus
(Toughened and Heat Soaked)

4/6/8/10 mm glass: Heat Strengthened

Glass marking

Glass will be marked with the Pilkington toughening stamp and will show a compliance with other regulatory requirements. The mark will be on each glass pane. Multiple panes will not necessarily be marked in the same corner.

Visual quality

Cast-in-place

The cast-in-place process uses a clear tape 10mm wide around the edge and around the holes between the two glasses. The junction between the clear tape and the resin is just visible inboard from the edge of the glass and the holes.

Very fine bubble at resin/tape interface. One bubble of size 2-3mm will be acceptable per m run or per hole area. One bubble of size 2-3mm will be acceptable in the body of each plate but not in the visible area as defined by an oval touching the centre of all four sides.

PVB

Advances in PVB technology in recent years have led to improved edge stability. Under natural exposure conditions the edge of a PVB laminate will be of an acceptable quality when properly installed and maintained. However the possibility of minor delamination cannot entirely be excluded.

When viewed from a distance of 3m in transmission and in the vertical position, bubbles, dirt or fibres within the laminate will be considered to be unacceptable if readily visible due to their size or quantity.

Distortion

When laminating toughened or heat strengthened glasses together slight visible distortion in transmission due to the small lens effects will be noted with increase in viewing angle. The phenomenon is not normally a problem in roof glazing, but may be discernible in vertical glazing. Site inspection should be from a distance of 3m and viewed at right angles to the glass.

Installation

Whilst the Pilkington **Planar**TM system is completely weatherproof, the components are not designed to be left in contact with water for extended periods, and adequate ventilation or drainage should be provided to allow the system to dry out periodically.

Weatherseals used around the periphery must be compatible with the Pilkington **Planar**TM system and approval from Pilkington should be sought prior to application.

This publication gives a general description of the product and materials. It is the responsibility of the users of this document to ensure that the proposed application of the product is appropriate and that such application complies with all relevant local and national legislation, standards, codes of practice and other requirements. To the extent allowed by law Pilkington United Kingdom Limited hereby disclaims all liability howsoever arising from any error in or omission from this publication and all consequences of relying on it.



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