



Pilkington Planar™ System Information

Pilkington Planar™ Intrafix Units

Pilkington Architectural offer a wide range of coated performance glasses for incorporation into the Pilkington **Planar™** system. A selection of such products and performance data is indicated below.

Pilkington Toughened and Heat Soaked Glass Outer Pane (6 mm)	Light Transmittance LT	Light Reflectance LR	Total Solar Radiant Heat Transmittance	Total Shading Coefficient	U _g -value [W/m ² K]	R _w -value [dB]
Pilkington Planar™ Intrafix units with 10 mm Pilkington Optifloat™ Clear THS inner pane and 16 mm airspace						
Pilkington Optifloat™ Clear	0.80	0.15	0.75	0.86	2.7	39
Pilkington Planar™ Sun 60/27	0.58	0.16	0.28	0.32	1.3	39
Pilkington Planar™ Sun 62/29	0.60	0.09	0.29	0.33	1.3	39
Pilkington Suncool™ 70/40	0.72	0.10	0.43	0.49	1.3	39
Pilkington Suncool™ 70/35	0.69	0.16	0.37	0.43	1.3	39
Pilkington Suncool™ 66/33	0.65	0.16	0.36	0.41	1.3	39
Pilkington Suncool™ 50/25	0.50	0.18	0.27	0.31	1.3	39
Pilkington Planar™ Intrafix units with 10 mm Pilkington Optiwhite™ THS inner pane and 16 mm airspace						
Pilkington Optiwhite™	0.83	0.15	0.82	0.94	2.7	39
Pilkington Planar™ Sun 60/27 OW	0.61	0.16	0.28	0.32	1.3	39
Pilkington Planar™ Sun 62/29 OW	0.63	0.10	0.30	0.34	1.3	39
Pilkington Suncool™ 70/40 OW	0.75	0.10	0.45	0.52	1.3	39
Pilkington Suncool™ 70/35 OW	0.72	0.16	0.39	0.45	1.3	39
Pilkington Suncool™ 66/33 OW	0.68	0.17	0.37	0.43	1.3	39
Pilkington Suncool™ 50/25 OW	0.52	0.19	0.28	0.32	1.3	39
Pilkington Planar™ Intrafix units with 6 mm + 10 mm Pilkington Optifloat™ Clear THS laminated inner pane and 16 mm airspace						
Pilkington Optifloat™ Clear	0.78	0.14	0.72	0.83	2.6	—
Pilkington Planar™ Sun 60/27	0.57	0.16	0.28	0.32	1.3	—
Pilkington Planar™ Sun 62/29	0.59	0.09	0.29	0.33	1.3	—
Pilkington Suncool™ 70/40	0.70	0.10	0.43	0.49	1.3	—
Pilkington Suncool™ 70/35	0.67	0.16	0.37	0.43	1.3	—
Pilkington Suncool™ 66/33	0.64	0.16	0.36	0.41	1.3	—
Pilkington Suncool™ 50/25	0.48	0.18	0.27	0.31	1.3	—
Pilkington Planar™ Intrafix units with 6 mm + 10 mm Pilkington Optiwhite™ THS laminated inner pane and 16 mm airspace						
Pilkington Optiwhite™	0.83	0.15	0.80	0.92	2.6	—
Pilkington Planar™ Sun 60/27 OW	0.60	0.16	0.28	0.32	1.3	—
Pilkington Planar™ Sun 62/29 OW	0.63	0.10	0.30	0.34	1.3	—
Pilkington Suncool™ 70/40 OW	0.74	0.10	0.45	0.52	1.3	—
Pilkington Suncool™ 70/35 OW	0.72	0.16	0.38	0.44	1.3	—
Pilkington Suncool™ 66/33 OW	0.68	0.17	0.37	0.43	1.3	—
Pilkington Suncool™ 50/25 OW	0.51	0.19	0.28	0.32	1.3	—

* Please note that these are a selection of Solar Control glasses within the range and the performance data supplied is indicative only and can vary subject to the substrate used. Technical data has been calculated according to BS EN 410 and BS EN 673. The above table has been updated to take into account the declared values of radiation and thermal properties required for CE Marking. R_w value is indicative for PVB interlayer product only and will be subject to minor variations dependent upon the size of the glass panels and the number of fittings required.

Pilkington Planar™ Intrafix – Glass Types

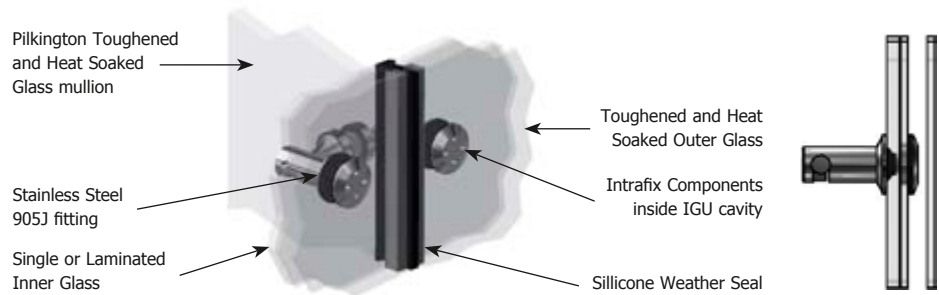
Glass Type	6 mm	10 mm	12 mm	15 mm	19 mm	Notes
Pilkington Optifloat™ Clear	+	+	+	+	+	
Pilkington Optifloat™ Bronze	+	+				
Pilkington Optifloat™ Grey	+	+				
Pilkington Optifloat™ Green	+	+				
Pilkington Suncool™ 70/40	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Suncool™ 66/33	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Suncool™ 50/25	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Optiwhite™	+	+	+	+	+	
Pilkington Suncool™ 70/40 OW	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Suncool™ 66/33 OW	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Suncool™ 50/25 OW	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Arctic Blue™	+	+				
Pilkington Activ™ Clear	+	+				
Pilkington Activ™ Blue	+	+				
Pilkington K Glass™	+					
Pilkington K Glass™ OW	+					
Pilkington Optitherm™ S1	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Screen Printed Glass	+	+	+	+	+	Maximum screened area 2400x4500 mm (See enclosed data sheet for further details)

Notes

Pilkington **Planar™** Laminated Intrafix is available with a selection of interlayers including PVB and Kuraray™ SentryGlas®. Silicone perimeter seals must be compatible with Pilkington Laminated Safety Glass.

A wide range of glass combinations and a choice of clear, translucent and coloured interlayers are available with laminated glasses. Please refer to Pilkington Architectural for advice. In line with regulations applicable in many European countries, Pilkington Architectural recommend the use of laminated glass in overhead or sloping overhead glazing.

Intrafix 905 Fitting to Double Glazed Pilkington Planar™ Laminated IGUs



Specification - Pilkington Planar™ Intrafix Units

COMPOSITION

Pilkington **Planar™** Intrafix Units are manufactured from an outer pane of Pilkington Toughened and Heat Soaked glass (typically 6 mm thick) and an inner pane of single or laminated Toughened and Heat Soaked glasses.

OUTER GLASS

Thickness: 6, 8 mm ±0.2 mm

INNER COMPONENT GLASSES

Thickness (monolithic): 10 mm to 15 mm ±0.3 mm

Indicative laminate combinations: 6 mm + 10 mm | 6 mm + 12 mm
6 mm + 15 mm

Pilkington **Planar™** Laminated Safety Glass

Interlayer thickness: 1.52 mm

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

Air space: 16 mm ±1 mm

Depth of silicone seal: Minimum 4 mm

Aluminium spacer depth: 7 mm

Sight line of unit edge seal: Dependent upon panel size. (12 mm min.)

Spacer colour: Black or Natural

Overall unit thickness: ±2 mm tolerance

GLASS SIZE – RECTANGLES

Maximum: 2500 × 5000 mm 0 + 4.5 mm

Minimum: 300 × 500 mm 0 + 4.5 mm

Aspect ratio: 14:1 Maximum

Diagonal tolerance: Up to 4 mm 3 mm maximum difference

Over 4 m 4 mm maximum difference

Overall unit thickness: 58 mm (Larger on request)

Maximum weight: 1000 kg

SHAPE CAPABILITY

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

ROLLER WAVE

Mean roller wave: $t < 8$ mm 0.05 mm

$t \geq 8$ mm 0.02 mm

Coated glass 0.05 mm

Maximum edge dip: 0.25 mm

Roller wave is usually parallel to the short side and in coated glass should be glazed horizontal where possible.

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. Where the detail of a structure is such that the double glazing edge sealant is fully exposed, minor undulations in the edge seal may be discernible particularly near corners of the unit. Where a unit uses a Pilkington **Planar™** Sun, Pilkington **Suncool™** or Pilkington **Optitherm™** S1 coating, it must be edge-deleted in the area of the unit edge seal to ensure maximum unit durability. Depending on product type, orientation and light conditions, the edge-deleted area may be visible to the naked eye.

ARGON FILLING

It is generally accepted that Argon gas will slowly dissolve through the seals over a period of time, the rate of diffusion being dependent on several factors such as unit size and the environment in which it is glazed. The total retention of Argon in the unit cannot therefore be guaranteed for the life of the unit.

HOLE DRILLING – RECTANGLES

Diameters: 38 mm ±1 mm

19 mm ±1 mm Countersunk

Position: May be up to 67 mm from glass edge at corners and sometimes along edge, subject to confirmation.

Positional tolerance: ±2 mm from one datum point

Number of holes: Up to 10 (more on request)

INTERLAYERS AVAILABLE AS STANDARD

Kuraray™ SentryGlas® or PVB.

TOUGHENING STRESS

10/12/15 mm glass: Pilkington Toughened and Heat Soaked Glass

6/8 mm glass: Pilkington Toughened and Heat Soaked Glass

GLASS MARKING

Glass will be marked with the Pilkington toughening stamp and will show compliance with other regulatory requirements. The mark will be on each glass pane. Multiple panes will not necessarily be marked in the same corner. However, the thinner glasses will generally be marked with a relatively discreet linear brand within the area of the unit edge seal.

HEAT SOAK TESTING

All toughened glass will be supplied heat soaked to or in excess of international specifications e.g. BS EN 14179.

LITESENTRY OSPREY SCANNER

A LiteSentry Osprey Scanner is used to monitor and ensure high quality aesthetics of the Pilkington **Planar™** glass products.

VISUAL QUALITY – 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 3 m 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.

KURARAY SENTRYGLAS

This interlayer technology delivers increased load bearing characteristics and improved overall durability. Compared to standard conventional glass interlayers, SentryGlas® ionoplast is more resistant to moisture and the effects of weather due to its exceptional edge stability, with no defect extending greater than 3 mm normal to the chamfered edge of the laminate. Laminates will conform to the specification for process blemishes set forth in ASTM C1172-03, Table 1. When viewed from a distance of 3 m 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 small lensing effects may be noted at certain viewing angles. The phenomenon is not normally a problem in roof glazing but may be discernible in vertical glazing. In addition, the air in all sealed units expands and contracts in hot and cold weather causing the glass to bow out and in respectively, and this movement may be visible in reflection. On occasion, such effects can be increased by the specification of a coated glass within the unit. Site inspection should be from a distance of 3 m and at right angles to the glass.

Due to a thin glass on the outer face and a thicker glass on the inner, distortions caused by atmospheric and temperature changes can result in the outer glass appearing distorted (pillowing). This is deemed as acceptable.

INSTALLATION

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

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CE marking confirms that a product complies with its relevant harmonised European Norm.

The Declaration of Performance for each product, including declared values, can be found at www.pilkington.com/CE



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