

Pilkington **Planar**[™] System Information

Single glass – flat and curved



Single Pilkington **Planar**[™] Glazing – Performance

Glass Type	Colour	Thickness (mm)	Light Transmittance LT	Light Reflectance LR	Total Solar Radiant Heat Transmittance	Total Shading Coefficient	U Value (W/m ² K)	R _w Value (dB)	
Pilkington Optifloat [™]	Clear	10	0.87	0.08	0.78	0.90	5.6	34	
		12	0.86	0.08	0.75	0.86	5.5	35	
		15	0.85	0.08	0.72	0.83	5.5	36	
Pilkington Optifloat [™]	Bronze	10	0.32	0.05	0.46	0.53	5.6	34	
		Grey	10	0.26	0.05	0.46	0.53	5.6	34
		Green	10	0.66	0.06	0.49	0.56	5.6	34
Pilkington Optiwhite [™]		10	0.91	0.08	0.89	1.02	5.6	34	
		12	0.90	0.08	0.88	1.01	5.5	35	
		15	0.90	0.08	0.87	1.00	5.5	36	
Pilkington Arctic Blue [™]	Blue	10	0.36	0.05	0.40	0.46	5.6	34	

Determined in accordance with EN 410 and EN 673

Single Pilkington **Planar**[™] – Glass types

Glass Type	Flat	Curved	Notes
Pilkington Optifloat [™] Clear	✓	✓	
Pilkington Optifloat [™] Bronze/Grey/Green	✓	✓	
Pilkington Optiwhite [™]	✓	✓	
Pilkington Arctic Blue [™]	✓	✓	
Pilkington Decorative Glass Screen Printed	✓	✓	Maximum screened area 2400 x 4500 mm (See enclosed data sheet for further details)

Specification – flat single Pilkington **Planar**[™]

Flat glass

Thicknesses:	10, 12mm	±0.3mm
	15mm	±0.5mm
	19mm	±1.0mm

Flat glass size – rectangles

Maximum:	2400 x 4800mm	±1mm
Minimum:	360 x 900mm	±1mm
Aspect ratio:	10:1	Maximum
Diagonal tolerance:	Up to 4m:	3mm Maximum difference
	Over 4m	4mm Maximum difference

Flat shape capability – simple shapes

All tolerances will vary depending on the complexity of shape.

Bow

Maximum bow:	0.1%	(Float glass)
	0.2%	(Ceramic coated glass)

Roller wave

Mean roller wave depth:	0.02mm
Maximum edge dip:	0.25mm
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.

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



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Toughening stress

Thermally toughened soda lime silicate safety glass to EN 12150
Classified as 1(C)1 to EN 12600. Checked regularly during production
by fracture count or the Differential Stress Refractometer (DSR) method.

Heat soak testing

All toughened glass (Pilkington T glass) will be supplied heat soaked to
international specifications eg prEN 14179-1, DIN 18516.

Glass marking

Glass will be marked with the Pilkington toughening stamp and will show
compliance with regulatory requirements. The mark will be on each glass pane.

Visual quality

Roller wave and natural bow in toughened glass have minimal effect on
vision in transmission but can be observed in reflection, obviously more
with reflective glass. This is kept to a minimum with the very low roller
wave and bow in Pilkington T glass Plus.

Site inspection should be from a distance of 3m and viewed at right angles
to the glass.

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.

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

Specification – curved single Pilkington **Planar**[™]

Curved glass

Thicknesses:	10mm, 12mm,	±0.3mm
	15mm	±0.5mm
	19mm	±0.1mm

Curved glass size – rectangles

Developed width:	360 to 2130mm	±3mm
Length:	400 to 3650mm	±3mm
Aspect ratio:	2:1 maximum for large areas	
Minimum size:	360 x 900mm	±3mm
Minimum radius:	1000mm	

Tolerances on curves are difficult to define. In simple terms:

Straight edge will be:	±3mm from the straight
Developed width will be:	10–12mm ±3mm from perfect curve
	15mm ±4mm from perfect curve
	19mm ±5mm from perfect curve

Note: 'developed width' means the width of glass pane prior to bending.

Torsion ±5mm per metre measured along the straight edge.

Curved shape capability

Rectangles and simple rakes. All tolerances will vary depending on com-
plexity of shape.

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 dif-
ferent machine and/or hand forming is a requirement for manufacture.

Such variations shall be kept to a minimum.

Hole drilling

Diameter:	19mm ±1mm Countersunk Curved glass countersunk on convex side.
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

Toughening stress

Thermally toughened soda lime silicate safety glass to EN 12150.
Checked regularly during production by fracture count or the Diffential
Stress Refractometer (DSR) method.

Heat soak testing

All toughened glass will be supplied heat soaked to international
specifications eg prEN 14179-1, DIN 18516.

Glass marking

Glass will be marked with the Pilkington toughening stamp and will show
compliance with regulatory requirements. The mark will be on each glass pane.

Visual quality

A degree of distortion, both when looking through and in reflection, is
inevitable in curved toughened glass, particularly when viewing a moving
object through the glass. All curved glass should be site inspected
from a minimum distance of 3m and viewed at right angles to the glass.
It should also be noted that toughened curved glass will split direct sunlight
into striped shadow.

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

General Notes – Curved Glazing

Curved Pilkington **Planar**[™] applications are the subject of continuing
development and enquiries are welcomed for projects furthering current
specifications and usage.

Special fittings have been designed for curved glazing and particular torque
settings determined. The angle of spring plate or 905 bar must suit the
curve radius.

At time of printing, the support structure must lie on the concave side of
the glass but can be internally or externally located. The curve may be on
any plane.

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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