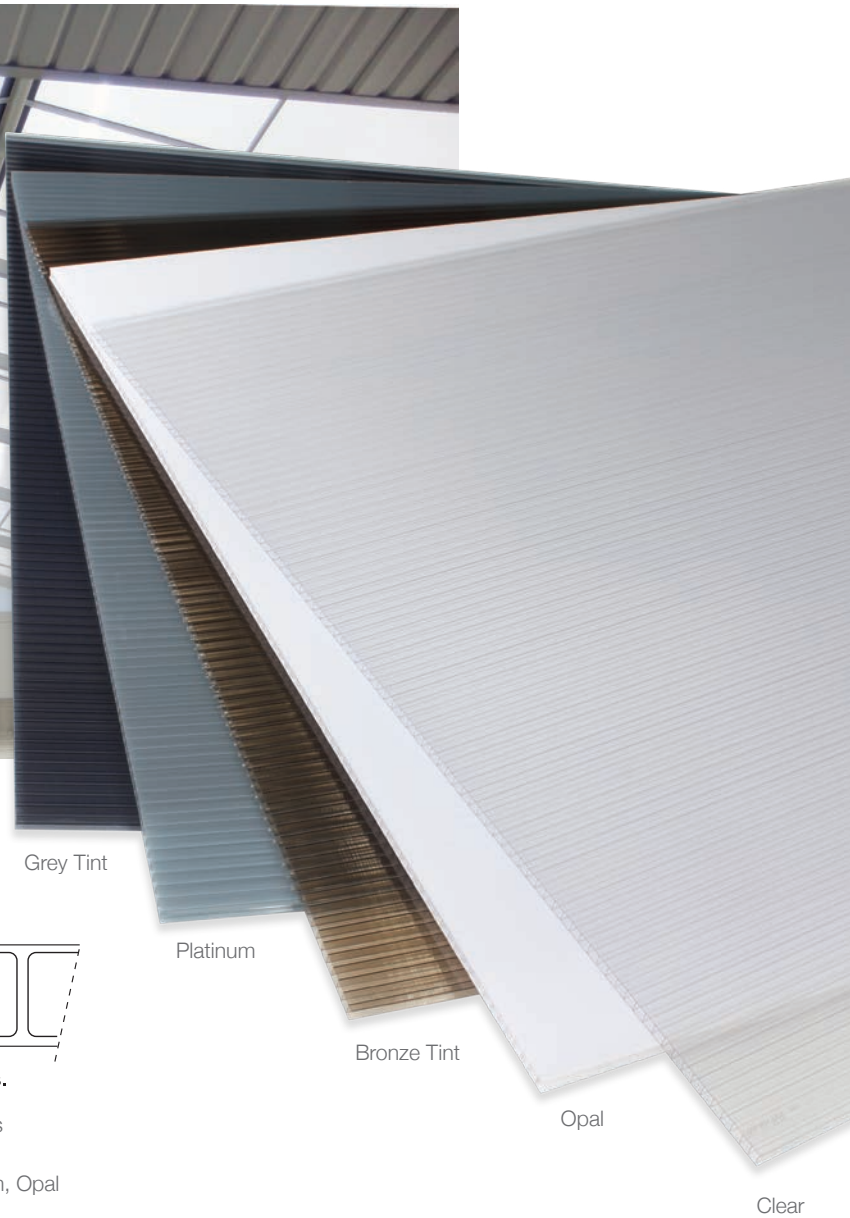
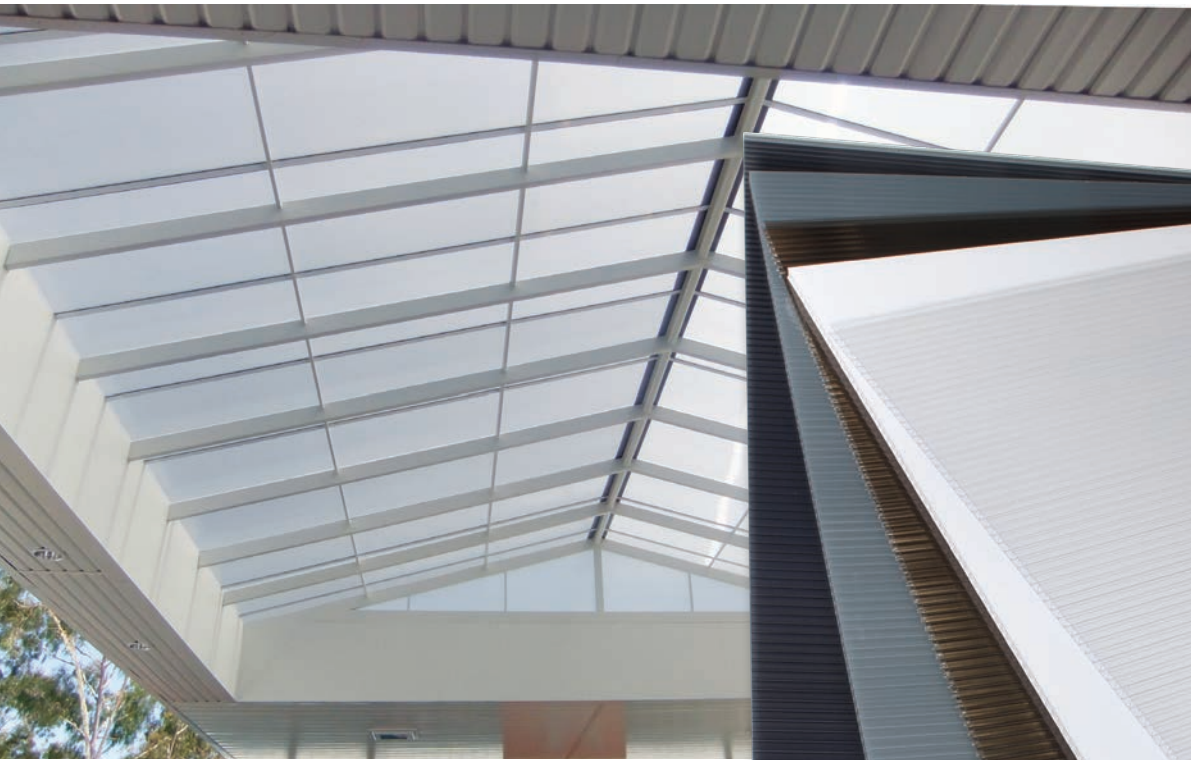




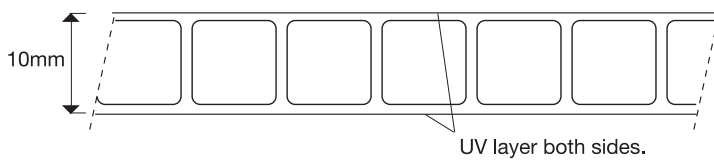
# Makrolon<sup>®</sup> multi UV Versatile polycarbonate glazing system





## The product range

### Gauge 10mm



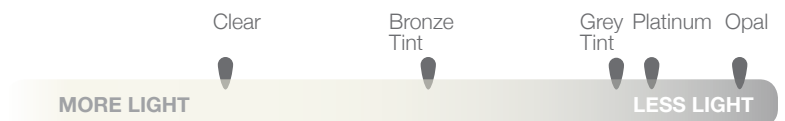
<b>Standard Lengths</b>	2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 9.0 metres
<b>Standard Width</b>	980mm
<b>Standard Colours</b>	Clear, Bronze Tint, Grey Tint, Platinum, Opal
<b>Sheet Weight</b>	1.7 kg/m <sup>2</sup>

Other colours, gauges, widths and lengths available. Lead times may apply.

## Light and heat transmission

### Light level

**Light Transmission (LT):** % of visible light transmission (400-700nm) that passes through the sheet.



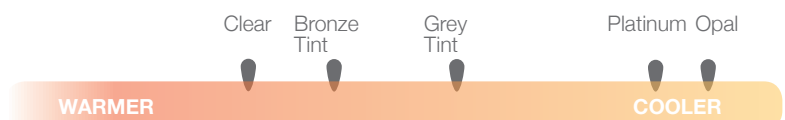
### Comfort level

**Shading Co-efficient (SC):** A ratio of the warming effect of the sun's rays through a sheet divided by the sun's warming effect through 3mm float glass (300-2500nm).



### Heat transmission

**Heat Transmission (HT):** % of total solar radiation transmission (300-2800nm). This value describes the ability of the sheet to conduct heat.



### Solar heat gain co-efficient

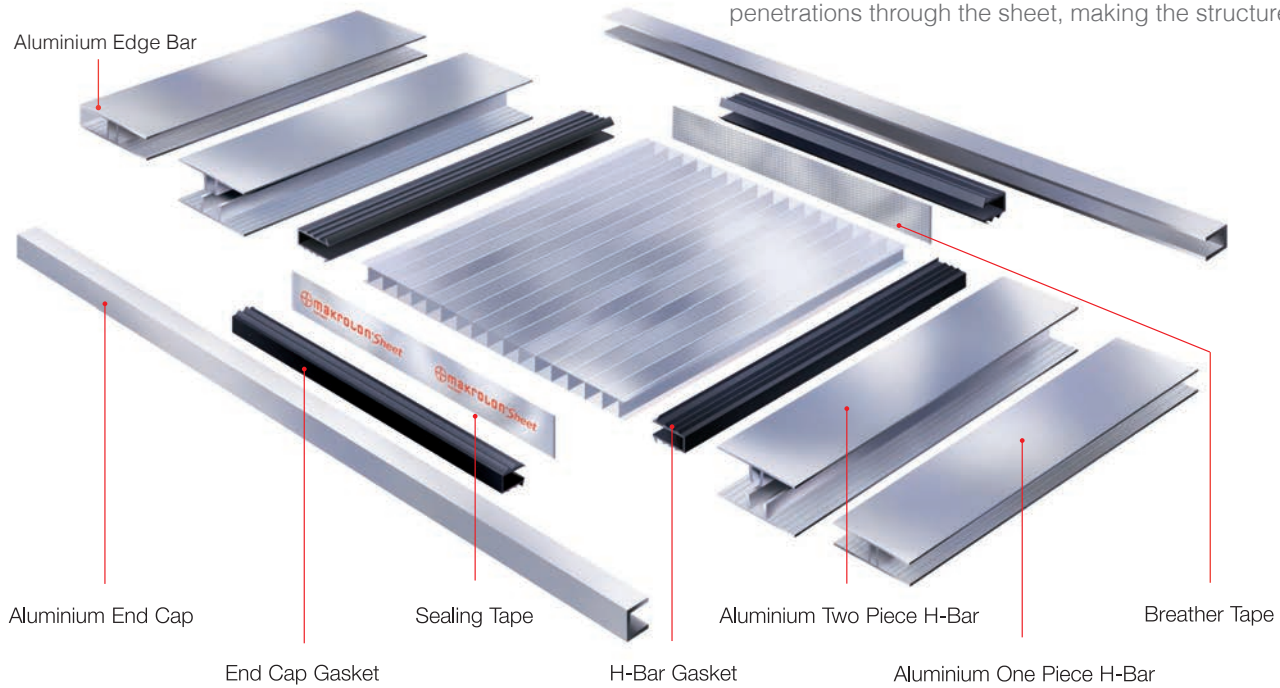
**Solar Heat Gain Co-efficient (SHGC):** Total solar energy transmitted or absorbed and re-radiated under the sheet (300-2500nm).





## The glazing system explained

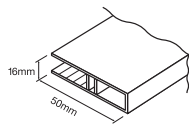
The H-Bar system makes handling and installation easy and flexible. The Makrolon® Multiwall sheets simply slot into the H-Bar ready for fixing to the structure. The glazing bar system allows for thermal expansion and eliminates the need for penetrations through the sheet, making the structure watertight.



## Accessories

### Aluminium Edge Bar

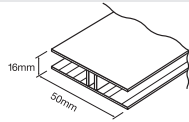
Standard Colours: Mill Finish, Black, Pearl White, Anodised Bronze  
Standard Length: 5m



Easy slot in installation.  
Use to start and finish H-Bar assembly.

### Aluminium One Piece H-Bar

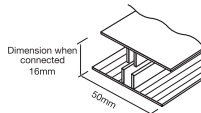
Standard Colours: Mill Finish, Black, Pearl White, Anodised Bronze  
Standard Length: 5m



Easy slot in installation.  
Recommended for high wind areas.

### Aluminium Two Piece H-Bar

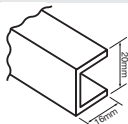
Standard Colours: Mill Finish, Black, Pearl White, Anodised Bronze  
Standard Length: 5m



Join and Cover edges of Multiwall sheets.  
Enables ease of sheet replacement.

### Aluminium End Cap

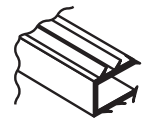
Standard Colours: Mill Finish, Black, Pearl White, Anodised Bronze  
Standard Length: 5m



Cover ends of Multiwall sheets.  
To be used in conjunction with End Cap Gasket.

### End Cap Gasket

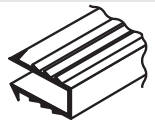
Colour: Black  
Standard Gauges: 10mm  
Standard Length: 10m rolls



Seal and secure ends of Multiwall sheets.  
To be used in conjunction with Aluminium End Cap.

### H-Bar Gasket

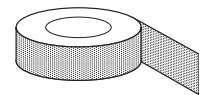
Colour: Black  
Standard Gauges: 10mm  
Standard Length: 20m rolls



Seal and secure edges of Multiwall sheets.  
To be used in conjunction with H-Bars and Edge Bars.

### Breather Tape

Length: 24m



Allow ventilation and reduce condensation.

### Sealing Tape

Length: 50m



Prevent moisture and dust from entering Multiwall flutes.

# Installation instructions

- Refer to Safety Recommendations.
- Installations must comply with the applicable building code.
- We do not recommend the collection of drinking water from any roof without appropriate precautions and filtration. Check with your local water authority for further advice.
- For safety precautions we recommend the use of safety mesh for installations above 3m.

**Table 1.**  
**Rafter and Purlin Nominal Spacing (mm)**

Gauge	Sheet Width	Rafter Centres	Purlin Centres
10mm	980	1000	1200*

\*Required for high wind areas only <sup>3</sup>

<sup>3</sup> Special high wind installation instructions apply. Please refer to Makrolon® Sheet website or customer service for further details.

**1** Install sheets with the ribs (flutes) running vertically in the direction of the fall on the roof with a minimum pitch of 5 degrees. Having sufficient fall allows natural weather action to assist in keeping the sheets clean and minimises leaking.

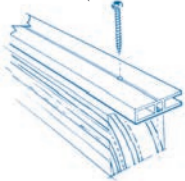
**2** Check recommendation for rafter and purlin spacing in Table 1.

**3** Makrolon® Multiwall sheets can be cut using a sharp knife, hand saw or circular saw with a fine tooth blade suitable for plastics. Sawdust (swarf) should be cleared from the channels with compressed air (or vacuumed) and edges should be free of notches.

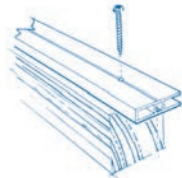
If the width of the Makrolon® Multiwall sheets needs to be reduced, trim them as close as possible to the last rib so that optimum clamping action of the glazing bar is ensured.

**4** Peel some of the masking back from the ends of the sheet and apply Breather Tape to the top and Sealing Tape to the bottom ends.

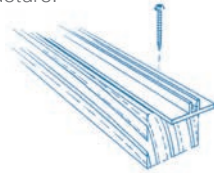
**5** Place the first measured and cut Edge Bar down squarely on the structure (screw side up).



**One Piece H-Bar System**  
Place the first measured and cut H-Bar down squarely on the structure (screw side up).



**Two Piece H-bar System**  
Place the first measured and cut base glazing bar on the structure.

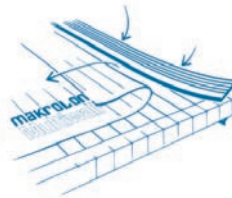


**The maximum end overhang is 50mm.**

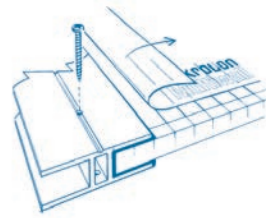
**6 One Piece H-Bar System**  
Secure the H-Bar to the rafter with a screw (gauge not exceeding 12g) at no greater than 1200mm apart.

**Two Piece H-bar System**  
Fasten the Base Glazing Bars to the rafter with Ripple Tek screws (10 gauge – 16 tpi) at no greater than 500mm apart by fixing through the center of the base glazing bar and securing it firmly onto the supporting structure. (Ripple Tek for Wood are 30mm long; Ripple Tek for Metal are 21mm in length)

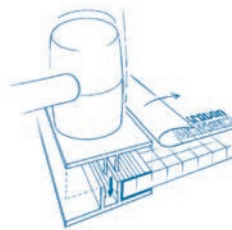
**7** Pull the masking back on the sides of the sheet and place the H-Bar gasket along the whole length of both sides of the sheet.



**8 One Piece H-Bar System**  
Place the next H-Bar on the other side and secure it to the support structure.



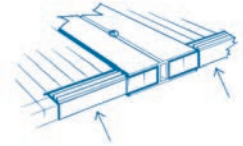
**Two Piece H-bar System**  
Place the sheet between the secured glazing bars. Position the first top glazing bar in line with the base. Secure the two bars using a rubber mallet.



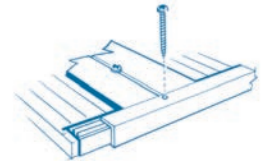
It is recommended that the top glazing bar is secured to the rafter with screws (gauge not exceeding 12g) at no greater than 1200mm apart. Once the next sheet is installed the second and subsequent top glazing bars can be fitted.

**9** Repeat steps 6-8 until all sheets are in position.

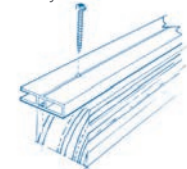
**10** When using Aluminium End Caps, place the end gasket along the end of the Multiwall sheet only, stopping at the H-Bar.



**11** Fasten the Aluminium End Cap with a screw to the H-Bar. On the underneath of the Aluminium End Cap drill a small weep hole where it meets the H-Bar.



**12** Use the Edge Bar to finish the assembly on the final rafter.



## Safety Recommendations

- Never walk on or apply a load or your weight directly to sheeting. Use walking boards along rafters at all times.
- Always exercise extreme care when walking on a roof.
- Consider all safety requirements when working at heights.
- Use appropriate personal protective equipment (PPE) such as safety footwear, safety glasses and gloves.
- All safety practices must comply with the applicable building and/or work cover code(s).

## Important

**Sealants** - These instructions are designed to prevent leaking and alleviate the requirement for sealants. Sealants, especially silicone are incompatible with polycarbonate. They will damage the sheet, restrict expansion and contraction, and void the warranty. Use the appropriate Makrolon® Multiwall accessories to complete your project and help protect your structure, without the need for sealants.  
**Thermal Expansion** - When inserting sheet into glazing sections allowance must be made for expansion.

**10**  
**Ten Year**  
**Warranty**

## Loss of Light Transmission – 10 Year Warranty

Bayer warrants that for a period of 10 years (subject to the terms below) the Products will not lose the ability to transmit light. In the event that a Product fails to comply with this warranty, Bayer will provide a full replacement of the Product, or in the case of a discontinued line, its equivalent. \*The loss of light transmission will not exceed 10% for a period of 10 years from the date of manufacture (when tested in accordance with ASTM D 1003-2000).

## Weather Breakeage – 5 year Warranty

Bayer warrants that for a period of 5 years from the date of manufacture, the Products (subject to the terms below) will specifically resist damage due to hail measuring up to 25mm in diameter. In the event that a Product fails to comply with this warranty, Bayer will provide a full replacement of the Product, or, in the case of a discontinued line, its equivalent.

Full Warranty terms & conditions are available from [www.bayermaterialscience.com.au](http://www.bayermaterialscience.com.au) or a Bayer MaterialScience office. It is the responsibility of the purchaser to obtain a copy of the full warranty conditions.



**makrolon®**

All Makrolon® Multiwall sheets are manufactured from high-tech, high quality Bayer **Makrolon®** polycarbonate resin for high impact resistance, light weight, excellent transparency, UV stability and excellent fire resistance.



**Bayer MaterialScience**

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Phone 1300 447 754  
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ACN 086 237 765

**Quality**  
**Endorsed**  
**Company**

ISO 9001

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