

MODULAR  
POLYCARBONATE  
GLAZING PANEL

# Marlon Toploc

Cover  
& Protect



**Brett  
Martin**



Silicone Sealant

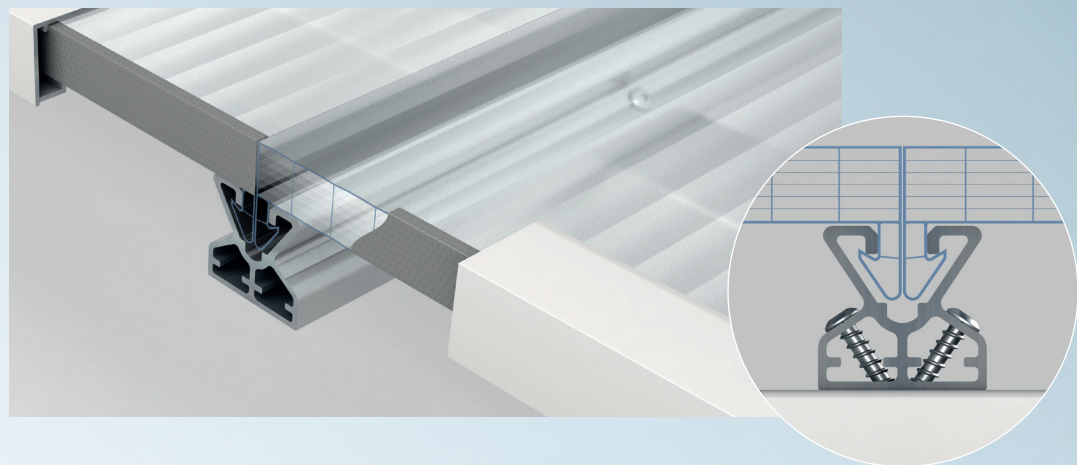
Polycarbonate Connecting Cap

Aluminium U Profile

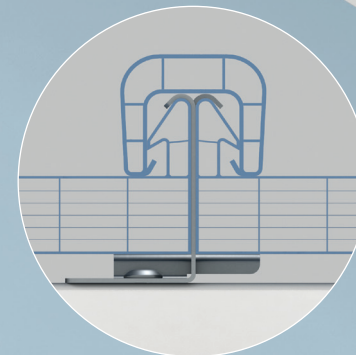
Breather Tape

# Marlon Toploc

This multiwall modular polycarbonate panel is used in two efficient glazing systems to offer either a standing seam or flush surface finish to optimise performance in both vertical and horizontal applications.



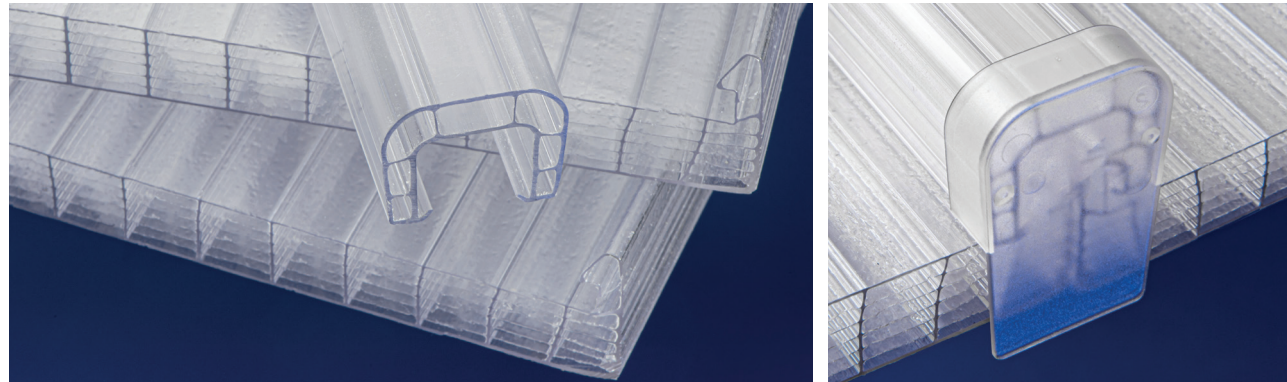
Flush Surface Finish



Standing Seam Finish



# Marlon Toploc



Marlon Toploc is a highly versatile architectural polycarbonate glazing system suitable for use in vertical, pitched or curved installations.

The multiwall panels are extruded with an upright connecting profile that can be installed facing externally to create a stand seam feature or reversed and installed facing internally to create a seamless glazing finish.

## Key Benefits

- Choice of glazing panel – 8mm or 16mm
- Highly versatile system
- Can be adapted into a number of configurations
- Suitable for cold curving
- Thermally insulating multiwall panels

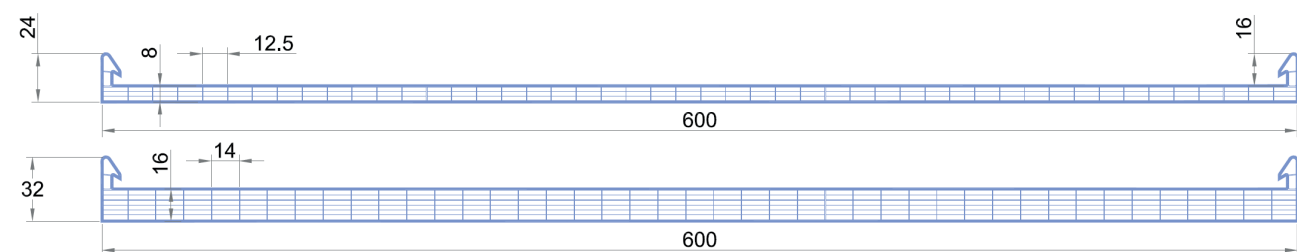
## Panel Details

Cover width	600mm (nominal)
Non-fragility Classification	Consult technical department
Fire Performance	B-s1, d0 to EN13501-1
Recommended Min Pitch	5°
Min Cold Curving Radius	4000mm
UV Protection	Double sided as standard
Warranty	Limited warranty

## Panel Properties

Thickness	Structure	Light Transmission Clear (g)	Light Transmission Pearlescent (PW)	Solar Transmission Clear (g)	Solar Transmission Pearlescent (PW)	U-Value	Weight
8mm	4wall	74%	60%	-	44%	2.8W/m <sup>2</sup> K	1.9Kg/m <sup>2</sup>
16mm	7wall	64%	56%	60%	33%	1.78W/m <sup>2</sup> K	3.0Kg/m <sup>2</sup>

## Panel Structure & Dimensions



## APPLICATION ASSEMBLIES

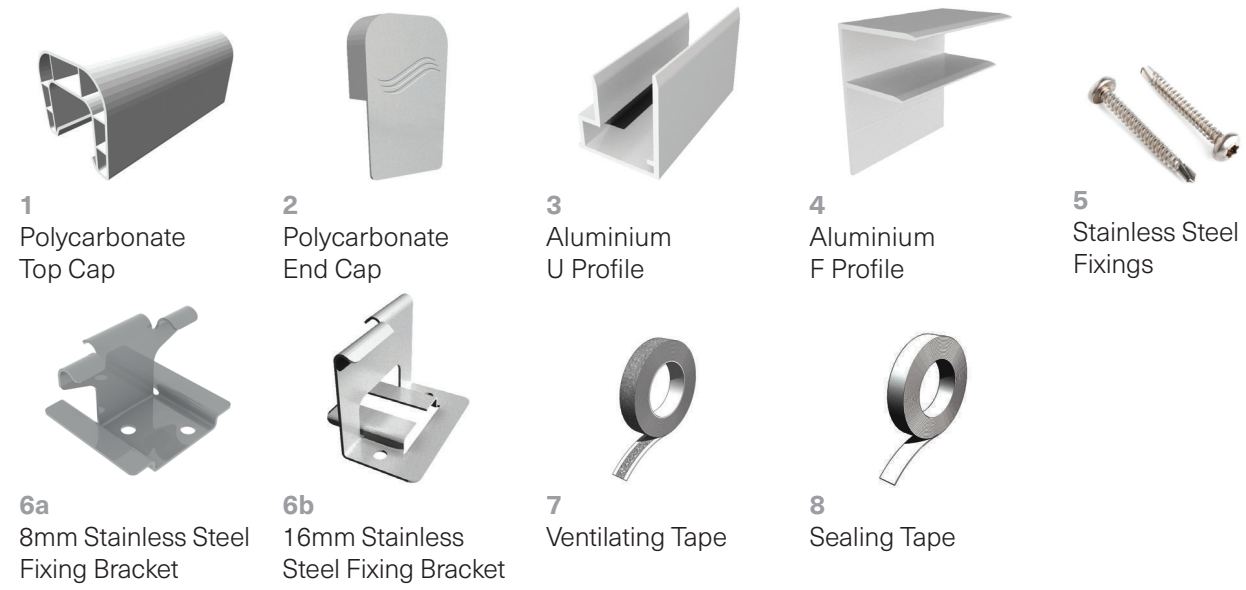
	STANDING SEAM External Polycarbonate Cap	FLUSH FINISH Internal Aluminium Mullion
Curved Rooflight Minimum cold curving radius 4000mm		
Pitched Rooflight Minimum pitch 5°		
Vertical Façade		

Can be used with the VF55, VF70 and VF90 glazing frames.

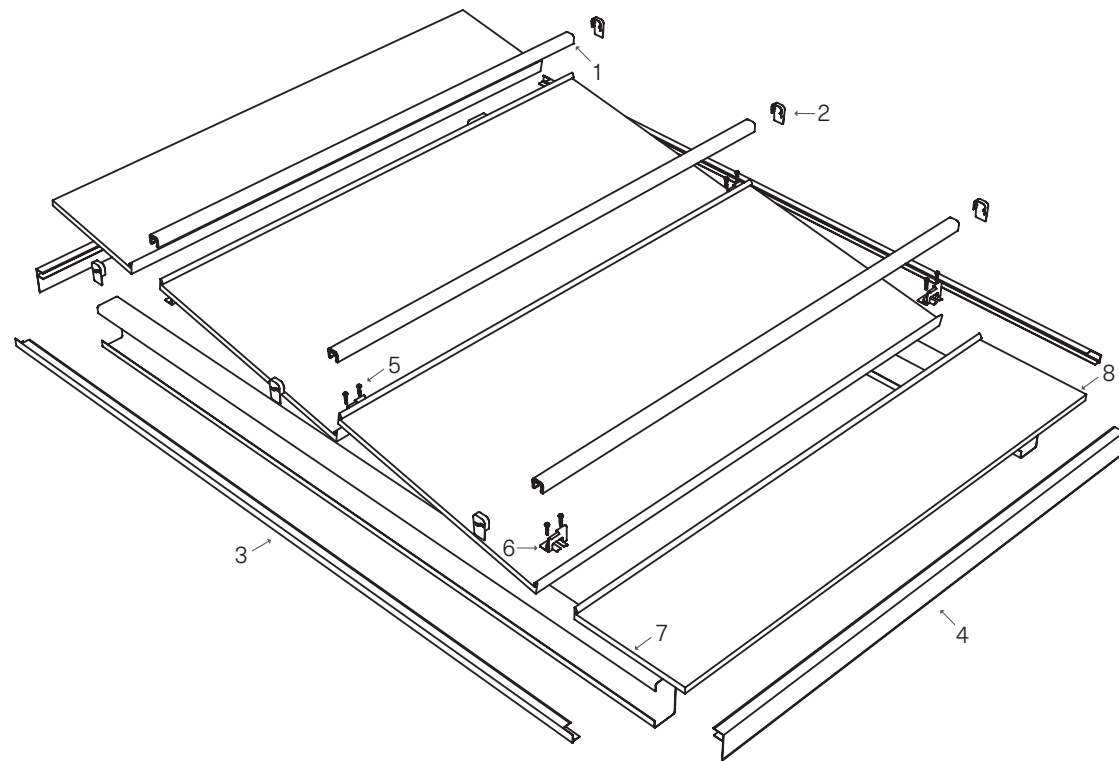
# Marlon Toploc

## Standing Seam System

### System Components

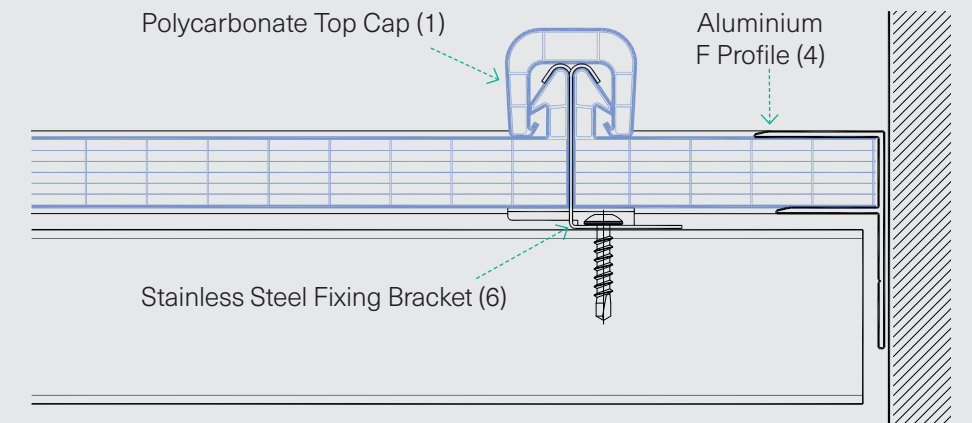


### Standing Seam Roof



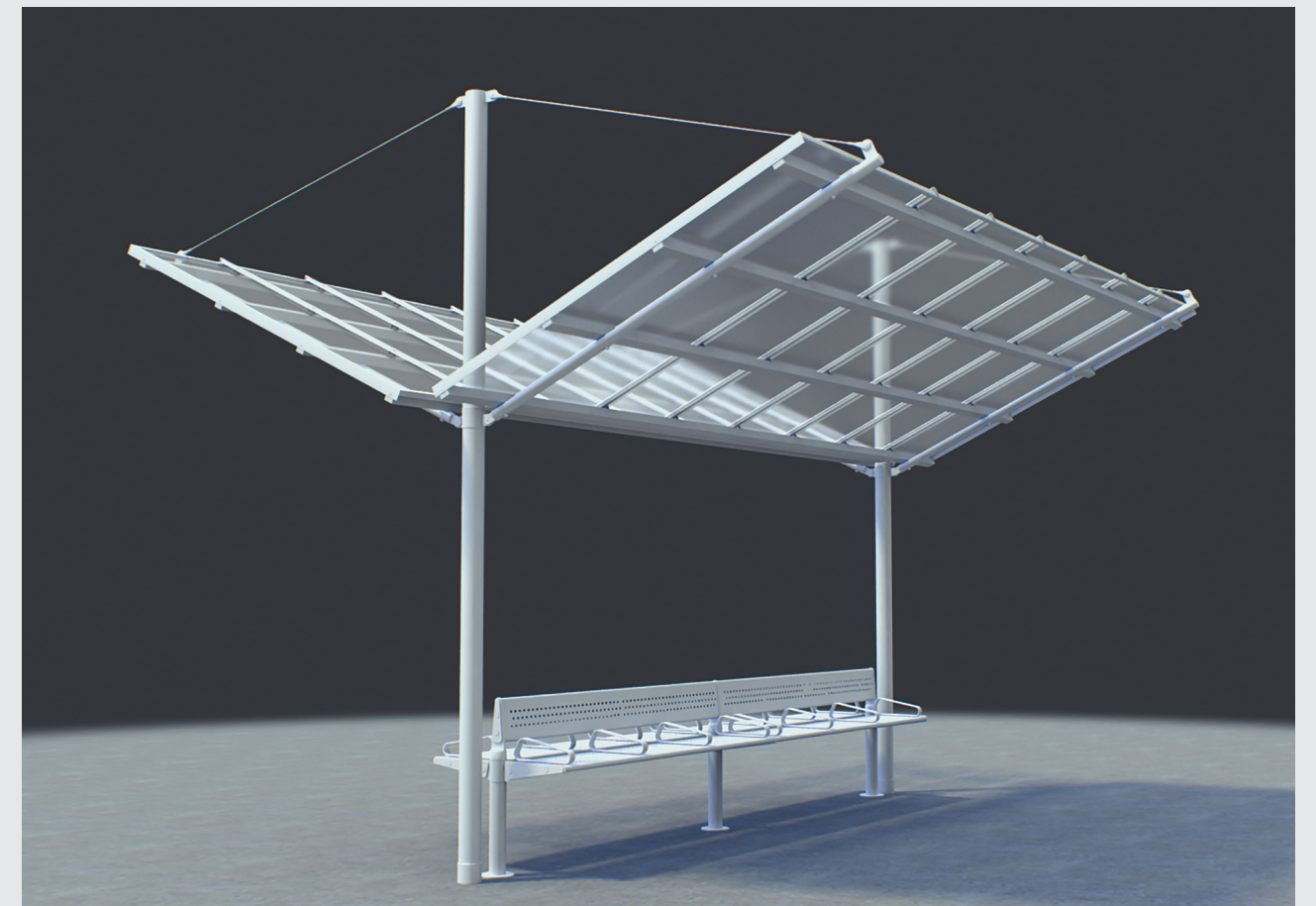
### INSTALLATION DETAILS

Purlin supported with stainless steel clip and polycarbonate cap.



#### Spanning

It is vital that accurate wind and snow loads are used when calculating spanning details. Please contact the Technical Department for spanning details for your specific project.

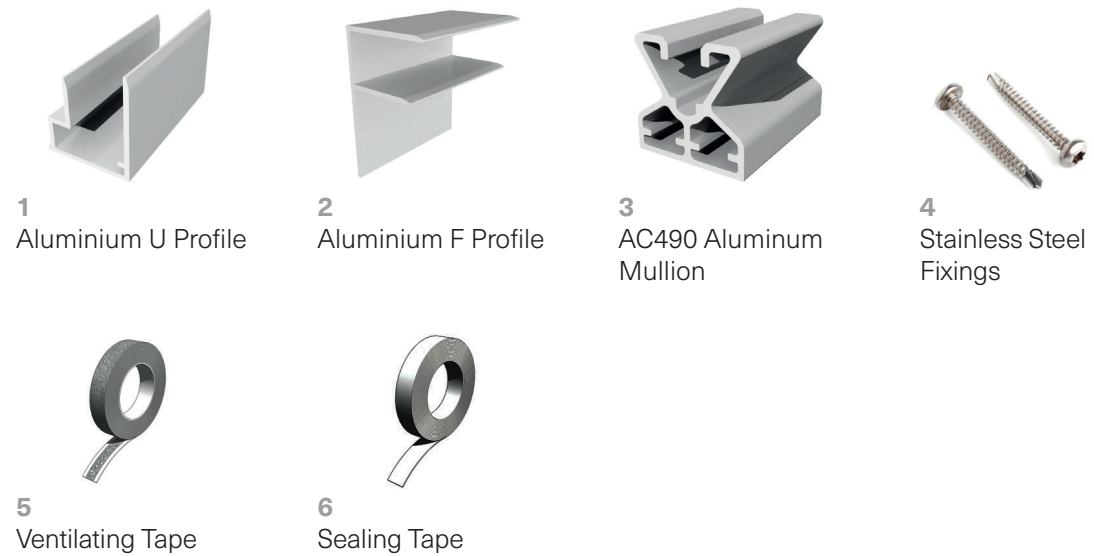




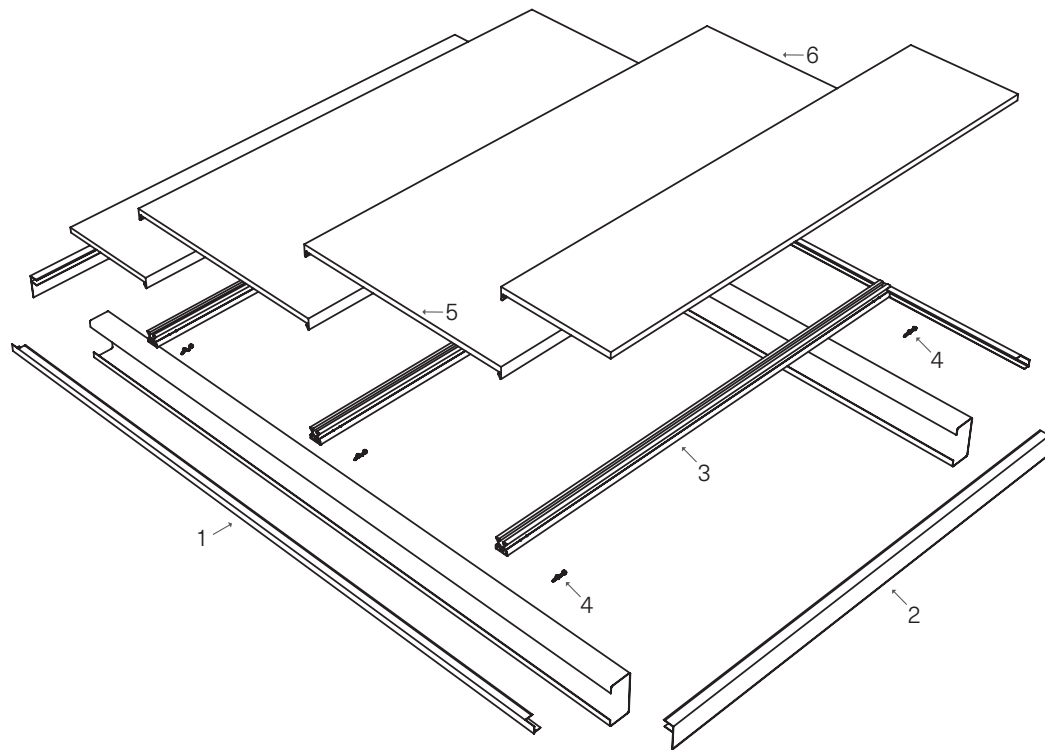
# Marlon Toploc

Flush Surface System

## System Components

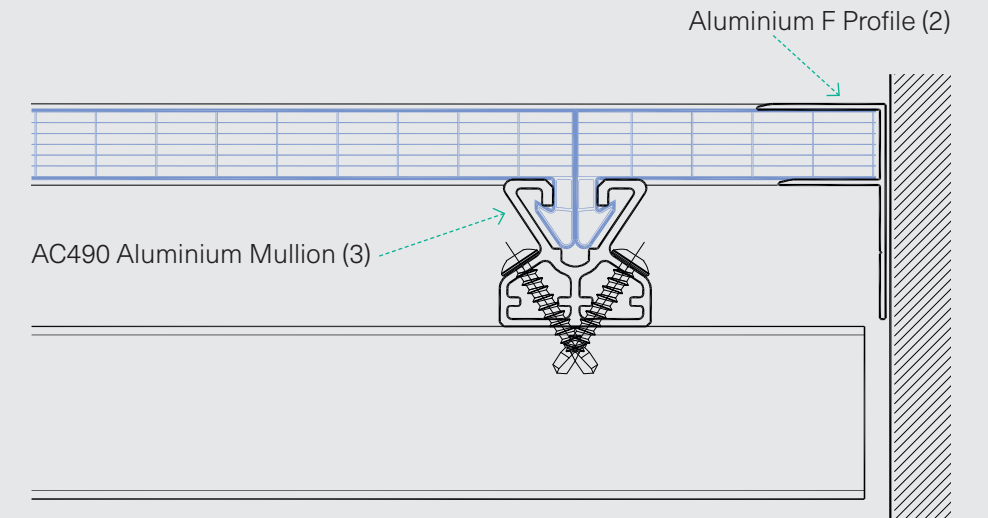


## Standing Seam Roof



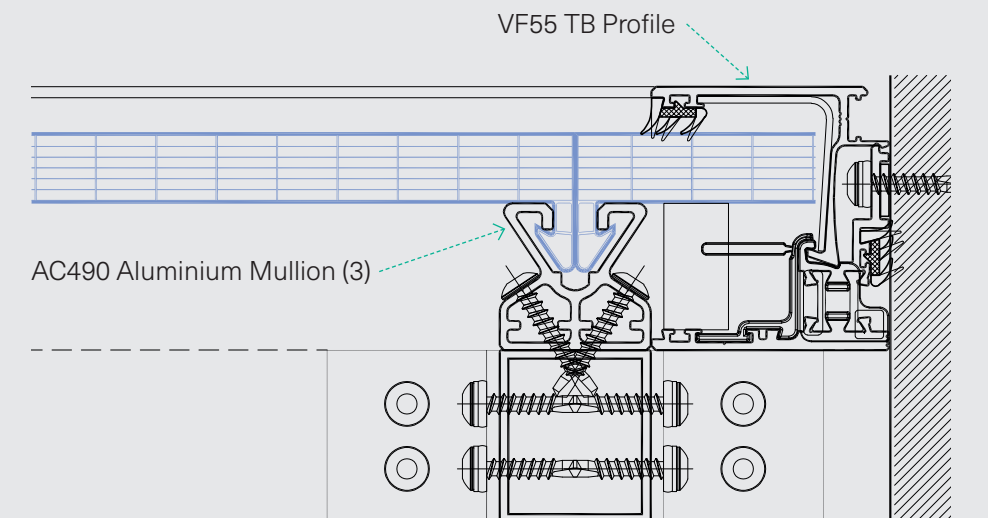
## INSTALLATION DETAILS

Purlin Supported with continuous vertical aluminum mullion support at each panel junction.



## SUITABLE FOR USE WITH VF55 & VF90 GLAZING FRAME SYSTEMS

Mullion Supported with secondary continuous vertical aluminum mullion support at each panel junction.



### Spanning

It is vital that accurate wind and snow loads are used when calculating spanning details. Please contact the Technical Department for spanning details for your specific project.



# Polycarbonate Mechanical Properties

## Strength & Damage Resistance



Damage to glazing can be hazardous and expensive but our Multiwall Systems manufactured from Marlon polycarbonate offer excellent protection against hailstones, vandalism and accidental damage with an impact resistance up to 200 times greater than glass. This characteristic is maintained over a broad temperature range and prolonged service life. The Marlon polycarbonate panels will retain their physical properties in extreme weather conditions making them the ideal glazing solution for projects throughout the world. Marlon polycarbonate can withstand temperature extremes from -40°C to 100°C (-40 to 212°F) long term and up to 130°C short term. No other glazing material can offer this combination of impact resistance and wide working temperature range.

## UV Protection



Our modular polycarbonate panels are co-extruded with a UV absorption layer. This protective layer prevents damaging UV radiation from penetrating the sheet for long term optical clarity and mechanical strength.

## Chemical Resistance



Polycarbonate has good resistance to many chemicals (with the exception of solvents and strong alkalis) so is often suitable for use in aggressive environments.

## Fire Performance



Our Marlon Toploc panels exhibit excellent fire performance and in the event of a fire will soften and open, allowing smoke, heat and gases produced by the fire to escape. This 'venting' property means that damage within buildings can be limited. For details of fire ratings please contact our Technical department.

## Warranty



Marlon Toploc is manufactured under Quality Management Systems registered to BS EN ISO 9001:2015. The panels carry a limited warranty. For full details please contact our Technical department.

## Testing



Systems are designed and tested to the relevant industry standards and performance criteria. For further information please contact our Technical department.

Properties	Test Method	Value	Units
Mechanical	Tensile strength at yield	DIN 53455	>60 MPa
	Tensile strength at break	DIN 53455	>70 MPa
	Modulus of elasticity	DIN 53457	>2300 MPa
Physical	Specific gravity	DIN 53479	1.20 g/m <sup>3</sup>
Thermal	Softening temperature - Vicat 'B'	DIN53460	148 °C
	Linear thermal expansion	DIN53752	6.8 x 10 <sup>-5</sup> m/m.K
	Maximum service temperature	Permanent	100 °C
	- no loading	Short term	130 °C

# Polycarbonate General Guidelines

## Sealing

It is recommended that the ends of the Marlon Toploc panels are sealed to minimise the build-up of moisture or dust contamination within the channels. A sealing tape, preferably aluminium, is applied at the top of the panel to prevent ingress of moisture, dust and insects. A breather tape applied to the bottom end of the panel permits air to move freely in and out of the panel, helping minimise condensation. Panels can be supplied pre-taped and cut to specific length to help reduce installation time.

## Thermal Expansion

In practical terms it is necessary to allow 3.5mm per linear metre between the top edge of the panel and the glazing profile.

## Cleaning

As a condition of ensuring that Marlon Toploc panels perform at optimum throughout their service life, it is recommended that the panels be cleaned periodically using suitable household cleaning agents as follows:

- Use lukewarm water to rinse the panels and soften dirt.
- Make up a solution of lukewarm water and ordinary household cleaner or a mild soap and use this to wash the panels.
- A sponge or soft cloth should then be used to gently remove dirt and grime.
- The cleaning process should then be repeated and the panel rinsed and dried with a soft cloth.
- For larger areas clean the surface with a high-pressure water cleaner.

## Warning

Care should be taken to observe the following precautions:

1. Do not scrub Marlon modular multiwall panels with brushes or sharp instruments.
2. Avoid any abrasives or cleaners of a highly alkaline composition.
3. It is generally advisable in all instances to test any cleaner on a sample piece of the Marlon modular multiwall panels first and it should also be remembered that cleaners and solvents which state that they are suitable for cleaning polycarbonate may not be safe for use on the UV protective surface of the panels.





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