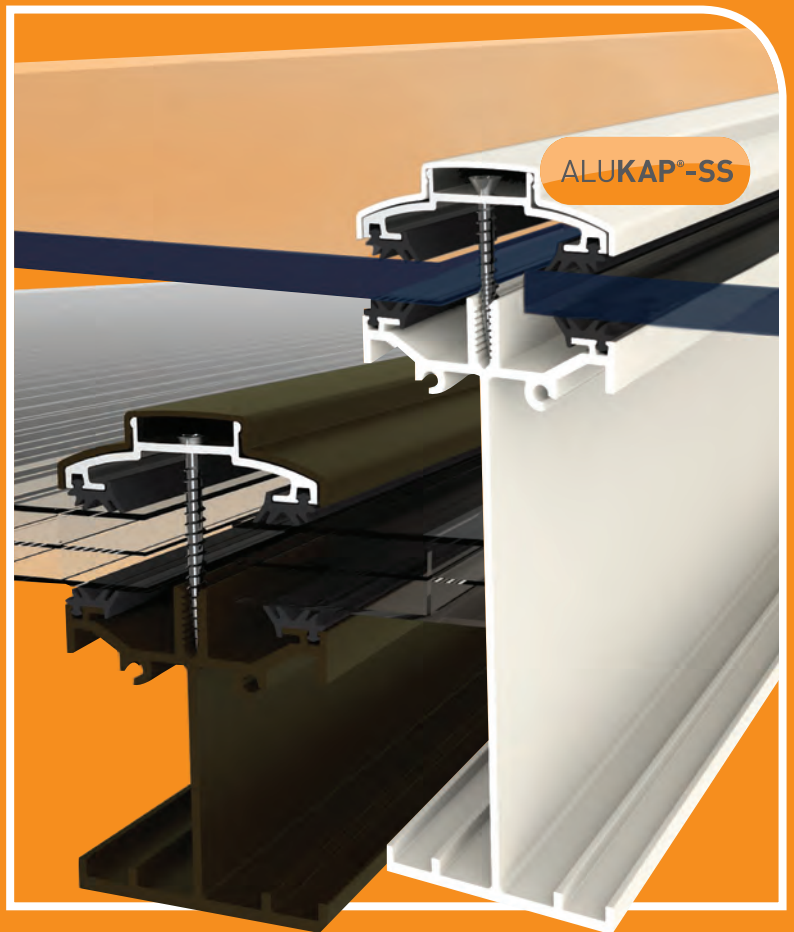


**ALUKAP<sup>®</sup>-SS**

## **High-Spanning** Glazing System **Technical Guide**



## High-Span Glazing Solution

ALUKAP®-SS self-support system has been designed to combine exceptional strength ratios with an excellent and aesthetically pleasing finish.

The simplicity of ALUKAP®-SS reduces installation time without reducing the quality of the finished product. Manufactured almost entirely from aluminium extrusion the ALUKAP®-SS system provides an integrated low-weight high-strength structure.

ALUKAP®-SS accommodates AXIOME® multiwall sheet in almost any thickness including 6mm, 10mm, 16mm, 25mm and 35mm. Additionally the high strength design of ALUKAP®-SS is perfectly suited to single glass and double glazed glass units options of almost any thickness.



### Common uses:

- ✓ Decking and Veranda Covers
- ✓ Covered Walkways
- ✓ Carports
- ✓ Shelters
- ✓ Play Area Covers
- ✓ Conservatories
- ✓ Swimming Pools
- ✓ Lean To's

### Qualities:

- ✓ Excellent Spanning Capabilities
- ✓ No need for Timber Rafters
- ✓ Fast to Install
- ✓ All Powder-Coated Aluminium for Longevity
- ✓ Maintenance Free
- ✓ Suited to Single Glass, Double Glazed Units and AXIOME® Multiwall

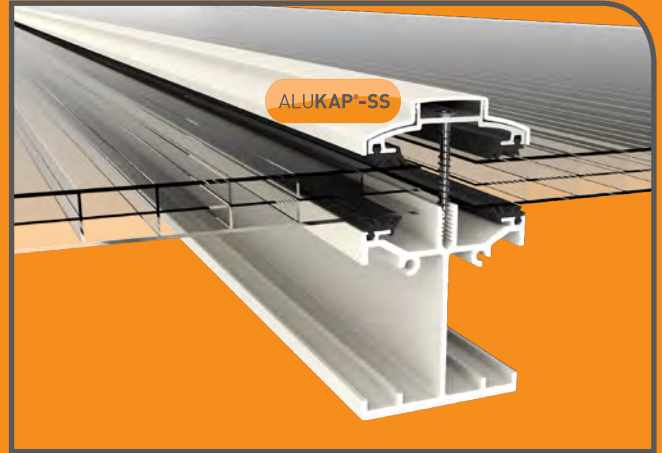


## ALUKAP®-SS : Low Profile Bar

The ALUKAP®-SS Low Profile glazing bar system offers a spanning range of between three and four meters depending on chosen loading ratings and choice of glazing material. This is ideal for shorter spans, and also areas where a centre purlin is provided to break the overall span, and provides a perfect solution where project budgets are limited.

This ALUKAP®-SS Low Profile bar is suited to almost any glass or AXIOME® multiwall thickness.

Wall and Gable bar options are readily available to provide a suitable finish to the upper part of the glazing beams at wall abutments and gable ends.



## ALUKAP®-SS : Low Profile Wall Bar

The ALUKAP®-SS Low Profile Wall Bar provides a perfect finish where the glazing abuts a rising wall. The integral upstand provides an excellent waterproof connection for lead flashing or flash band to drop down over. This also reduces installation time on site and provides a lasting leak-proof solution.



## ALUKAP®-SS : Low Profile Gable Bar

The ALUKAP®-SS Low Profile Gable Bar provides a perfect finish to the end bar of ALUKAP®-SS glazing. The simplicity of the down stand means that it works with any thickness of glazing.



## ALUKAP®-SS : High Span Bar

This High Span ALUKAP®-SS bar outperforms possibly every other bar on the market when it comes to self-supported spanning distances.

With a free-spanning capability between five and six meters this ALUKAP®-SS High Span bar system can be used to create much more usable spaces with less posts and other supports required.

From barbecue covered decking areas, to double-width carports and children's play areas this beam creates a space to suit a wide range of commercial, public and residential structures.



## ALUKAP®-SS : High Profile Wall Bar

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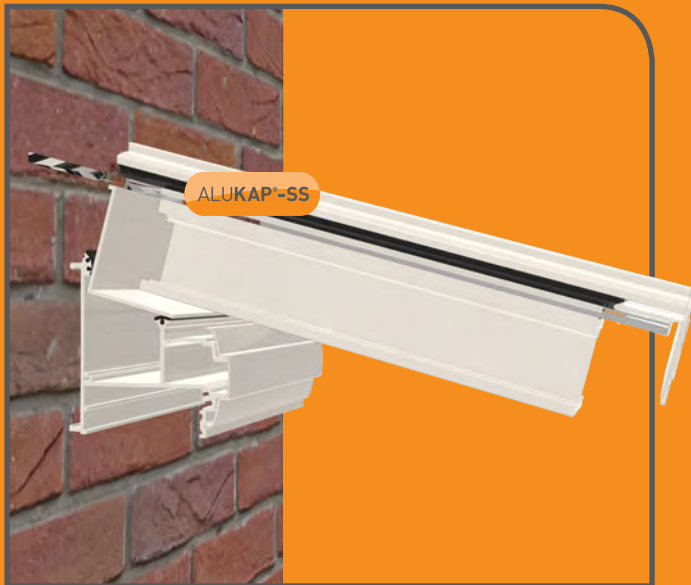




## ALUKAP®-SS : Wall Plate

Using the same profile as the ALUKAP®-SS Eaves Beam, the ALUKAP®-SS Wall Plate can be bolted to a wall or similar structure to provide a robust and straight wall plate to glaze from.

The ALUKAP®-SS Wall Plate is designed to work with glazing pitches from 2.5 to 25 degrees.



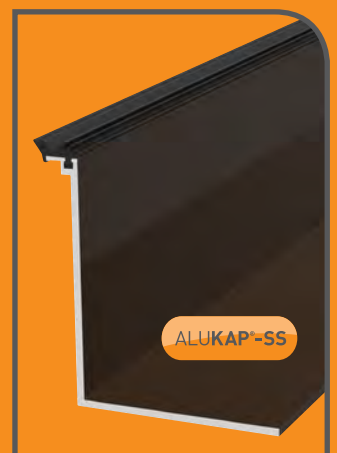
## ALUKAP®-SS : L-Cap Bar

As with the Eaves Beam the ALUKAP®-SS Wall Plate has an optional ALUKAP®-SS L-Cap for structures where draft and wind proofing are essential.

'L-Cap' High Span Bar



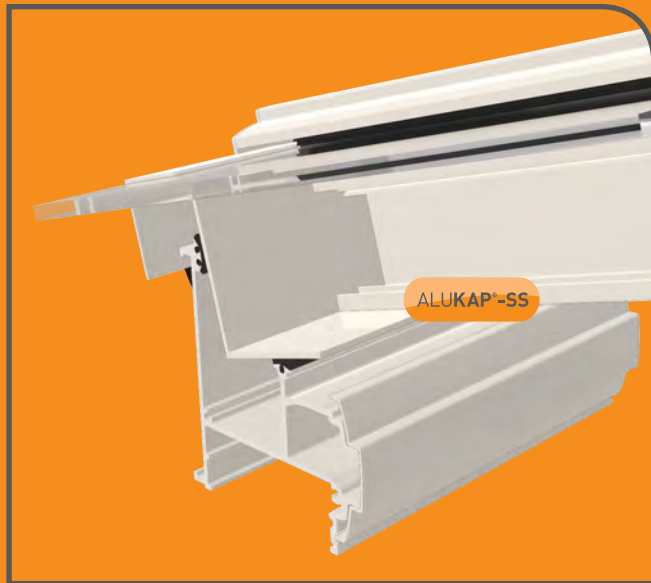
'L-Cap' Low Profile Bar



## ALUKAP®-SS : Eaves Beam

The ALUKAP®-SS Eaves Beam provides a variable pitch solution to suit a wide range of required pitches. Manufactured using high quality powder-coated aluminium profiles this beam is designed with strength, aesthetics and longevity in mind.

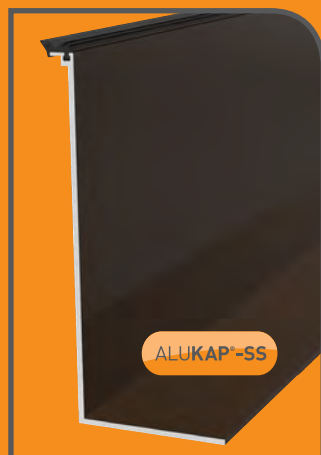
The intersecting ALUKAP®-SS bars simply bolt in to the ALUKAP®-SS Eaves Beam with M6 stainless steel bolts provided, and the cover strip clicks in to place concealing the fixing points. The ALUKAP®-SS Eaves Beam also provides an installer-friendly Deep Flow QUADRAFLO® Gutter bracket locator to increase speed and accuracy during installation.



## ALUKAP®-SS : L-Cap Bar

There is an optional ALUKAP®-SS L-Cap for structures where draft and wind proofing are essential, however where the structure is open there is a cost saving to be made by omitting the ALUKAP®-SS L-Cap.

'L-Cap' High Span Bar



'L-Cap' Low Span Bar



## ALUKAP®-SS : Wall Plate and Eaves Beam Deductions

Wall Plate detail

Glazing 15mm  
from the wall

ALUKAP®-SS

ALUKAP®-SS

### NOTE: FOR HEAVY LOADS OR LONG SPANS

For longer spans and / or heavier loading we recommend posts for additional support below the wall plate also.

At the ALUKAP®-SS Wall Plate end, deduct 15mm from the top end of the glazing material to allow for expansion and contraction. The lead flashing from the wall should then come down and dress over this. On lower pitched roofs the flashing should be sealed on to the glazing with a compatible sealant in order to prevent water ingress in severe weather.

At the ALUKAP®-SS Eaves Beam end of the ALUKAP®-SS roof, you should ensure that the glazing extends beyond the face of the ALUKAP®-SS Eaves Beam by 30mm to allow the water to run off the roof in to the gutter.

Glazing 30mm over  
hang from end plate

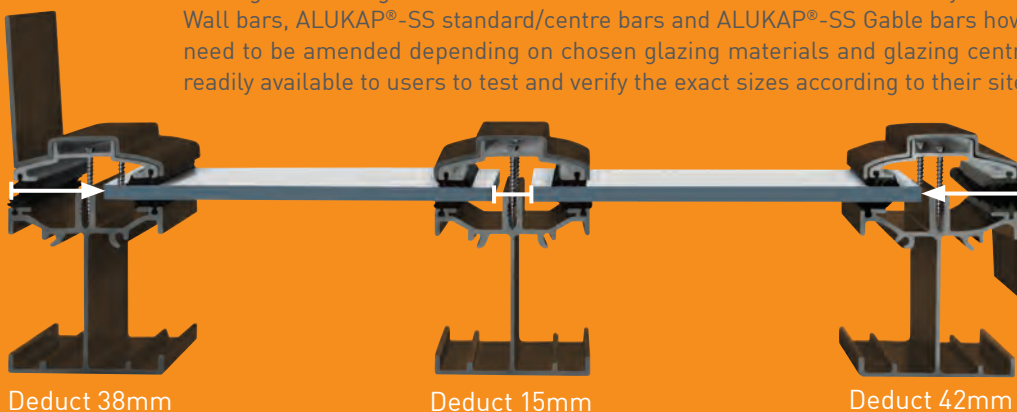
ALUKAP®-SS

Eaves Beam detail

Inasmuch as Clear Amber have no control over the circumstances in which our material may be used, or site specific parameters, we cannot guarantee that any particular results will be achieved. Users should carry out their own tests to determine the suitability of the material for their application. Installers should satisfy themselves that published permissible loadings and bar spacings for ALUKAP®-SS structures, together with any supporting posts, frames, or walls and fixings, are sufficient to provide adequate strength for the intended use and to meet regional loading requirements. Installers should also obtain their own job-specific structural engineer's report for their individual site. Samples are readily available to users to test and verify the exact sizes according to their site requirements.

## ALUKAP®-SS : Glazing Deductions

Glazing deduction guidelines are shown below for the ALUKAP®-SS bar system for ALUKAP®-SS Wall bars, ALUKAP®-SS standard/centre bars and ALUKAP®-SS Gable bars however, these may need to be amended depending on chosen glazing materials and glazing centres. Samples are readily available to users to test and verify the exact sizes according to their site requirements.



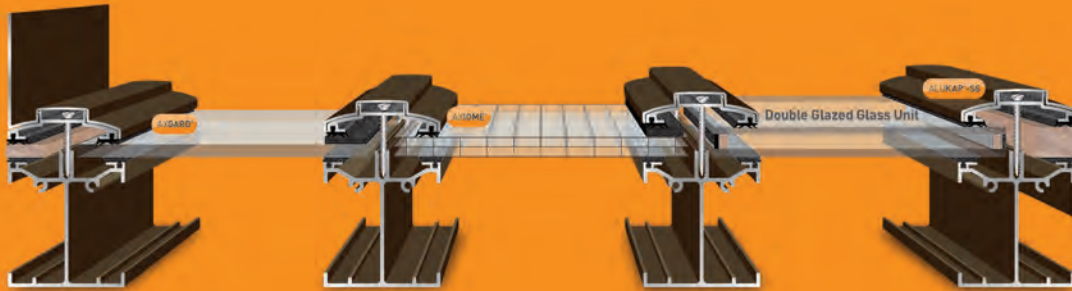
Deduct 38mm

Deduct 15mm

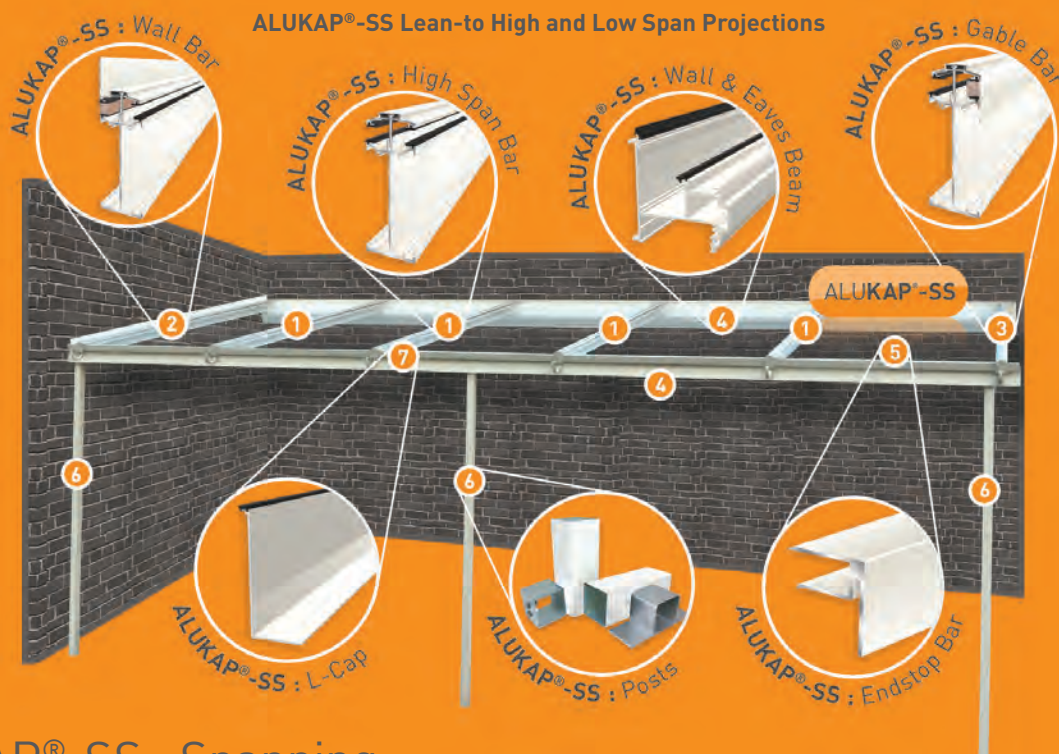
Deduct 42mm



## ALUKAP®-SS : Suited to any Thickness or Type of Glazing



## ALUKAP®-SS : Typical Roof Component Assembly Example



## ALUKAP®-SS : Spanning

The following ALUKAP®-SS Spanning guides have been calculated by independent structural engineers and provide an excellent resource for specifying correct spans and bars specification depending of the estimated wind and snow loading requirements for the specific location. *NOTE: loads are unfactored (i.e. do not include partial safety factors of 1.2 for wind or 1.33 for imposed).*

These ALUKAP®-SS Spanning guides show the deflection of the bars at three given loads per linear metre for several different length options. There is a set for the three most common glazing options for both the ALUKAP®-SS Low Profile bar and also the ALUKAP®-SS High Span bar. Notwithstanding separate glazing sheet limitations these figures are the expected results when the bars are spaced at 1000mm centres, where force on one linear meter of bar equates to the same force for one square meter of structure.

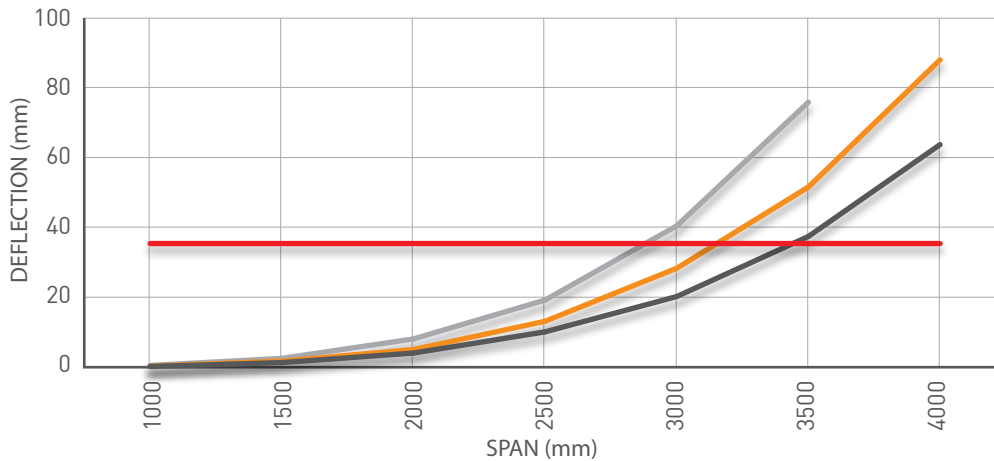
For most glazing sheets 1000mm width centres is normally too wide, however from these figures you can simply calculate your desired width and then check the width. For example, for a roof requiring 0.6kN of load, but where the ALUKAP®-SS bars are set at 700mm centres, you can take the 0.6kN load and divide by 1000mm width, then multiply back up by 700mm width and you will find the effective force on the actual ALUKAP®-SS bar is reduced to 0.42kN per linear meter:  $0.6 / 1000 \times 700 = 0.42$ . Therefore by reducing the glazing centres some incredible free span distances can be achieved.

Samples are available to users to test and verify the exact sizes according to their site requirements, and users should not rely on the data below, but have a site specific structural report created taking in to consideration all variants.



## ALUKAP®-SS Spanning with AXIOME®

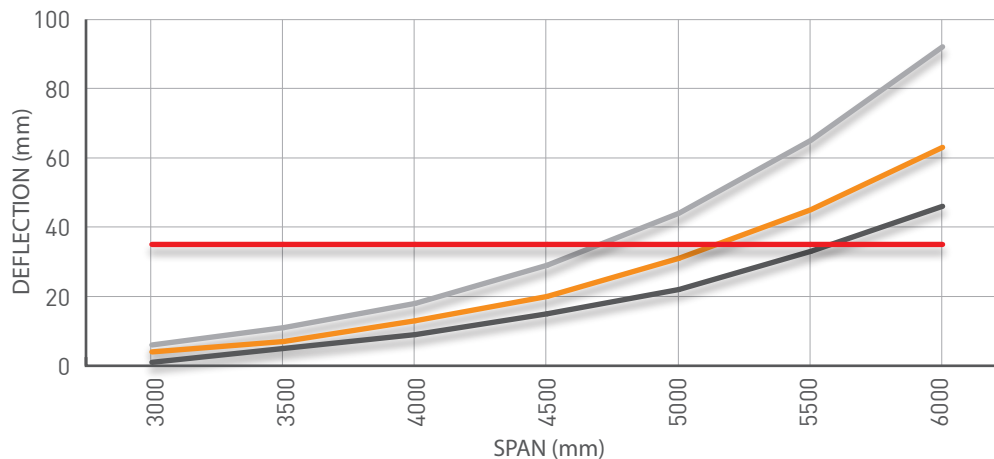
## ALUKAP®-SS Low Profile Bar with AXIOME®



## KEY

- Deflection (mm) at 0.42 kN/m
- Deflection (mm) at 0.6 kN/m
- Deflection (mm) at 0.9 kN/m
- 35mm Deflection

## ALUKAP®-SS High Span with AXIOME®

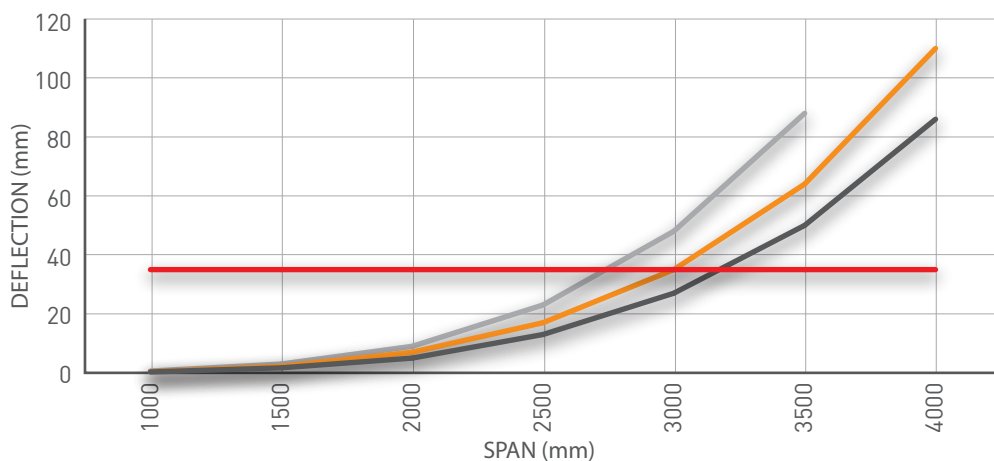


## KEY

- Deflection (mm) at 0.42 kN/m
- Deflection (mm) at 0.6 kN/m
- Deflection (mm) at 0.9 kN/m
- 35mm Deflection

## ALUKAP®-SS Spanning with 4mm Double Glazing

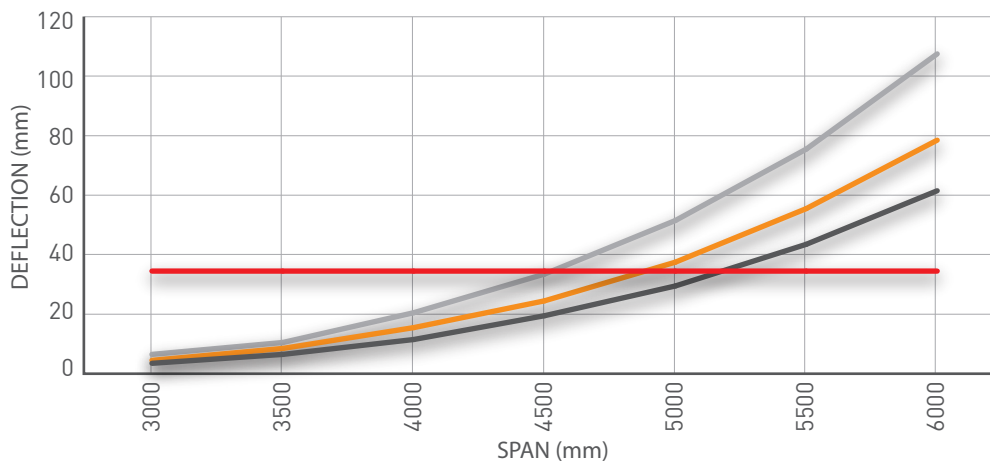
## ALUKAP®-SS Low Profile Bar with 4mm Double Glazing



## KEY

- Deflection (mm) at 0.42 kN/m
- Deflection (mm) at 0.6 kN/m
- Deflection (mm) at 0.9 kN/m
- 35mm Deflection

## ALUKAP®-SS High Span with 4mm Double Glazing

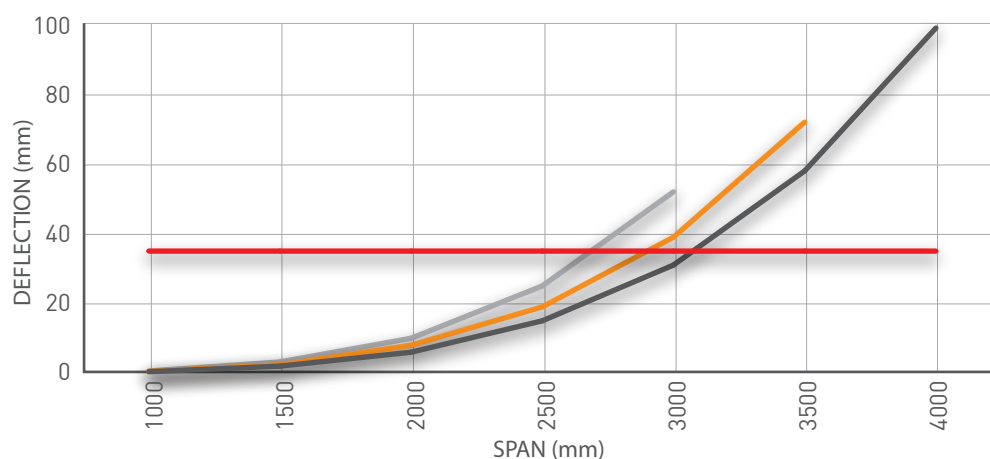


### KEY

- Deflection (mm) at 0.42 kN/m
- Deflection (mm) at 0.6 kN/m
- Deflection (mm) at 0.9 kN/m
- 35mm Deflection

## ALUKAP®-SS Spanning with 6mm Double Glazing

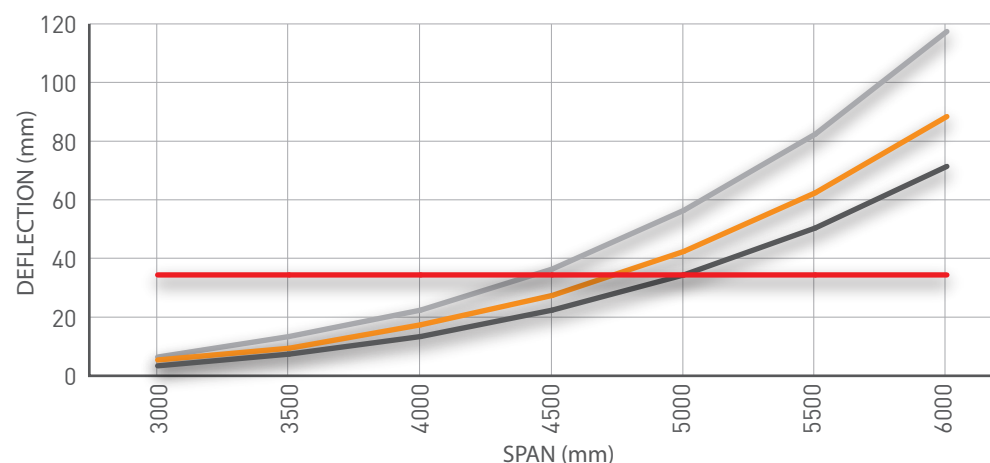
### ALUKAP®-SS Low Profile Bar with 6mm Double Glazing



### KEY

- Deflection (mm) at 0.42 kN/m
- Deflection (mm) at 0.6 kN/m
- Deflection (mm) at 0.9 kN/m
- 35mm Deflection

## ALUKAP®-SS High Span with 6mm Double Glazing



### KEY

- Deflection (mm) at 0.42 kN/m
- Deflection (mm) at 0.6 kN/m
- Deflection (mm) at 0.9 kN/m
- 35mm Deflection

## ALUKAP®-SS : Eaves Beam Post Spacing

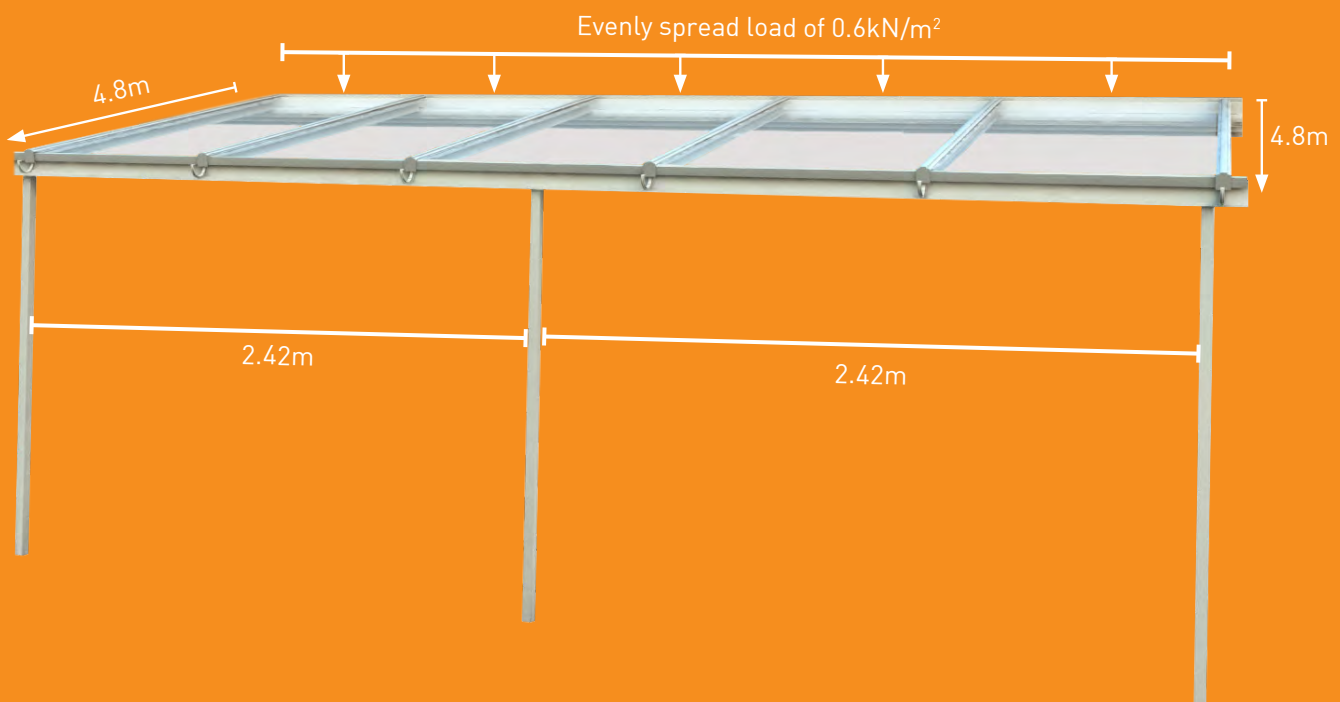
As always you should always consult a structural engineer and make sure you have your structure correctly set up depending on the location, exposure, pitch and several other site-specific factors. However we have set out some calculated figures to provide a rough guide of spacing between ALUKAP®-SS posts. For larger constructions, ALUKAP®-SS roofs can be further strengthened by many bespoke additions such as bracing, gallows brackets etc.

### ALUKAP®-SS Eavesbeam Calculations

Max Distance Between Posts	Total Load: 0.6kN/m <sup>2</sup>	Total Load: 0.9kN/m <sup>2</sup>	Total Load: 1.2kN/m <sup>2</sup>
3m Projection	2.80m	2.47m	2.42m
4.8m Projection	2.42m	2.10m	1.80m
6.0m Projection	2.25m	1.85m	1.60m

ALUKAP®-SS Disclaimer: These calculations are carried out in accordance with BS 8118 but are intended as a guide only. Inasmuch as Clear Amber have no control over the circumstances in which our material may be used, we can-not guarantee that any particular results will be achieved. Users should carry out their own tests and obtain structural engineer calculations as required to determine the suitability of the material for their application. Installers should satisfy themselves that published permissible loadings and bar spacing's for ALUKAP®-SS roofs and posts are sufficient to provide adequate strength for the intended use and to meet regional loading requirements.

### Example diagram showing dimensions of an ALUKAP®-SS Glazing System



# ALUKAP®-SS : Heritage Range

This standard palette of colours are designed to provide a core range of most popular colours that are frequently requested. By collating this suite of hues we are able to provide faster deliveries for your day-to-day requirements whilst still meeting the demands for a wider choice of matching profiles.



## Other Bespoke Colours:

ALUKAP®-SS can be coloured to any RAL code, using our special coating process.

<b>RAL 9010</b> ALUKAP® White	<b>RAL 1011</b> Brown Beige	<b>RAL 3003</b> Ruby Red	<b>RAL 3005</b> Wine Red	<b>RAL 5007</b> Brilliant Blue	<b>RAL 5011</b> Steel Blue
<b>RAL 6021</b> Pale Green	<b>RAL 6005</b> Moss Green	<b>RAL 6009</b> Fir Green	<b>RAL 7035</b> Light Grey	<b>RAL 7038</b> Agate Grey	<b>RAL 7040</b> Window Grey
<b>RAL 7005</b> Mouse Grey	<b>RAL 7011</b> Iron Grey	<b>RAL 7016</b> Anthracite Grey	<b>RAL 8016</b> Mahogany Brown	<b>RAL 8017</b> Chocolate Brown	<b>RAL 8040</b> ALUKAP® Brown

## WARNING : REGISTERED DESIGNS & PATENTS

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# ALUKAP<sup>®</sup>-XR

## Superior Roof Glazing System Technical Guide



## Simple Effective Roof Glazing

Roof glazing has always been a challenging task; rewarding if it goes well, and expensive if it doesn't. ALUKAP®-XR puts paid to uncertainty. With a proven gasket system, concealed fixings and reduced installation time, it's an all-round winner.

With no plastic components, superior waterproofing and neat aesthetics, ALUKAP®-XR's excellent performance makes it suitable for a huge variety of applications.

Available in two bar widths, plus a range of specialised bars to match, all with quality aluminium end caps, ALUKAP®-XR provides the ultimate roof glazing solution for even the worst weather. High quality fixings and gaskets are included with every bar, with a number of rafter gasket options available too.

Samples of ALUKAP®-XR are readily available on request.

### Common uses:

- ✓ Carports
- ✓ Greenhouses
- ✓ Canopies
- ✓ Smoking Shelters
- ✓ Verandas
- ✓ Covered Walkways
- ✓ Swimming Pools
- ✓ Factory Partitions
- ✓ Cycle Shelters
- ✓ Vertical Glazing



### Qualities:

- ✓ Superior Weather Resistance
- ✓ All Aluminium Components
- ✓ Class Leading Aesthetics
- ✓ Installer Friendly
- ✓ Reduced Installation Time
- ✓ Concealed Fixings
- ✓ Manufactured From High Quality Aluminium
- ✓ No Plastic Connections



## ALUKAP®-XR : 45mm Bar

This neat 45mm ALUKAP®-XR glazing bar is an excellent solution to compliment 45mm timber rafters. Despite its petite nature, it offers surprisingly substantial sight lines providing impressive aesthetics to the glazing structure. The secret-fix security aluminium end cap system prevents the top section from slippage and many clients say that they have even used to prevent the glazing itself from slipping down moderately sloped roofs. Users must carry out their own tests on the site specific loadings to satisfy themselves that this structurally acceptable for each particular application.



### ALUKAP®-XR 45mm Bar

Length	Rafter Gasket Options	Code
3.0m	No Rafter Gasket	AKX220
3.6m	No Rafter Gasket	AKX222
4.8m	No Rafter Gasket	AKX224
6.0m	No Rafter Gasket	AKX226
3.0m	45mm Rafter Gasket	AKX228
3.6m	45mm Rafter Gasket	AKX230
4.8m	45mm Rafter Gasket	AKX232
6.0m	45mm Rafter Gasket	AKX234
3.0m	45mm Slot Fit Rafter Gasket	AKX236
3.6m	45mm Slot Fit Rafter Gasket	AKX238
4.8m	45mm Slot Fit Rafter Gasket	AKX240
6.0m	45mm Slot Fit Rafter Gasket	AKX242
3.0m	55mm Rafter Gasket	AKX244
3.6m	55mm Rafter Gasket	AKX246
4.8m	55mm Rafter Gasket	AKX248
6.0m	55mm Rafter Gasket	AKX250
3.0m	55mm Slot Fit Rafter Gasket	AKX252
3.6m	55mm Slot Fit Rafter Gasket	AKX254
4.8m	55mm Slot Fit Rafter Gasket	AKX256
6.0m	55mm Slot Fit Rafter Gasket	AKX258

## ALUKAP®-XR : 60mm Bar

The 60mm ALUKAP®-XR glazing bar has been developed to cope with situations where a wider cover is required. Its shape compliments the 45mm ALUKAP®-XR bar so that both can be used on the one structure if desired. Both bars lend themselves excellently to a perfect inline joint connection without extra components allowing a far higher yield on optimisation of bar lengths which underscores one of the key design features for reducing waste and cutting costs.



### ALUKAP®-XR 60mm Bar

Length	Rafter Gasket Options	Code
3.0m	No Rafter Gasket	AKX320
3.6m	No Rafter Gasket	AKX322
4.8m	No Rafter Gasket	AKX324
6.0m	No Rafter Gasket	AKX326
3.0m	45mm Rafter Gasket	AKX328
3.6m	45mm Rafter Gasket	AKX330
4.8m	45mm Rafter Gasket	AKX332
6.0m	45mm Rafter Gasket	AKX334
3.0m	45mm Slot Fit Rafter Gasket	AKX336
3.6m	45mm Slot Fit Rafter Gasket	AKX338
4.8m	45mm Slot Fit Rafter Gasket	AKX340
6.0m	45mm Slot Fit Rafter Gasket	AKX342
3.0m	55mm Rafter Gasket	AKX344
3.6m	55mm Rafter Gasket	AKX346
4.8m	55mm Rafter Gasket	AKX348
6.0m	55mm Rafter Gasket	AKX350
3.0m	55mm Slot Fit Rafter Gasket	AKX352
3.6m	55mm Slot Fit Rafter Gasket	AKX354
4.8m	55mm Slot Fit Rafter Gasket	AKX356
6.0m	55mm Slot Fit Rafter Gasket	AKX358



## ALUKAP®-XR : Gable Bar

The ALUKAP®-XR Gable Bar is an incredibly useful system, allowing all the alignment and fixing work to be completed before snap-fixing the top section, providing a perfect finish to an area of the roof that is often seen the most.



### ALUKAP®-XR Gable Bar 60mm

Length	Rafter Gasket Options	Code
3.0m	No Rafter Gasket	AKX452
3.6m	No Rafter Gasket	AKX454
4.8m	No Rafter Gasket	AKX456
6.0m	No Rafter Gasket	AKX458
3.0m	45mm Rafter Gasket	AKX460
3.6m	45mm Rafter Gasket	AKX462
4.8m	45mm Rafter Gasket	AKX464
6.0m	45mm Rafter Gasket	AKX466
3.0m	45mm Slot Fit Rafter Gasket	AKX468
3.6m	45mm Slot Fit Rafter Gasket	AKX470
4.8m	45mm Slot Fit Rafter Gasket	AKX472
6.0m	45mm Slot Fit Rafter Gasket	AKX474
3.0m	55mm Rafter Gasket	AKX476
3.6m	55mm Rafter Gasket	AKX478
4.8m	55mm Rafter Gasket	AKX480
6.0m	55mm Rafter Gasket	AKX482
3.0m	55mm Slot Fit Rafter Gasket	AKX484
3.6m	55mm Slot Fit Rafter Gasket	AKX486
4.8m	55mm Slot Fit Rafter Gasket	AKX488
6.0m	55mm Slot Fit Rafter Gasket	AKX490

## ALUKAP®-XR : Wall Bar

The ALUKAP®-XR Wall Bar offers the ultimate waterproofing solution in circumstances where a glazing structure terminates at a rising wall. Again the second-fix top section allows all the hard work to be done first before simply snapping the upper profile in place. This system eliminates much of what would otherwise be a complex lead detail.



### ALUKAP®-XR Wall Bar 60mm

Length	Rafter Gasket Options	Code
3.0m	No Rafter Gasket	AKX552
3.6m	No Rafter Gasket	AKX554
4.8m	No Rafter Gasket	AKX556
6.0m	No Rafter Gasket	AKX558
3.0m	45mm Rafter Gasket	AKX560
3.6m	45mm Rafter Gasket	AKX562
4.8m	45mm Rafter Gasket	AKX564
6.0m	45mm Rafter Gasket	AKX566
3.0m	45mm Slot Fit Rafter Gasket	AKX568
3.6m	45mm Slot Fit Rafter Gasket	AKX570
4.8m	45mm Slot Fit Rafter Gasket	AKX572
6.0m	45mm Slot Fit Rafter Gasket	AKX574
3.0m	55mm Rafter Gasket	AKX576
3.6m	55mm Rafter Gasket	AKX578
4.8m	55mm Rafter Gasket	AKX580
6.0m	55mm Rafter Gasket	AKX582
3.0m	55mm Slot Fit Rafter Gasket	AKX584
3.6m	55mm Slot Fit Rafter Gasket	AKX586
4.8m	55mm Slot Fit Rafter Gasket	AKX588
6.0m	55mm Slot Fit Rafter Gasket	AKX590



## ALUKAP®-XR : Hip Bar

This ALUKAP®-XR Hip Bar is a must-have for easy hip connections. It provides a second-fix cover member, allowing the installer to make accurate mitre abutments and apply sealant if necessary, before snapping on the upper profile that acts as an umbrella protection without any unsightly and impractical plastic connectors.

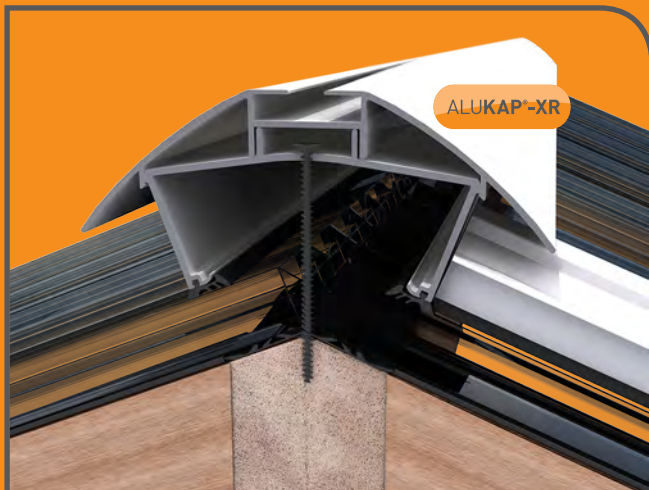


### ALUKAP®-XR Hip Bar

Length	Rafter Gasket Options	Code
3.0m	No Rafter Gasket	AKX612
3.6m	No Rafter Gasket	AKX614
4.8m	No Rafter Gasket	AKX616
6.0m	No Rafter Gasket	AKX618
3.0m	45mm Rafter Gasket	AKX620
3.6m	45mm Rafter Gasket	AKX622
4.8m	45mm Rafter Gasket	AKX624
6.0m	45mm Rafter Gasket	AKX626
3.0m	45mm Slot Fit Rafter Gasket	AKX628
3.6m	45mm Slot Fit Rafter Gasket	AKX630
4.8m	45mm Slot Fit Rafter Gasket	AKX632
6.0m	45mm Slot Fit Rafter Gasket	AKX634
3.0m	55mm Rafter Gasket	AKX636
3.6m	55mm Rafter Gasket	AKX638
4.8m	55mm Rafter Gasket	AKX640
6.0m	55mm Rafter Gasket	AKX642
3.0m	55mm Slot Fit Rafter Gasket	AKX644
3.6m	55mm Slot Fit Rafter Gasket	AKX646
4.8m	55mm Slot Fit Rafter Gasket	AKX648
6.0m	55mm Slot Fit Rafter Gasket	AKX650

## ALUKAP®-XR : Ridge Bar

The ridge area of a roof gets the greatest impact from the elements, which is why the ALUKAP®-XR Ridge Bar is manufactured with an incredibly robust structure. Curved gasket feet that accommodate varying pitches, and a generous overhang that again protects the connections from adjoining bars without any unsightly and impractical plastic connectors, are just two of the many outstanding features and benefits to this unique ridge system.



### ALUKAP®-XR Ridge Bar

Length	Rafter Gasket Options	Code
1.0m	No Rafter Gasket	AKX710
2.0m	No Rafter Gasket	AKX720
3.0m	No Rafter Gasket	AKX730
6.0m	No Rafter Gasket	AKX760
1.0m	45mm Rafter Gasket	AKX712
2.0m	45mm Rafter Gasket	AKX722
3.0m	45mm Rafter Gasket	AKX732
6.0m	45mm Rafter Gasket	AKX762
1.0m	45mm Slot Fit Rafter Gasket	AKX714
2.0m	45mm Slot Fit Rafter Gasket	AKX724
3.0m	45mm Slot Fit Rafter Gasket	AKX734
6.0m	45mm Slot Fit Rafter Gasket	AKX764
1.0m	55mm Rafter Gasket	AKX716
2.0m	55mm Rafter Gasket	AKX726
3.0m	55mm Rafter Gasket	AKX736
6.0m	55mm Rafter Gasket	AKX766
1.0m	55mm Slot Fit Rafter Gasket	AKX718
2.0m	55mm Slot Fit Rafter Gasket	AKX728
3.0m	55mm Slot Fit Rafter Gasket	AKX738
6.0m	55mm Slot Fit Rafter Gasket	AKX768

## ALUKAP®-XR : Valley Bar

The ALUKAP®-XR valley is one entirely unique patent pending design. It is designed to recess in to a timber valley so that it is entirely concealed. It's double gasket water seal, ensures that there are no possibilities of leaks. The high-capacity channels ensure a fast rainwater flow. The valley suits almost any angle of glazing. For extreme angles the valley can be simply tilted within the Valley timber if required, as shown in the lower image below.

### Benefits:

- ✓ One Piece Leak-Proof System
- ✓ Not Visible From Underneath
- ✓ Integral Glass Stops
- ✓ Suits Varying Angles
- ✓ Suits any Glazing Thickness
- ✓ No Need for Glazing Bar on the Top of the Glass Down the Valley

Description	Code
Alukap-XR Valley Bar with gaskets 3.0m	AKX810
Alukap-XR Valley Bar with gaskets 4.8m	AKX812
Alukap-XR Valley Bar with gaskets 6.0m	AKX814



## ALUKAP®-XR : Gaskets

The ALUKAP®-XR Gaskets are pre-lubricated with a special lubricant that is safe for use with coated glass units. Gasket lubrication helps assist natural expansion and contraction and reduces any unnecessary friction build up. The Rafter Gasket with Slot Fit is designed as an on-site time saver, where a centre groove has been routed in to the rafters. The slot fit then means that the Rafter Gasket can be quickly installed with perfect alignment before the glazing sheet is positioned on to the roof.

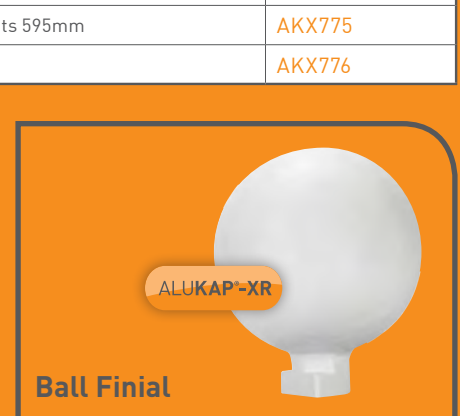
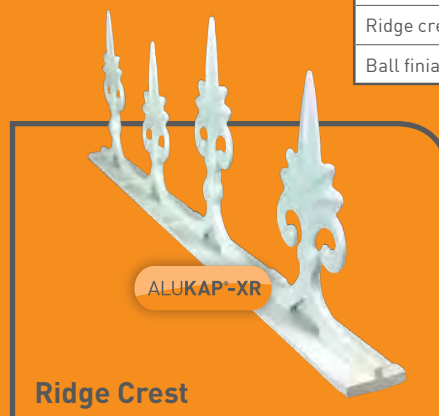
Description	Code
Standard bar gasket	AKX65
Rafter gasket 45mm	AT45
Rafter gasket 45mm slot fit	AT47
Rafter gasket 55mm	AT55
Rafter gasket 55mm slot fit	AT57



## ALUKAP®-XR : Castings

The ALUKAP®-XR Castings provide long-lasting, durable solutions for various end caps and decorative finishing's.

Description	Code
Ridge finial	AKX774
Ridge crests 595mm	AKX775
Ball finial	AKX776



## ALUKAP® : Standard Bar Endcap

The endcap of a glazing bar is sometimes the most prominently seen component. On the ALUKAP®-XR system, every bar comes with a powder coated metal endcap which provides a robust solution that will last. Each ALUKAP® standard bar endcap comes with a screw which fixes to the bar completely concealed below the bar top cap.

### Standard Endcap



Description	Code
Glazing bar end cap	AKX310

## ALUKAP®-XR : Ridge Endcaps

The ALUKAP®-XR Ridge has two endcap options. For roofs where the end of the ALUKAP®-XR Ridge is a gable end the flat finish of the ALUKAP®-XR Gable Endcap finishes the ridge off with a vertical end. Alternatively where the ALUKAP®-XR Ridge is joined to connecting Hip bars, the unique design of the Radius Endcap provides excellent coverage for adjoining bars.

### Gable End Plate



Description	Code
Gable end ridge cap	AKX772
Radius end ridge cap	AKX773

### Radius End Cap



## ALUKAP®-XR : Endstop Bar

Issues with the lower end of glass and polycarbonate glazing panels gave rise to the innovation of a substantial drip trim that will not warp, discolour, crack or fall off like the inferior plastic equivalents. This crucial area is all too often left to chance, and can cause costly damage to the glazing. The ALUKAP®-XR End Stop, puts a stop to that!

### Endstop Bar



Length	Code (6.4mm)	Code (10mm)	Code (16mm)	Code (25mm)	Code (28mm)	Code (35mm)	Code (78mm)
3.0m	-	AKX106	AKX112	AKX118	-	AKX130	-
3.6m	-	AKX108	AKX114	AKX120	-	AKX132	-
4.8m	AKX104	AKX110	AKX116	AKX122	AKX128	AKX134	AKX140



## ALUKAP® : Lantern Pinnacle Top Cap

This ALUKAP®-XR Pinnacle top cap provides the perfect solution for a pinnacle roof lantern apex. It works well with a wide range of pitches and any number of intersecting glazing bars. The two-piece ALUKAP®-XR Pinnacle top cap provides a fully concealed fixing method for any lantern roof pinnacle capping requirement.

### Lantern Pinnacle Top Cap



Description	Code
Roof Lantern Pinnacle Top Cap	AKX779

## ALUKAP® : Lantern Radius End Cap

The ALUKAP®-XR Lantern Radius Endcap is designed specifically to work with the ALUKAP®-XR Hip bars. On Roof lanterns where a Hip Bar is used as a ridge section to create a neater and lower-cost solution, this Radius Endcap connects in to the Hip-Ridge profile and provides excellent cover for the intersection Hip bars.

**NOTE:** If you are using an ALUKAP®-XR Ridge and not an ALUKAP®-XR Hip Bar for the ridge then please use the AKX773 Ridge Radius Endcap.

### Lantern Radius End Cap



Description	Code
Roof Lantern Radius End Cap	AKX778

## Reducing Chance of Slippage

This image shows a glazing assembly which combines the ALUKAP®-XR Endstop Bar glazed behind the ALUKAP® Standard Bar Endcap. This means that in addition to the pressure from the main fixings on the ALUKAP®-XR bars holding the glazing sheets in position, the combined Endcap and Endstop bar provides a further constraint, thereby greatly reducing any chance of glazing slippage.



## ALUKAP®-XR : Technical Data

The inherent robust qualities of ALUKAP®-XR are seen clearly in the technical data provided below. The tables below are intended for guideline use only, when seeking particular qualities for any specification.

### Aluminium Extrusion

Property	Standard/type	Measure	Value
Aluminium Strength	60663 T6	UTS	215/nm <sup>2</sup>
Dimensions & mechanical	EN755		
Chemical composition	EN573		

Product/property	Test	Value
Lubricant	Non-hazardous	low toxicity
Lubricant properties	25°C : 1.13	Clear mobile liquid
Lubricant emulsion stability		Excellent
Lubricant compatibility		Active compatible
Gasket grade	Developed for BS7412	Class A
Gasket tolerance	Produced to BS3734	E1

### Powder Coating

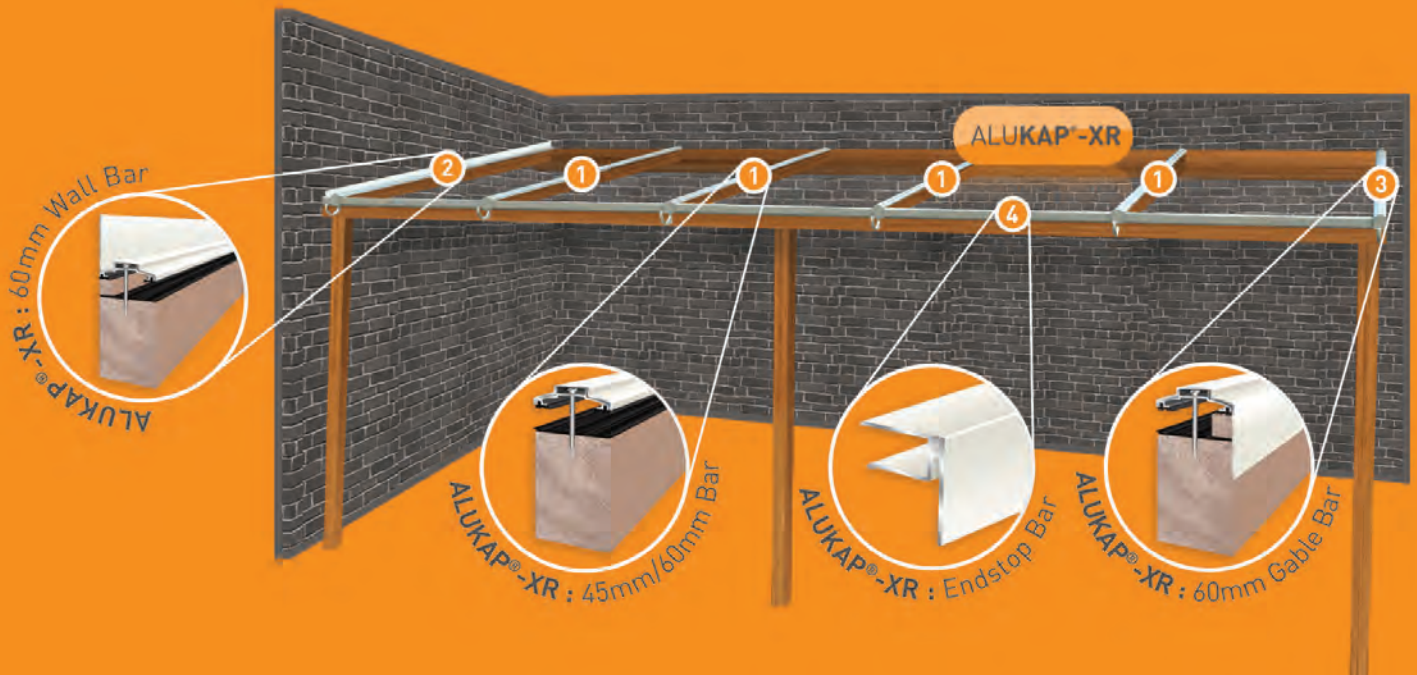
Property	Measure	Value
Powder coating standard	BS6496	EN12206
Minimum thickness	Microns	60
Average typical thickness	Microns	80 - 100

## ALUKAP®-XR : Glazing Deductions



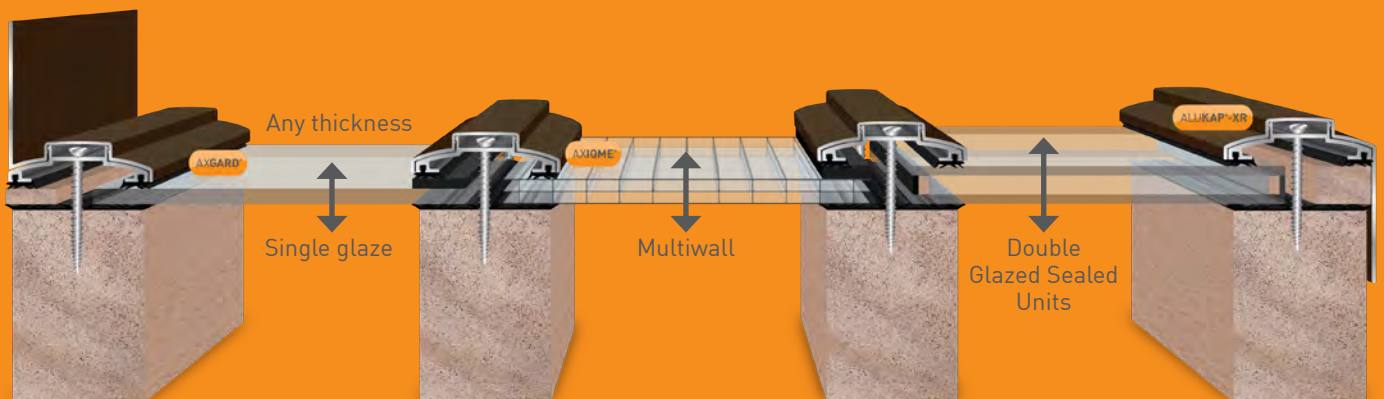
## ALUKAP®-XR : Typical Roof Component Assembly Example

### ALUKAP®-XR Rafter Supported Lean-to



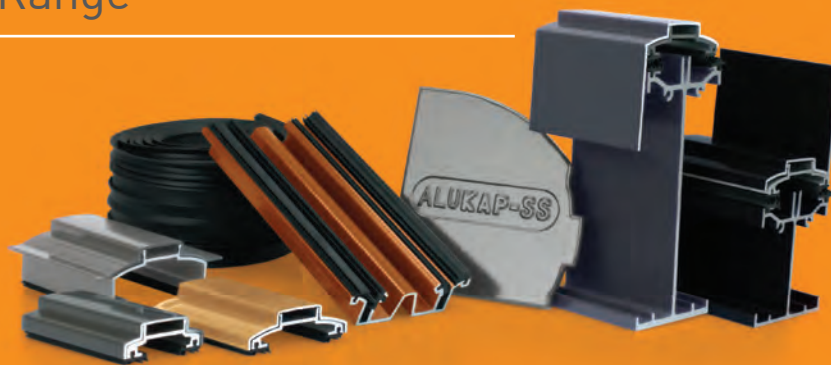
## ALUKAP®-XR : Suited to any thickness or type of glazing

The diagram below indicates how the ALUKAP®-XR bar system is suitable for any thickness or type of glazing material – AXGARD®, Glass, AXIOME®, Double Glazed Glass Unit.



# ALUKAP®-XR : Heritage Range

This standard palette of colours are designed to provide a core range of most popular colours that are frequently requested. By collating this suite of hues we are able to provide faster deliveries for your day-to-day requirements whilst still meeting a demands for a wider choice of matching profiles.



## Other Bespoke Colours:

ALUKAP®-XR can be coloured to any RAL code, using our special coating process.

<b>RAL 9010</b> ALUKAP® White	<b>RAL 1011</b> Brown Beige	<b>RAL 3003</b> Ruby Red	<b>RAL 3005</b> Wine Red	<b>RAL 5007</b> Brilliant Blue	<b>RAL 5011</b> Steel Blue
<b>RAL 6021</b> Pale Green	<b>RAL 6005</b> Moss Green	<b>RAL 6009</b> Fir Green	<b>RAL 7035</b> Light Grey	<b>RAL 7038</b> Agate Grey	<b>RAL 7040</b> Window Grey
<b>RAL 7005</b> Mouse Grey	<b>RAL 7011</b> Iron Grey	<b>RAL 7016</b> Anthracite Grey	<b>RAL 8016</b> Mahogany Brown	<b>RAL 8017</b> Chocolate Brown	<b>RAL 8040</b> ALUKAP® Brown

## WARNING : REGISTERED DESIGNS & PATENTS

The IP of the designs in this brochure are protected by internationally registered design rights. Many products are also protected with active or pending Patents. Clear Amber will not hesitate to take appropriate legal action if its rights in this respect are infringed.

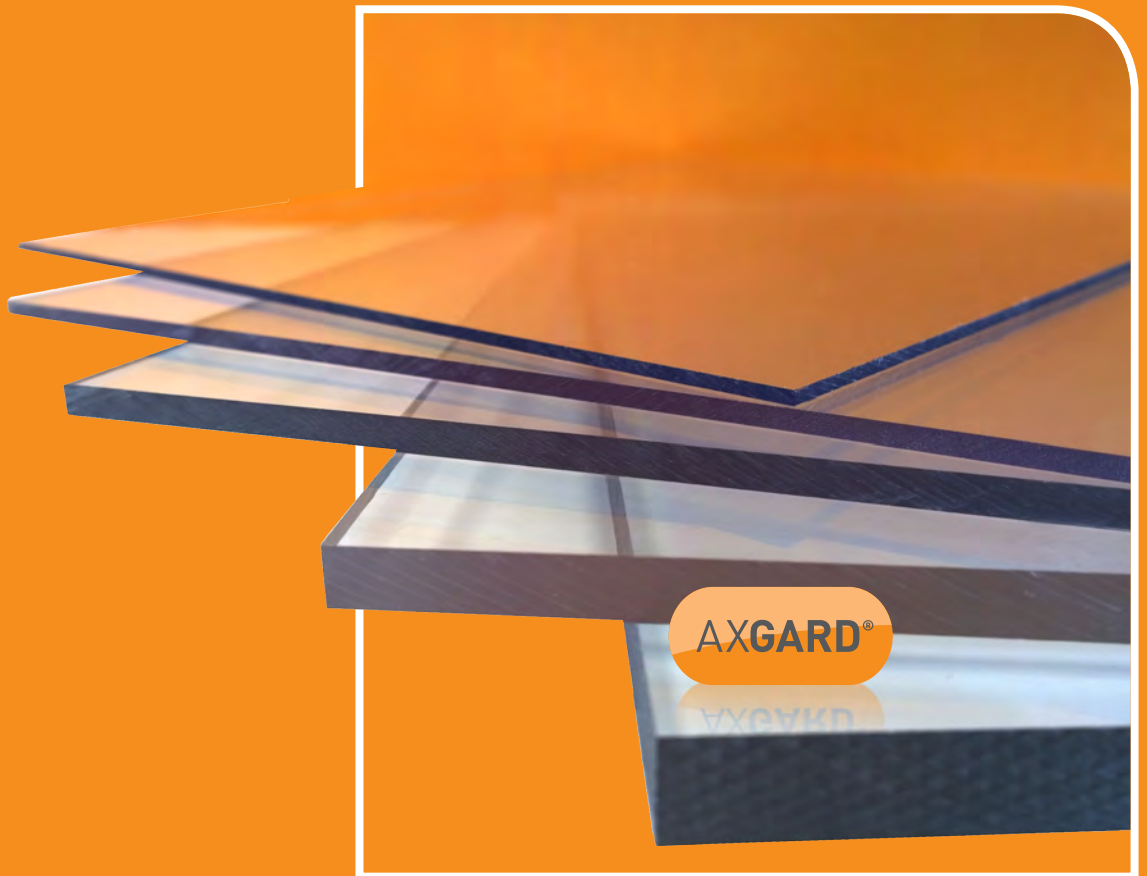
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Inasmuch as Clear Amber have no control over the circumstances in which our material may be used, or site specific parameters, we cannot guarantee that any particular results will be achieved. Users should carry out their own tests to determine the suitability of the material for their application. Installers should satisfy themselves that published permissible loadings and bar spacings for ALUKAP®-XR structures, together with any supporting posts, frames, or walls and fixings, are sufficient to provide adequate strength for the intended use and to meet regional loading requirements. Installers should also obtain their own job-specific structural engineer's report for their individual site. Samples are readily available to users to test and verify the exact sizes according to their site requirements.



**AXGARD®**

## **Security Glazing Products** **Technical Guide**



# The Security Glazing Solution

AXGARD® is produced from one of the most advanced polymers produced today.

AXGARD® combines unique strength, superior transparency, and proven durability, whilst remaining lightweight, flexible and fire resistant, making it the perfect security glazing material for any application.

AXGARD® is virtually as transparent as glass, more than 200 times stronger, less than half the weight and is classed as virtually unbreakable. It is widely used in vandal-prone areas, high impact applications or where security is at risk.

## Common uses:

- ✓ Security Glazing
- ✓ Machine Guards
- ✓ Glazing in Schools, Prisons and Other Public Buildings
- ✓ Bus Shelters and Smoking Shelters
- ✓ Riot and Crowd-Control Shields
- ✓ Boat, Train, Bus and Aircraft Window Glazing
- ✓ Excavation and Forestry Plant Glazing
- ✓ Lighting and Signage
- ✓ Acoustic Barriers
- ✓ Stadium Roofing and Glazing
- ✓ Church Windows and Stained Glass Protection
- ✓ Barrel Vaults and Covered Walkways



## Qualities:

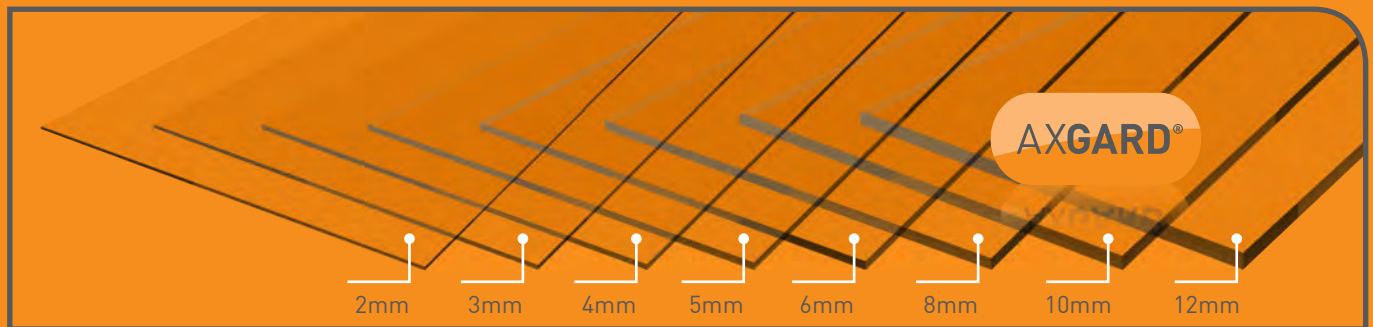
- ✓ High Impact Strength
- ✓ Easy to Cut Onsite
- ✓ Excellent Wipe Clean Surface
- ✓ UV Stabilised
- ✓ Durable
- ✓ Class 1 Fire Rating
- ✓ Can Be Fixed Entirely with Specialised Adhesive
- ✓ Excellent Seal with Silicones



## AXGARD® : Clear

AXGARD® Clear Sheets are the most popular choice for Roof Glazing, Canopies, Shelters, and many other glazing applications. Manufactured in a wide range of thicknesses, AXGARD® Clear Sheets are available from 2mm thick to 12mm. The thinner 2mm gauge provides advantages of being the most cost effective solution and offers the greatest degree of flexibility. The thicker gauges such as 10mm and 12mm Clear AXGARD® provide greater strength and rigidity.

### AXGARD® Clear Sheet Sizes



### AXGARD® Clear UV Protected Size Availability

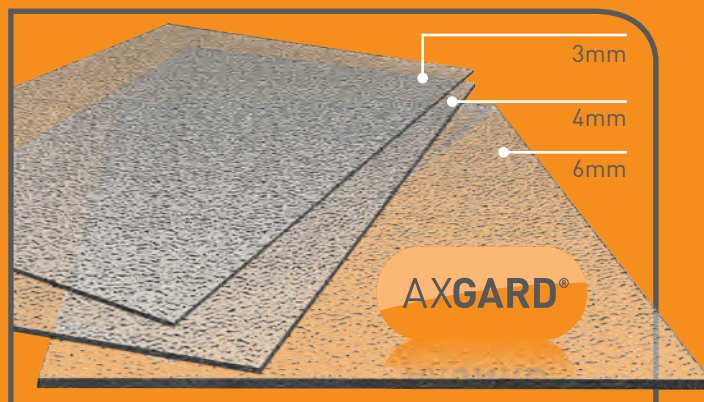
Metric Lengths (available in standard widths of 500mm, 1000mm and 2050mm or cut to size)							Thickness (code)	Imperial Lengths (available in standard widths of 620mm and 1250mm or cut to size)						
500mm	1000mm	1500mm	2000mm	3050mm	4000mm	6105mm		620mm	675mm	1020mm	1240mm	2050mm	2500mm	3900mm
✓	✓	✓	✓	✓	-	-	<b>2mm</b> (AP2CUV)	✓	✓	✓	✓	✓	✓	-
✓	✓	✓	✓	✓	✓	✓	<b>3mm</b> (AP3CUV)	✓	-	-	✓	-	✓	✓
✓	✓	✓	✓	✓	✓	✓	<b>4mm</b> (AP4CUV)	✓	-	-	✓	-	✓	-
✓	✓	✓	✓	✓	✓	✓	<b>5mm</b> (AP5CUV)	-	✓	✓	-	✓	-	-
✓	✓	✓	✓	✓	✓	✓	<b>6mm</b> (AP6CUV)	✓	-	-	✓	-	✓	-
✓	✓	✓	✓	✓	-	-	<b>8mm</b> (AP8CUV)	✓	-	-	✓	-	✓	-
✓	✓	✓	✓	✓	-	-	<b>10mm</b> (AP10CUV)	✓	-	-	✓	-	✓	-
✓	✓	✓	✓	✓	-	-	<b>12mm</b> (AP12CUV)	-	-	-	-	-	-	-

## AXGARD® : Patterned

The AXGARD® Patterned finish provides privacy whilst maintaining a good level of light transmission. This is very popular for industrial glazing applications, and security areas.

### Key Benefits:

- ✓ Provides Privacy
- ✓ Maintains Great Light Transmission
- ✓ Allows a Degree of Visibility Whilst Retaining Privacy



### AXGARD® Patterned UV Protected Size Availability

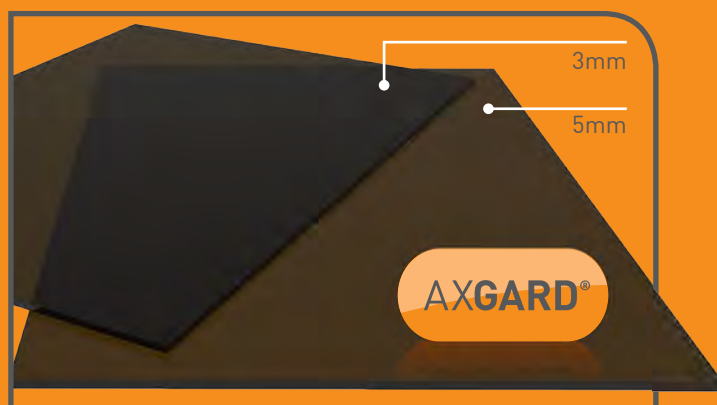
Thickness (code)	Metric Lengths (available in standard widths of 500mm, 1000mm and 2050mm or cut to size)				
	500mm	1000mm	1500mm	2000mm	3050mm
<b>3mm</b> (AP3PUV)	✓	✓	✓	✓	✓
<b>4mm</b> (AP4PUV)	✓	✓	✓	✓	✓
<b>6mm</b> (AP6PUV)	✓	✓	✓	✓	✓

## AXGARD® : Bronze

Bronze tint AXGARD® offers a tinted solution which reduces glare and provides shade. The darker colour will encourage heat absorption.

### Key Benefits:

- ✓ Provides Shading from Glare
- ✓ Stylish Tint for Applications such as Boat Windows



### AXGARD® Bronze UV Protected Size Availability

Thickness (code)	Metric Lengths (available in standard widths of 500mm, 1000mm and 2050mm or cut to size)					
	500mm	1000mm	1500mm	2000mm	3050mm	6105mm
<b>4mm</b> (AP4BUV)	✓	✓	✓	✓	✓	✓
<b>5mm</b> (AP5BUV)	✓	✓	✓	✓	✓	✓



## AXGARD® : Opal

Our Opal AXGARD® option provides both privacy, shading and heat rejection properties and is very popular in many glazing applications including backlit projects.

### Key Benefits:

- ✓ Allows Approximately 30% Light Transmission
- ✓ Provides Privacy
- ✓ Removes Almost All Visibility
- ✓ Provides Even White Tint



### AXGARD® Opal UV Protected size availability

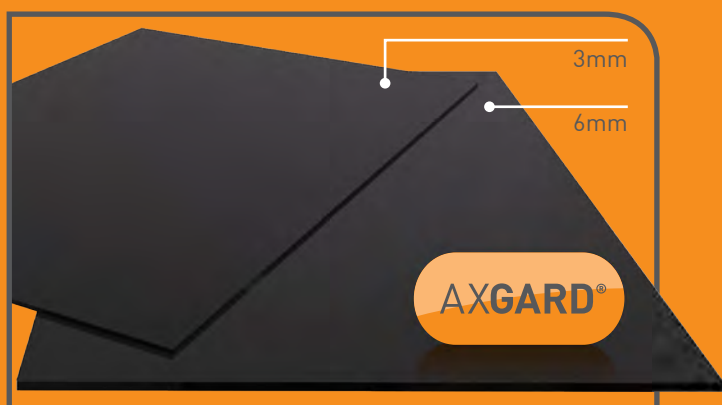
Metric Lengths (available in standard widths of 500mm, 1000mm and 2050mm or cut to size)							Thickness (code)	Imperial Lengths (widths of 620mm and 1250mm)
500mm	1000mm	1500mm	2000mm	3050mm	4000mm	6105mm		3900mm
✓	✓	✓	✓	✓	✓	✓	3mm (AP30UV)	✓
✓	✓	✓	✓	✓	✓	✓	5mm (AP50UV)	-

## AXGARD® : Black

AXGARD® Black sheet is a solid black colour which is ideal for blackout areas where light transmission is not required.

### Key Benefits:

- ✓ Complete Opaque
- ✓ Provides Block from Light
- ✓ Offers Total Privacy



### AXGARD® Black UV Protected size availability

Thickness (code)	Metric Lengths (available in standard widths of 500mm, 1000mm and 2050mm or cut to size)				
	500mm	1000mm	1500mm	2000mm	3050mm
3mm (AP3KUV)	✓	✓	✓	✓	✓
6mm (AP6KUV)	✓	✓	✓	✓	✓

## AXGARD®-MSR

AXGARD® resin is also used in the manufacture of AXGARD®-MSR which is a mirror created with virtually unbreakable properties and a scratch-resistant coating. For more information on this product please refer to the *AXGARD®-MSR Technical Guide Brochure*.



## AXGARD® : Examples of Different Edge Finishing

With the latest automated CNC machinery AXGARD® can be cut to include **drilled holes** and **flat** or **quarter-round** edge finishing as shown in these images of AXGARD®-MSR. The same edge finish options are available in any AXGARD® product option.



AXGARD®-MSR 6mm saw cut edge



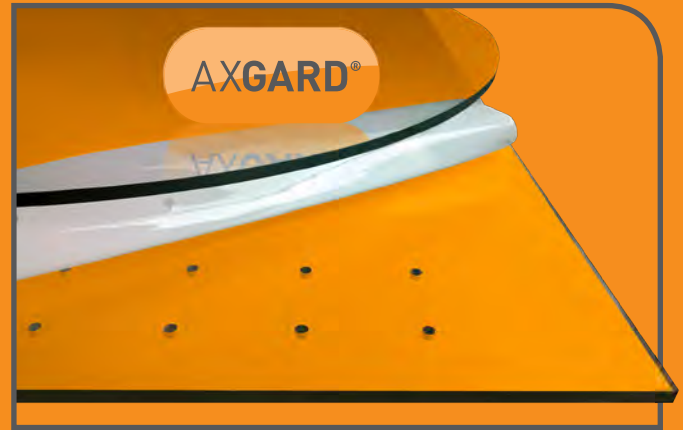
AXGARD®-MSR 3mm quarter-round edge with hole



AXGARD®-MSR 3mm CNC cut edge with hole

## AXGARD® : Clear – Shapes and Holes

AXGARD® can be cut to any shape using the latest automated CNC machinery. Also holes for fixing, speaker areas and hinges for example can also be drilled at any diameter.



## AXGARD® : Drilling Holes on Site

Standard twist drills for wood or metal can be used to drill AXGARD®; however, slower speeds and feed rates are required for best results in producing clean, non-gummed holes. In most situations, acceptable holes with minimal shavings are produced on AXGARD® sheets with a 5-speed drill press operating at speeds from 500 to 2500 rpm.

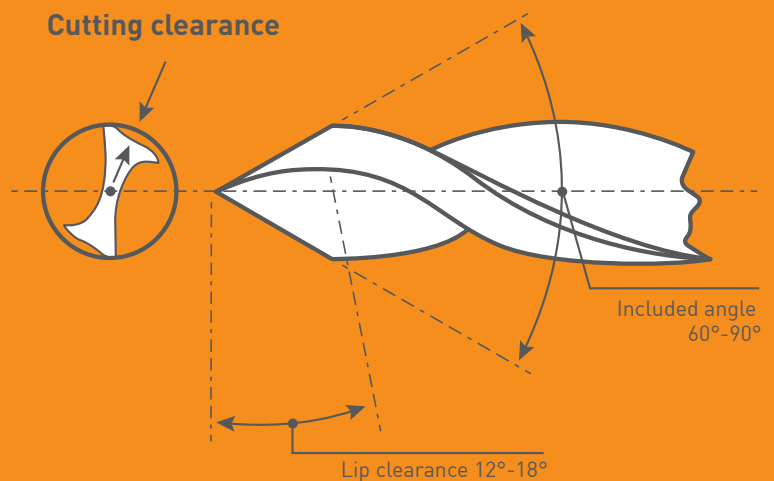
Twist drills for AXGARD® sheet should have 2 flutes, a point with an included angle of 60° to 90°, and a lip clearance of 12° to 18°, as shown in the following figure. These factors help to reduce the heat by allowing the cuttings to escape easily as the hole is drilled.

For larger diameter holes in AXGARD® sheets it is recommended that the rpm speed is reduced. With all drilling it is important that the AXGARD® sheet is well secured during drilling to prevent vibration causing any chipping or cracking.

Depending on actual final application of the AXGARD®, it is generally recommended that holes are drilled 1.5 times bigger than the screw diameter to account for sheet expansion.

During the drilling process it is recommended that the drill is backed out often to free chips, especially when drilling deep holes. Water or compressed air can be used on thicker sheets to cool the sheet and prevent overheating.

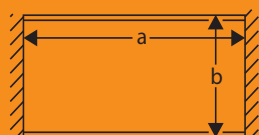
It is recommended that tests are carried out for each specific application. Free AXGARD® samples are available for testing purposes.



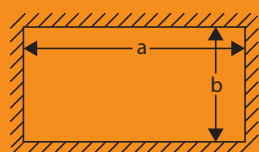
## AXGARD® : Spanning Guide

The following charts below provide spanning guides for AXGARD® sheets when clamped on 2 sides in the first chart or clamped 4 sides on the second chart.

### 2 Sides Fixed



### 4 Sides Fixed



#### AXGARD®

t (mm)	q (N/m²)			
a (mm)	600	750	850	1000
400	3	4	4	4
450	4	4	4	4
500	4	4	5	5
550	5	5	5	5
600	5	5	5	6
650	5	6	6	6
700	6	6	6	7
750	6	6	7	7
800	6	7	7	7
850	7	7	8	8

The calculations have been made for a maximum deflection of 2% on the minimum width/length

#### AXGARD®

	q = 600 N/m²			q = 750 N/m²			q = 850 N/m²			q = 1000 N/m²		
t (mm)	a:b relation			a:b relation			a:b relation			a:b relation		
a (mm)	>1:2	1:1.5	1:1	>1:2	1:1.5	1:1	>1:2	1:1.5	1:1	>1:2	1:1.5	1:1
400	3	3	3	4	3	3	4	4	3	4	4	3
450	4	4	3	4	4	3	4	4	3	4	4	4
500	4	4	3	4	4	4	5	4	4	5	5	4
550	5	4	4	5	5	4	5	5	4	5	5	4
600	5	5	4	5	5	4	5	5	4	6	5	5
650	5	5	4	6	5	5	6	6	5	6	6	5
700	6	5	5	6	6	5	6	6	5	7	6	5
750	6	6	5	6	6	5	7	6	5	7	7	6
800	6	6	5	7	6	5	7	7	6	7	7	6
850	7	6	5	7	7	6	7	7	6	8	8	6
900	7	7	6	8	7	6	8	8	6	8	8	7
950	7	7	6	8	8	6	8	8	7	9	8	7
1000	8	7	6	-	-	-	-	-	-	-	-	-
1050	8	8	7	-	-	-	-	-	-	-	-	-

All loads are unfactored and based on uniformly distributed loads (UDL).

The calculations have been made for a maximum deflection of 2% on the minimum width/length

Inasmuch as Clear Amber have no control over the circumstances in which our material may be used, or site specific parameters, we cannot guarantee that any particular results will be achieved. Users should carry out their own tests

to determine the suitability of the material for their application. Installers should satisfy themselves that published permissible loadings for AXGARD® glazing, together with any supporting posts, frames, or walls and fixings, are sufficient to provide adequate strength for the intended use and to meet regional loading requirements. Installers should also obtain their own job-specific structural engineer's report for their individual site. Samples are readily available to users to test and verify the exact sizes according to their site requirements.



## Service Temperature

AXGARD® has a service temperature range from **-50°C to +100°C**, withstanding up to **+120°C** for short term exposure. This makes it suitable for use in any climate.

## Flammability Tests

Polycarbonate has one of the highest melting points of any thermoplastic material and resists flame spread across its surface. The following table shows the high ratings achieved in building standards fire tests.

Standard	Classification
NSP 92501,4	M1(1mm)
NSP 92501,4	M2(1.5 à 12mm)
BS 476/7	Class 1
DIN 4102	B1,B2
CSE RF 2/75/A, CSE RF 3/77	Class 1
UL Classified	V2 (File e221255)
ASTM D-635	CC1

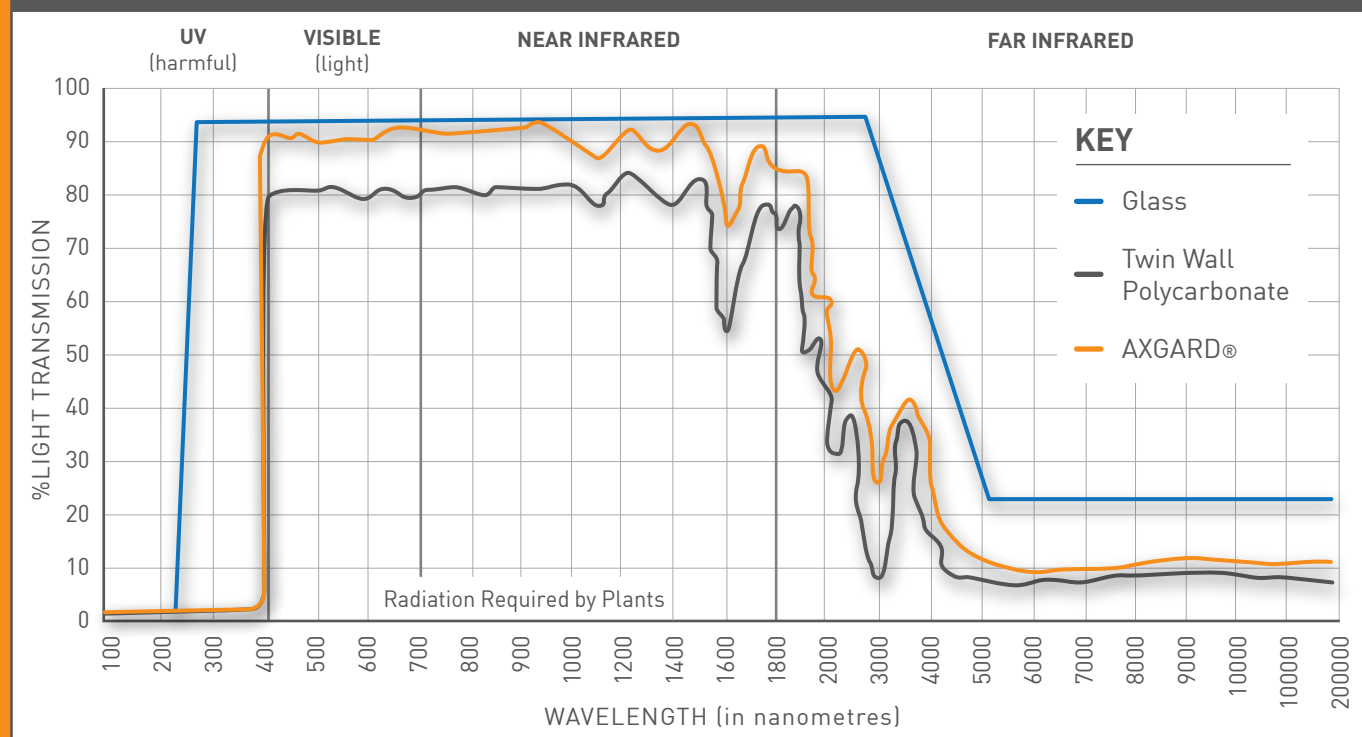
## Weight/Area Ratio

The specific gravity of AXGARD® sheet is 1.2, which is about half that of glass. The following table shows the ratio between the weight of AXGARD® sheets of various thicknesses and glass.

Sheet Thickness mm	(in.)	Axgard kg/m2	(lb/ft2)	Glass	kg/m2	(lb/ft2)
2	[0.08]	2.40	[0.491]		4.90	(1.00)
3	[0.12]	3.60	[0.737]		7.34	(1.50)
4	[0.16]	4.80	[0.983]		9.80	(2.00)
5	[0.20]	6.00	[1.23]		12.24	(2.51)
6	[0.24]	7.20	[1.47]		14.68	(3.00)
8	[0.31]	9.60	[1.97]		19.60	(4.01)
10	[0.39]	12.00	[2.46]		24.48	(5.01)

AXGARD® polycarbonate **almost totally blocks harmful UV radiation** whilst still allowing exceptional levels of visible light transmission. The graph below shows comparisons with other products.

## AXGARD® Light Transmission

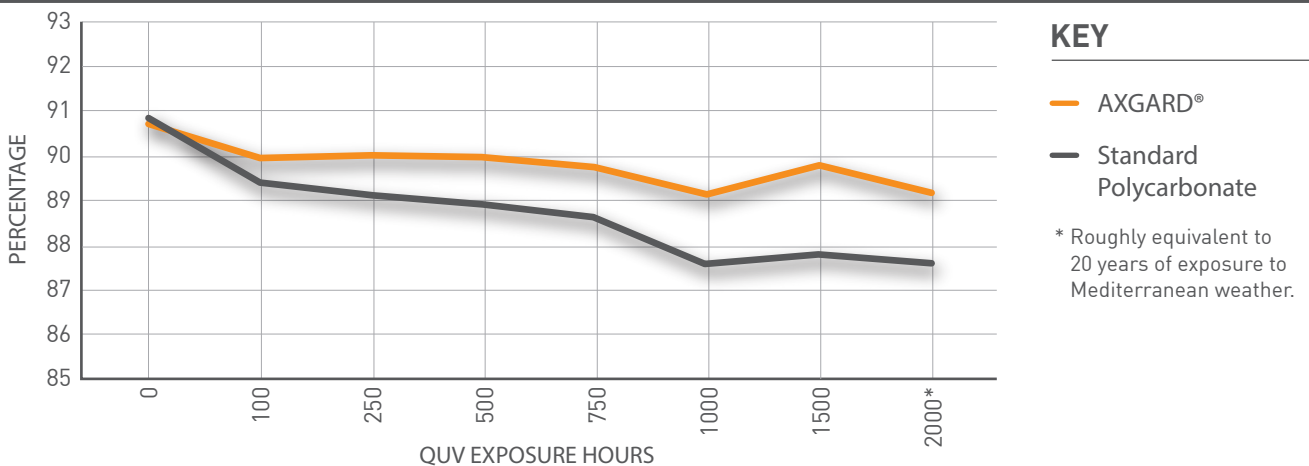


## Weather Resistance

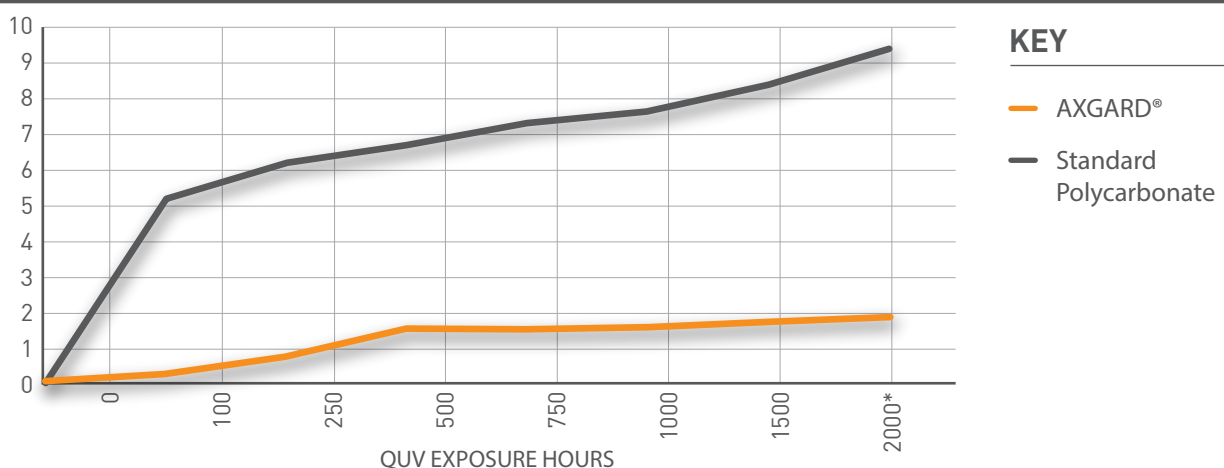
AXGARD® sheet has an extra UV protective layer on both sides which greatly improves resistance against UV radiation. Estimated changes in optical properties of 3mm AXGARD® compared to standard polycarbonate under accelerated UV exposure (QUV) are shown in these diagrams below. 100 hours of QUV exposure is roughly equivalent to one year actual outdoor exposure of mediterranean weather. The changes in optical properties of AXGARD® are very minimal making AXGARD® an excellent choice for enhanced longevity.

The table of properties below shows some additional characteristics and qualities of AXGARD® sheet material, the combination of which makes AXGARD® a world class security glazing material.

### % Light Transmission



### Change in Yellowness Index



## Cold Bending

AXGARD® may be installed with a stressed curve to create an arch or dome, as long as the curve and resulting stress is within specified limits. This stress will fall within an acceptable limit and there will be no effect on the sheet characteristics if the magnitude of the radius is at least 200 times that of the sheet thickness, as indicated in the following table.

Radius Desired - mm (in)	Thickness Required - mm (in)
600 (24)	3 (0.12)
800 (31)	4 (0.16)
1000 (39)	5 (0.20)
1200 (47)	6 (0.24)
1600 (63)	8 (0.31)

	Property	Conditions	ASTM Method	Units-SI	Value
Physical	Density		D-1505	g/cm <sup>3</sup>	1.2
	Water absorption	24 hr. @ 23°C	D-570	%	0.15
Mechanical	Tensile strength at yield	10mm/min	D-638	MPa	65
	Tensile strength at break	10mm/min	D-638	MPa	60
	Elongation at yield	10mm/min	D-638	%	6
	Elongation at break	10mm/min	D-638	%	>90
	Tensile modulus of elasticity	10mm/min	D-638	MPa	2,300
	Flexural modulus	1.3mm/min	D-790	MPa	2,500
	Flexural strength at yield	1.3mm/min	D-790	MPa	100
	Notch impact strength izod	23°C	D-256	J/m	800
	Charpy impact strength notched	23°C	ISO 180	Kj/m <sup>2</sup>	55
	Impact falling weight	3mm sheet	ISO-663/1 <sup>a</sup>	J	158
Thermal	Rockwell hardness		D-785	R scale	125
	Long term service temp			°C	-50 to +100
	Short term service temp			°C	-50 to +120
	Heat deflection temp	Load: 1.82 MPa	D-648	°C	135
	Vicat softening temp	Load: 1kg	D-1525	°C	150
	Co-efficient of linear thermal expansion		D-696	10 <sup>-5</sup> cm/cm°C	6.5
	Thermal conductivity		C-177	W/m K	0.21
	Specific heat capacity		C-351	kJ/kg K	1.26
Optical	Haze		D-1003	%	<0.5
	Light transmission		D-1003	%	89
	Refractive index		D-542		1.586
	Yellowness index		D-1925		<1
Electrical	Dielectric constant	1kHz	D-150		3.0
		1MHz	D-150		2.9
	Dissipation factor	1kHz	D-150		0.001
		1MHz	D-150		0.01
	Dielectric strength short time	500 V/s	D-149	kV/mm	>30
	Surface resistance	Ketley	D-257	Ohm	5.1x10 <sup>15</sup>
	Volume resistance	Ketley	D-257	Ohm-cm	1.3x10 <sup>17</sup>

## Hotline Bending and Thermoforming

AXGARD® can also be 'hot-line' bent and thermoformed provided specific instructions are followed, which are available on request.

## Chemical Resistance

Whilst AXGARD® is resistant to many everyday chemicals, some stronger chemicals can attack the sheet reducing its strength and clarity.

## Installation

Compatible fixings, adhesives and sealants must always be used when installing AXGARD®. Also the polythene film must be removed immediately after installation.

## Cleaning

For best results use clean 100% cotton cloth and large quantities of mild detergent solution. Where very regular cleaning is essential we recommend AXGARD®-SR which has a scratch resistant coating.

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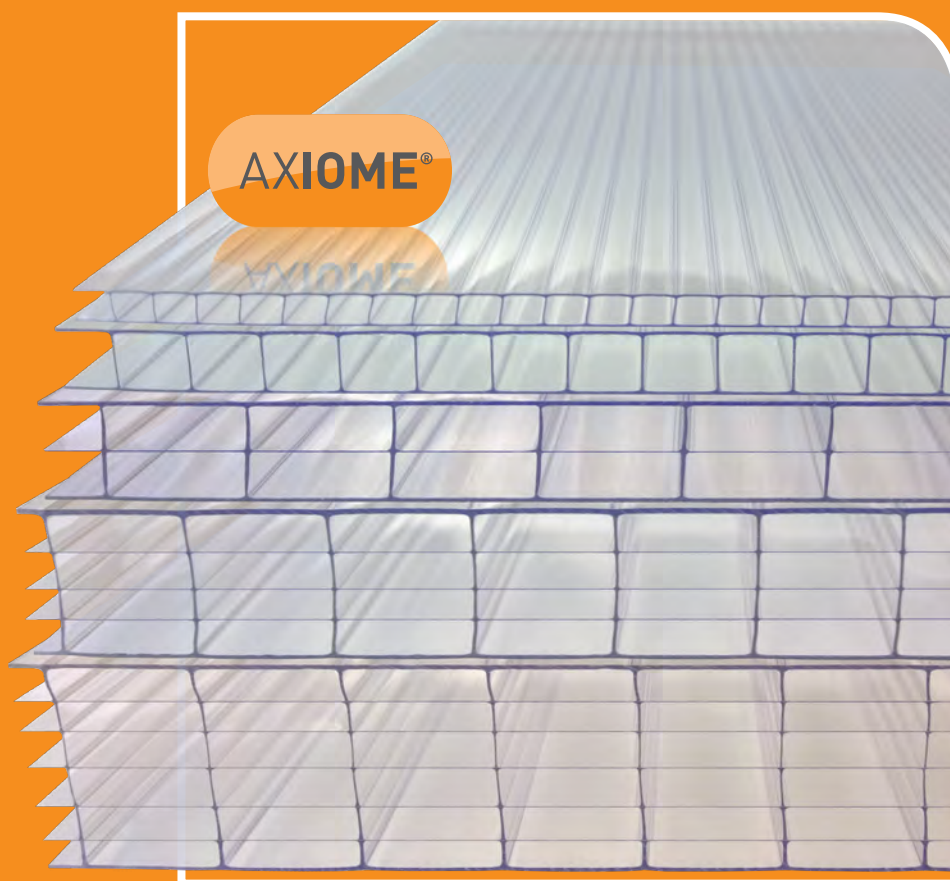
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Inasmuch as Clear Amber have no control over the circumstances in which our material may be used, or site specific parameters, we cannot guarantee that any particular results will be achieved. Users should carry out their own tests to determine the suitability of the material for their application.



**AXIOME®**

## **Multiwall Polycarbonate Products** **Technical Guide**



# High Quality Multiwall Glazing Sheet

Over the past two decades AXIOME® multiwall polycarbonate sheet has become an increasingly popular roofing and screening material for a large range of applications. A few examples of these are shown in these pages.

AXIOME® multiwall is the result of years of technical development and embodies a wide range of beneficial qualities, making it the ideal solution for an extensive array of requirements in the conservatory, construction, horticulture and internal design industries.



## Common uses:

- ✓ Commercial Rooflights and Barrel Vaults
- ✓ Airport Walkways
- ✓ Covered School Play Areas
- ✓ Bus Shelters and Smoking Shelters
- ✓ Swimming Pool Roofs
- ✓ Commercial Chicken Shed Windows
- ✓ Carports
- ✓ Acoustic Barriers
- ✓ Orangeries and Conservatories
- ✓ Greenhouse Glazing

## Qualities:

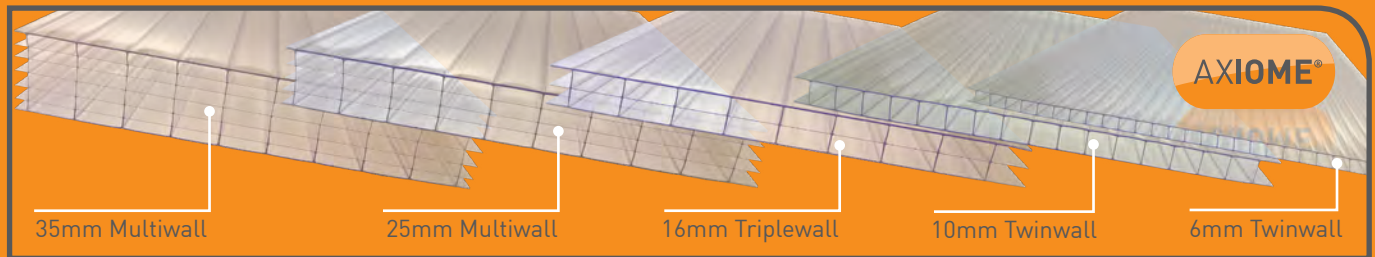
- ✓ Lightweight Reducing Stress on Structures
- ✓ Easy to Cut Onsite as Required
- ✓ Excellent Rigidity
- ✓ UV Stabilised
- ✓ Highly Weather Resistant
- ✓ Excellent Fire Rating
- ✓ Good Thermal Insulation
- ✓ Does Not Shatter Like Glass With Impact



## AXIOME® : Clear

Clear AXIOME® sheets are the most common option, offering the greatest light transmission. The AXIOME® sheets are widely used for an incredible range of applications around the globe. From canopies and covered walkways, to carports and conservatories, equestrian areas, childrens' play areas, cold frames and horticultural uses, AXIOME® is a truly versatile product.

### AXIOME® Clear Sheet Sizes

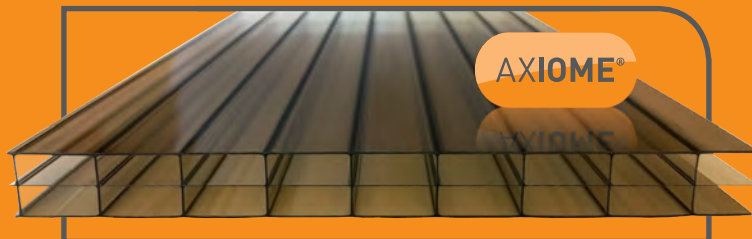


### AXIOME® Clear

Metric Lengths									Thickness (code)	Imperial Lengths
2000mm	2500mm	3000mm	3500mm	4000mm	4500mm	5000mm	6000mm	7000mm		10,000mm
[6mm Twinwall - standard widths are 690mm, 1050mm and 2100mm or cut to size]										[available in width of 980mm]
✓	-	✓	-	✓	-	-	✓	✓	6mm [AS6C]	-
10mm Twinwall - standard widths are 690mm, 1050mm, 1400mm and 2100mm or cut to size										
✓	✓	✓	✓	✓	✓	✓	✓	✓	10mm [AS10C]	-
16mm Triplewall, 25mm and 35mm Multiwall available in standard widths of 690mm, 840mm, 1050mm, 1250mm, 1400mm, 1700mm and 2100mm or cut to size										
✓	✓	✓	✓	✓	✓	✓	✓	✓	16mm [AS16C]	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	25mm [AS25C]	-
✓	✓	✓	✓	✓	✓	✓	✓	✓	35mm [AS35C]	-

## AXIOME® : Bronze

The AXIOME® Bronze sheet provides shading from glare and a popular aesthetic appearance. Being a darker colour, choosing Bronze tint AXIOME® will increase heat absorption creating a warmer inside temperature when located in areas of direct sunlight.

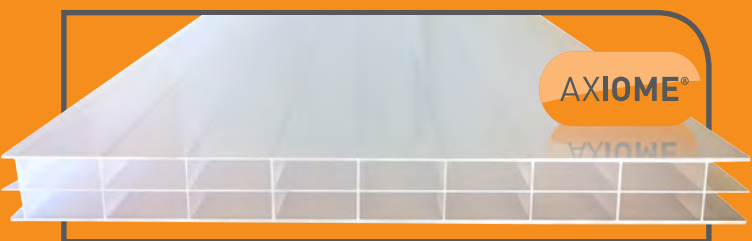


### AXIOME® Bronze

Thickness (code)	Metric Lengths								
	2000mm	2500mm	3000mm	3500mm	4000mm	4500mm	5000mm	6000mm	7000mm
	10mm Twinwall - standard widths are 690mm, 1050mm and 2100mm or cut to size								
<b>10mm</b> (AS10B)	✓	-	✓	-	-	-	-	✓	-
	16mm Triplewall, available in standard widths of 690mm, 840mm, 1050mm, 1400mm, 1700mm and 2100mm or cut to size								
<b>16mm</b> (AS16B)	✓	✓	✓	✓	✓	✓	✓	✓	✓
	25mm and 35mm Multiwall available in standard widths of 690mm, 840mm, 1050mm, 1250mm, 1400mm, 1700mm and 2100mm or cut to size								
<b>25mm</b> (AS25B)	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>35mm</b> (AS35B)	✓	✓	✓	✓	✓	✓	✓	✓	✓

## AXIOME® : Opal

The Opal tint AXIOME® sheet provides a white tint impression. The advantages of this Opal AXIOME® tint are that it provides a degree of privacy whilst maintaining a good light transmission and a bright overall appearance. In addition the Opal tint reduces the level of solar energy entering the sheet, keeping covered areas cooler when installed in areas exposed to higher levels of direct sunlight.



### AXIOME® Opal

Metric Lengths									Thickness (code)	Imperial Lengths	
2000mm	2500mm	3000mm	3500mm	4000mm	4500mm	5000mm	6000mm	7000mm		10,000mm	
10mm Twinwall - standard widths are 690mm, 1050mm, 1400mm and 2100mm or cut to size										(available in width of 980mm)	
✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>10mm</b> (AS100)	-	
16mm Triplewall, available in standard widths of 690mm, 840mm, 1050mm, 1400mm, 1700mm and 2100mm or cut to size											
✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>16mm</b> (AS160)	✓	
25mm and 35mm Multiwall available in standard widths of 690mm, 840mm, 1050mm, 1250mm, 1400mm, 1700mm and 2100mm or cut to size											
✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>25mm</b> (AS250)	-	
✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>35mm</b> (AS350)	-	

## SOLEK® : Clear (Technical brochure available for more details)

AXIOME SOLEK® sheets have a silver foil insert in every flute which provides up to 80% rejection of solar energy. SOLEK® has the effect of keeping indoor areas cooler whilst allowing in an acceptable level of light. More information is available on the *SOLEK® Technical Brochure*.



### SOLEK® Clear

Thickness (code)	Metric Lengths							
	2000mm	2500mm	3000mm	3500mm	4000mm	4500mm	5000mm	6000mm
	16mm Triplewall, 25mm and 35mm Multiwall available in standard widths of 690mm, 840mm, 1050mm, 1250mm, 1400mm, 1700mm and 2100mm or cut to size							
<b>16mm</b> (AS16SK)	✓	✓	✓	✓	✓	✓	✓	✓
<b>25mm</b> (AS25SK)	✓	✓	✓	✓	✓	✓	✓	✓
<b>35mm</b> (AS35SK)	✓	✓	✓	✓	✓	✓	✓	✓

## AXIOME® : Thicker or Thinner Specification

AXIOME® sheets come in several thicknesses which provide solutions for various applications. This chart shows the relative benefits between each option.

Thickness	Qualities / Benefits
6mm Twinwall	Fits most Greenhouse beads, high light transmission, best bending radius
10mm Twinwall	Good bending radius
16mm Triplewall	Stronger structure than twinwall, average insulation value
25mm Multiwall	Good Insulation, good structural loading capacity
35mm Multiwall	Higher insulation value, best structural loading capacity
AXIOME®-80 76mm Multiwall	High thermal insulation value, good loading capacity, sonic sound noise reduction layer (SNR)



## Colour Concepts

There are several myths surrounding each tint, for example whilst bronze sheet offers a shading effect, it does not reduce the heat, in fact it attracts more heat. We have set out the guidelines to explain the properties provided by each shade.

### What Colour?

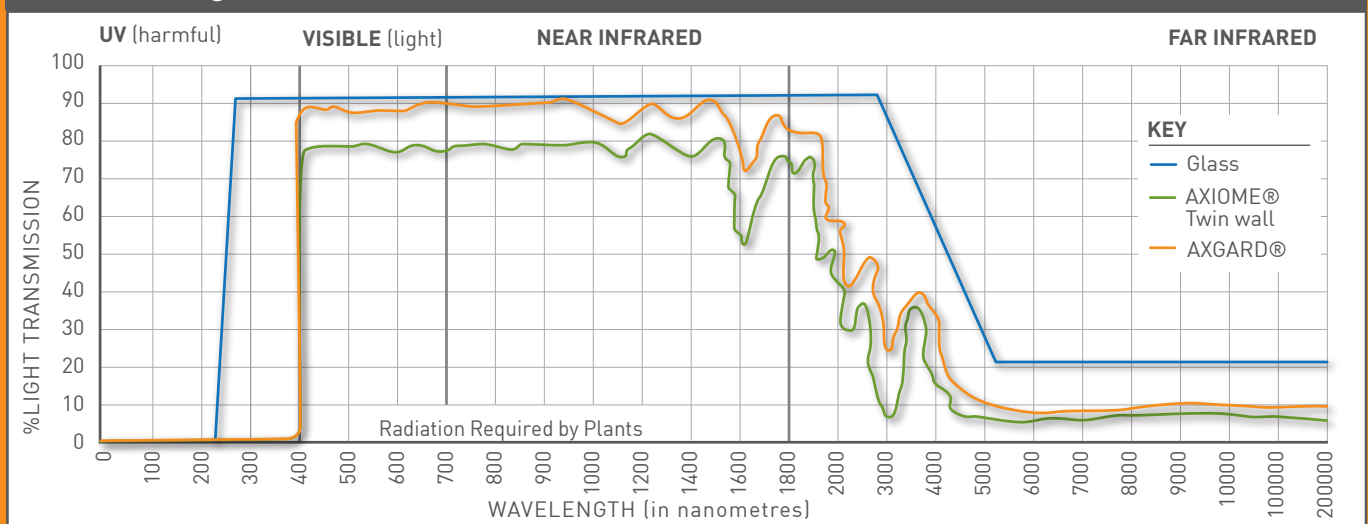
Colour	Qualities / Benefits
Clear	Maximum light transmission and brightness; protects from harmful UV
Opal	Reflects some heat, provides shading and privacy
Bronze	Reduces glare and provides shading, will tend to increase heat build up
Clear Silver SOLEK®	Rejects approximately 80% of the solar energy dramatically reducing heat build up
Silver Bronze SOLEK®	Rejects a high degree of solar energy, reducing heat build up and provides shading



## AXIOME® : Light Transmission

AXIOME® polycarbonate almost totally blocks harmful UV radiation whilst still allowing exceptional levels of visible light transmission.

### AXIOME® Light transmission

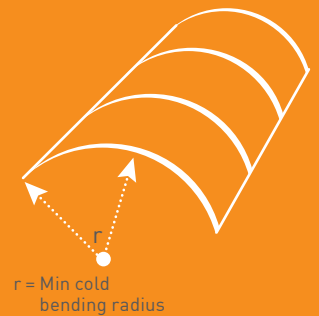


## AXIOME® : Technical Data

The huge diversity of applications for which AXIOME® Multiwall is used inevitably means that a perceived strength for one project can be a disadvantage for another use. The tables below are intended for guideline use when seeking particular qualities for any specification. Our vast range provides an option for probably every eventuality.

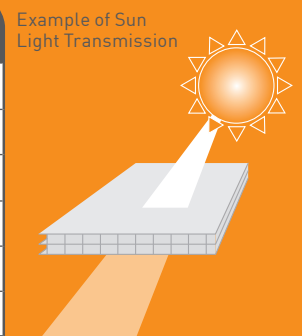
### Physical Properties

Thickness	Area Weight Kg/m <sup>2</sup>	U-Value W/m <sup>2</sup>	Sound reduction level db	Min cold bending radius mm
AXIOME® 6mm Twinwall	1.3	3.5	18	1250
AXIOME® 10mm Twinwall	1.5	3.0	20	1750
AXIOME® 16mm Triplewall	2.4	2.3	20	2750
AXIOME® 25mm Multiwall	3.0	1.7	22	5000
AXIOME® 35mm Multiwall	3.4	1.3	22	7000
AXIOME®-80 76mm Multiwall	6.9	0.8	43	TBC



### Light Transmission

Thickness	Clear %	Bronze%	Opal %	SOLEK®%
AXIOME® 6mm Twinwall	81	N/A	N/A	N/A
AXIOME® 10mm Twinwall	81	52	48	N/A
AXIOME® 16mm Triplewall	74	31	42	25
AXIOME® 25mm Multiwall	62	22	34	23
AXIOME® 35mm Multiwall	51	20	25	20
AXIOME®-80 76mm Multiwall	N/A	N/A	15	10



### Fire Performance

Thickness	Method	Fire rating class
AXIOME® 6mm Twinwall	N/A	N/A
AXIOME® 10mm Twinwall	BS476: Part 7	1Y
AXIOME® 16mm Triplewall	BS476: Part 7	1Y
AXIOME® 25mm Multiwall	BS476: Part 7	1Y
AXIOME® 35mm Multiwall	BS476: Part 7	1Y
AXIOME®-80 76mm Multiwall	TBC	TBC



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### Disclaimer

Once AXIOME® multiwall polycarbonate sheet has left our warehouse, we cannot control transportation, storage, installation or handling, nor can we influence installation conditions, Clear Amber Group cannot be held responsible in any

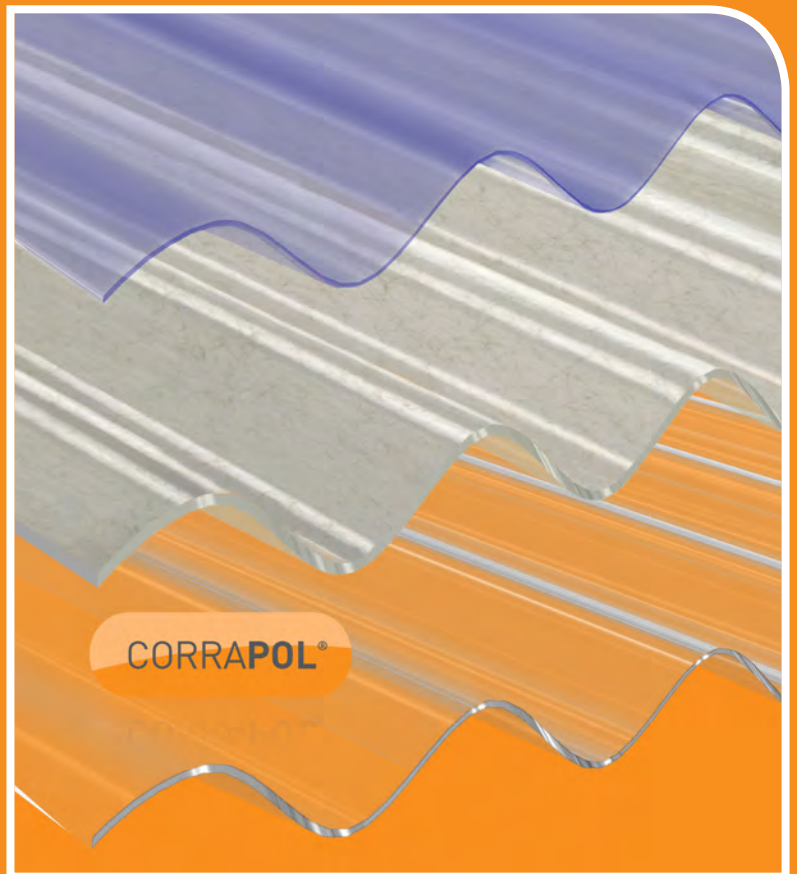
way for condensation issues or other installation problems that may arise, or any associated remedial work. All advice is offered in good faith based on our experience. Installers should apply best practices before and during installation.

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**CORRAPOL®**

## Clear **Corrugated Sheet Ranges** Technical Guide



## Clear Corrugated Sheet Ranges

The CORRAPOL® Clear Corrugated sheet range is manufactured for a wide variety of applications and offers different extrusions for varying longevity and budget requirements. The CORRAPOL® STORMPROOF provides a long lasting superior corrugated roof glazing solution, whereas the CORRAPOL® DIY grade provides a more cost effective option. This brochure provides a guide as to the range and specific benefits of each extrusion type which we manufacture, along with some technical data, and installation guidelines.



### Common uses:

- ✓ Carports
- ✓ Greenhouses
- ✓ Canopies
- ✓ Shelters
- ✓ Verandahs
- ✓ Covered Walkways
- ✓ Swimming Pools
- ✓ Factory Partitions
- ✓ Cold Frames



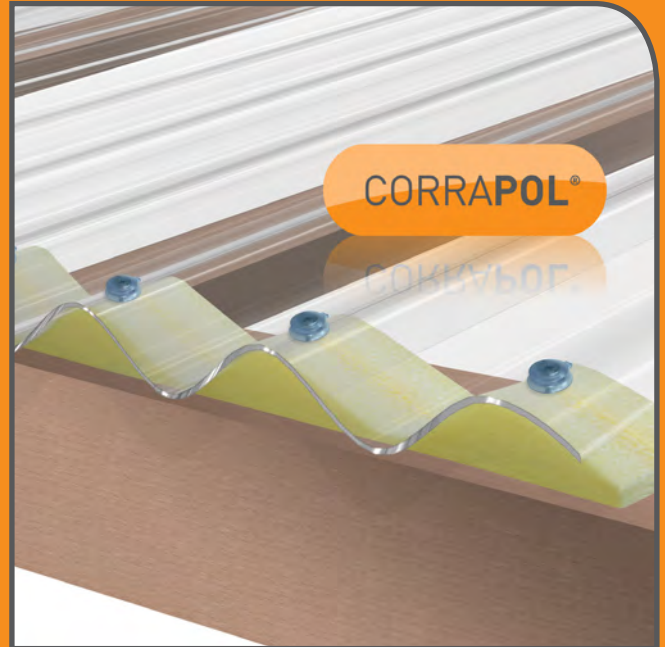


## CORRAPOL® STORMPROOF : Low & High Profiles

CORRAPOL® STORMPROOF Sheets are the strongest and longest lasting sheet within the CORRAPOL® range is the CORRAPOL® STORMPROOF range. CORRAPOL® STORMPROOF clear sheets are extruded from virtually unbreakable plastic resin which offers superior strength, excellent clarity and above all unrivalled weathering characteristics resulting in a very long life span. This superior strength and longevity mean that CORRAPOL® STORMPROOF clear sheets will not go yellow or brittle with age, and won't crack during installation like lower cost PVC options tend to. CORRAPOL® STORMPROOF clear sheets are made from resin which makes them 200 times stronger than glass of the same thickness which is generally considered to be virtually unbreakable and what we call 'STORMPROOF'. The UV protection layer incorporated in to the manufacturing process of CORRAPOL® STORMPROOF sheets mean they will provide superior light transmission for many years.

### Key Benefits:

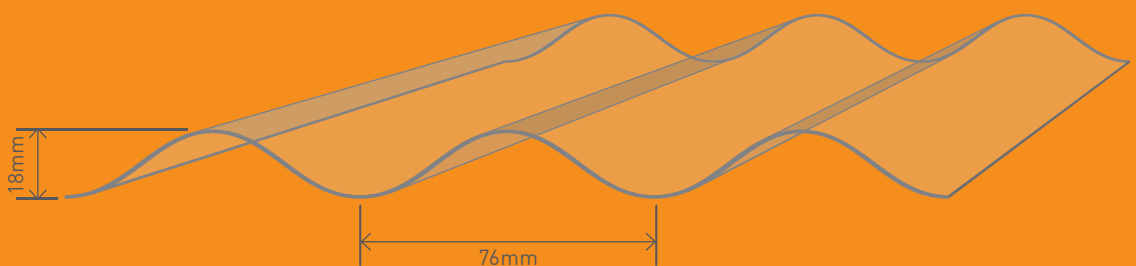
- ✓ Maintains Great Light Transmission
- ✓ UV Protected
- ✓ High Impact Strength
- ✓ Virtually Unbreakable
- ✓ Estimated 25 year Lifespan
- ✓ Doesn't discolours like cheaper alternatives
- ✓ Doesn't Crack when Fixing like PVC



## CORRAPOL® STORMPROOF : Low Profile Sheets

### Common Uses:

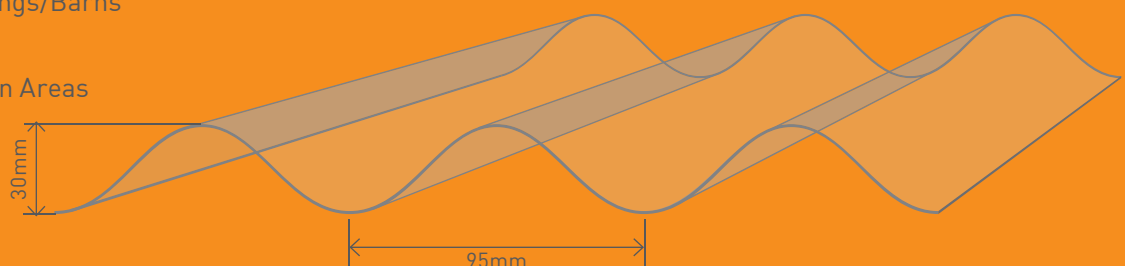
- ✓ Carports
- ✓ Canopies
- ✓ Cold Frames
- ✓ Porches
- ✓ Greenhouses



## CORRAPOL® STORMPROOF : High Profile Sheets

### Common Uses:

- ✓ Agricultural Buildings/Barns
- ✓ Garages
- ✓ Covered Equestrian Areas



# CORRAPOL® STORMPROOF : Technical Data

The value and quality of a construction material is indicated by the standards which it meets. The tables below list the stringent international standards CORRAPOL® STORMPROOF is expected to meet, which also has excellent fire resistant qualities. The CORRAPOL® STORMPROOF resin has a softening point in excess of 120°C. Most products extruded in polycarbonate and tested to BS476 Pt7 achieve a class 1(Y) rating. The international results depicted in the chart below show just how high a rating CORRAPOL® STORMPROOF has achieved worldwide. CORRAPOL® STORMPROOF is less flammable and has a higher melting point than fibreglass, acrylic or PVC sheets.

## Flammability and Construction Standards

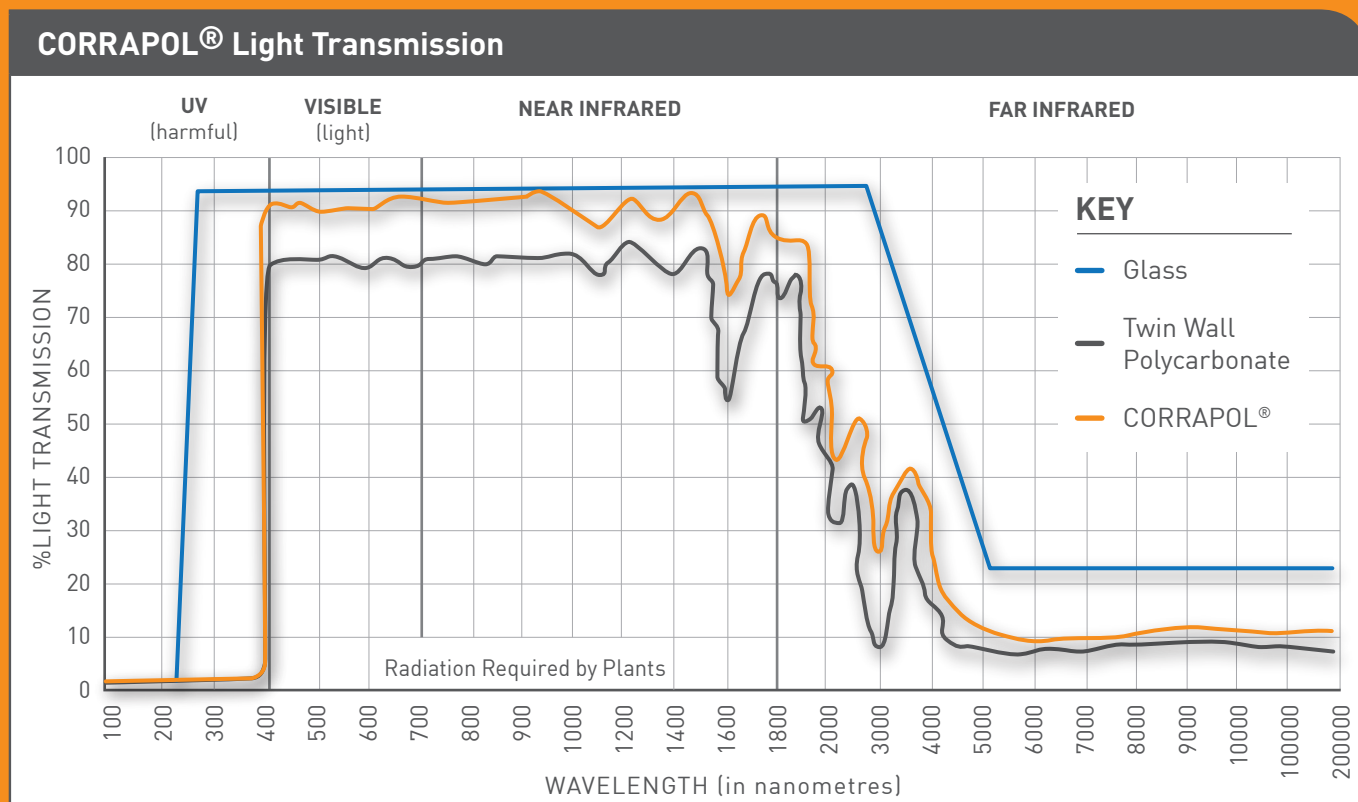
Standard	Country	CORRAPOL Thickness	Method	Designation or Rating
Flammability	France	0.8-1.0mm	NFP 92501 NFP 92504 NFP 92505	M-1
Flammability	Germany	0.8-1.0mm	DIN 4102	B-1
Flammability	Israel	0.8mm	I.S. 755	V 2 2
Flammability	Dade County FL-USA	0.8mm	ASTM D-1929	Meeting the South-Florida Building Code 806°F
			D-1929	1004°F
			D-635	45 Sec
			D-635	1.77 in
			E-84	6
			E-84	78
			D-638	[weathering]
Flammability	USA	0.8mm	UL: UL723	4.7 47.0
			ASTM D-1929	490°C @ 4:3min 530°C @ 2:15min
			ASTM D-635	3.0 cm/min 30(Burning rate)
Flammability	USA Los Angeles	0.8mm	Los Angeles Building Code	CC2 (Section 2603)
Hurricane Code	Dade County Florida, USA		AS2376-1980	Passed
Wind Load	Australia			Complies
Cyclonic Wind Load	Australia		AS 2424	Passed
Sandbag Impact testing	Australia		AS2424, AS 1562-3	Passed
TNO Hail Test	Netherlands		1999-CON-LBC/B7139/JNE	Passed
TNO Load Test (Pressure)	Netherlands		1999-CON-LBC/B7157/JNE	Passed

## Typical Properties

W	Property	Conditions	ASTM Method	Units-SI	Value
Physical	Density		D-1505	g/CM³	1.2
	Water absorption	24hr.@23°C	D-570	%	0.15
Mechanical	Tensile strength at yield	10mm/min	D-638	MPa	62
	Tensile strength at break	10mm/min	D-638	MPa	65
	Elongation at yield	10mm/min	D-638	%	7
	Elongation at break	10mm/min	D-638	%	>80
	Tensile modulus of elasticity	10mm/min	D-638	MPa	2,300
	Flexural modulus	1.3mm/min	D-790	MPa	1,890
	Flexural strength at yield	1.3mm/min	D-790	MPa	93
	Notch impact strength izod	23°C	D-256	J/m	800
	Notch impact strength	23°C	D-256	J/m	800
	Impact falling weight		ISO-663/1 <sup>a</sup>	J	50
	Rockwell hardness		D-785	R scale	118
Thermal	Long term service temperature			°C	-50 to +100
	Short term service temperature			°C	-50 to +120
	Heat deflection temperature	Load: 1.82 MPa	D-648	°C	135
	Vicat softening temperature	Load: 1kg	D-1525	°C	150
	Co-efficient of linear thermal expansion		D-696	10 <sup>-5</sup> cm/cm°C	6.5
	Thermal conductivity		C-177	W/m K	0.21
	Specific heat capacity		C-351	kJ/kg K	1.3
Optical	Haze		D-1003	%	<0.5
	Light transmission		D-1003	%	90
	Refractive index		D-542		1.57
	Yellowness index		D-1925		<1
Electrical	Dielectric constant	1kHz	D-150		2.6
		1MHz	D-150		2.4
	Dissipation factor	1kHz	D-150		0.005
		1MHz	D-150		0.02
	Dielectric strength short time	500 V/s	D-149	kV/mm	20
	Surface resistance	Ketley	D-257	0hm	4.1x10 <sup>15</sup>
	Volume resistance	Ketley	D-257	0hm-cm	1.7x10 <sup>17</sup>

## CORRAPOL® STORMPROOF : Light Transmission

CORRAPOL® STORMPROOF almost totally blocks harmful UV radiation whilst still allowing exceptional levels of visible light transmission. The graph below shows comparisons with other products.



## CORRAPOL® : Range Selector Guide

	STORMPROOF	PVC	GRP	BT
LONG LIFE SPAN	✓			
IMPACT RESISTANT	✓			
UV PROTECTED	✓			
HIGH STRENGTH	✓		✓	
LIGHT TRANSMISSION	✓	✓		
LIGHTWEIGHT / EASY-TO-CUT	✓	✓	✓	✓
LOW COST		✓	✓	✓
RIGID			✓	✓
PROVIDES PRIVACY			✓	✓

## CORRAPOL®-PVC : DIY Grade Sheets

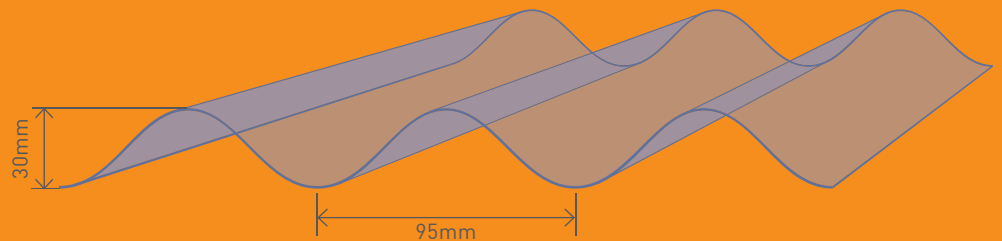
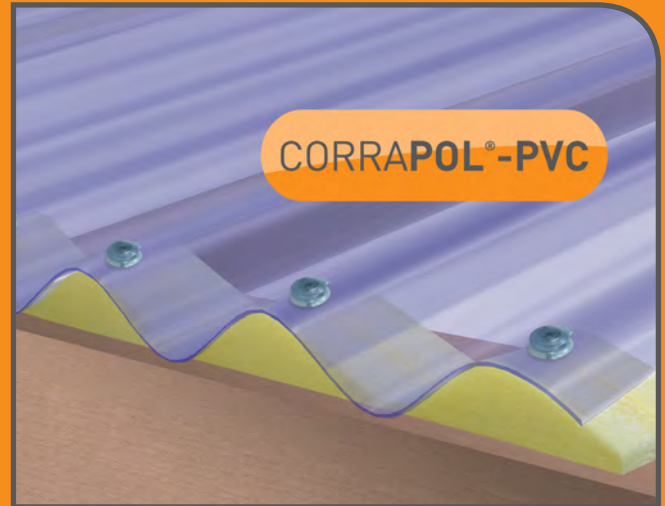
Whilst not as strong or as long lasting as the CORRAPOL® STORMPROOF range, CORRAPOL®-PVC DIY Grade Sheets offer a lower cost and are ideal for areas where impact resistance is not important and also where direct sunlight is limited. In areas like this, the CORRAPOL®-PVC DIY Grade range provides an excellent solution and will provide an excellent waterproof solution with good light transmission.

### Key Benefits:

- ✓ Low Cost
- ✓ Maintains Great Light Transmission
- ✓ Allows a Degree of Visibility Whilst Retaining Privacy
- ✓ Lightweight
- ✓ Ideal for DIY

### Common Uses:

- ✓ DIY Projects
- ✓ Lean-tos



## CORRAPOL®-GRP : Polyester Translucent Sheets

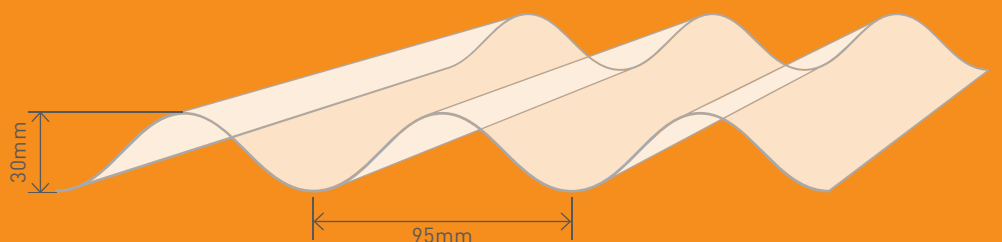
This type of CORRAPOL® provides excellent strength, similar to that of the CORRAPOL® STORMPROOF range, however the light transmission is lower due to the fibres in the resin mix. Where areas where direct sunlight is relatively low, the CORRAPOL®-GRP Translucent Sheets are an excellent solution with high impact strength and excellent rigidity.

### Key Benefits:

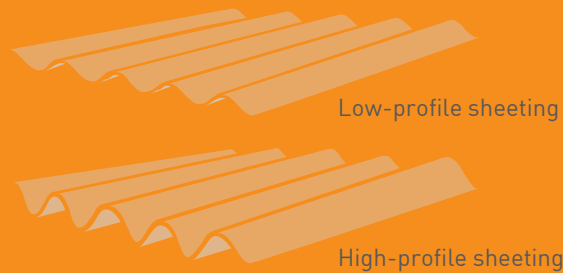
- ✓ Provides Privacy
- ✓ Maintains Great Light Transmission
- ✓ Allows a Degree of Visibility Whilst Retaining Privacy
- ✓ High Strength
- ✓ High Rigidity

### Common Uses:

- ✓ Agricultural Buildings/Barns
- ✓ Garages



# CORRAPOL® : Installation Guide



## Tools required



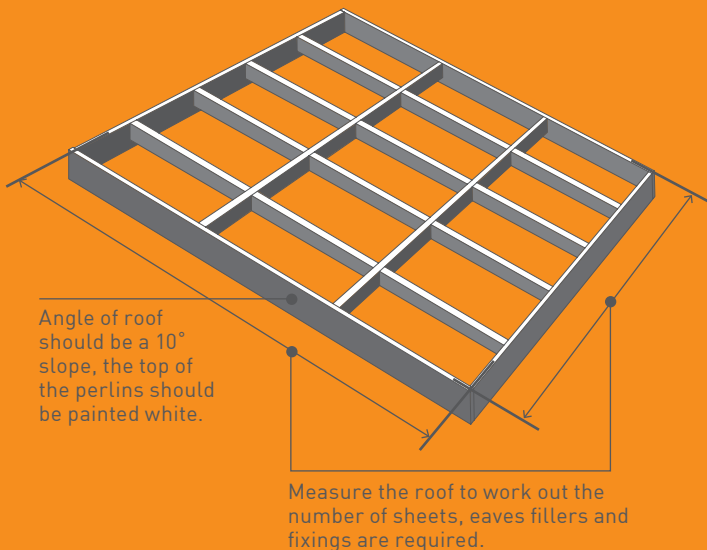
Protective gloves and glasses



Fine toothed Jigsaw, cordless screwdriver and tape measure

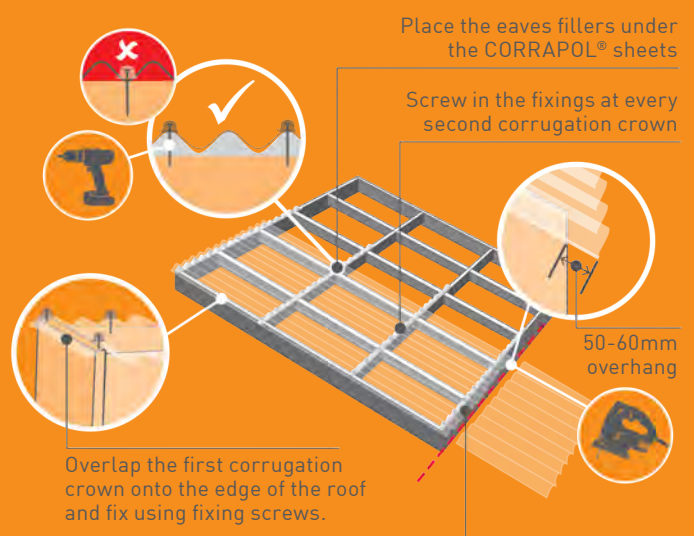
## Installation

### 1 Take all **MEASUREMENTS** of the roof



### 2 Install the **FIRST** CORRAPOL® sheet and eaves fillers

**TOP TIP** – To keep the roof watertight and weatherproof, make sure you **always** fix through the **corrugation peak** and not the trough.



Measure roof and CORRAPOL® sheeting, clamp panel down and cut the excess with a fine tooth bladed Jigsaw allowing for an overlap of 50-60mm.

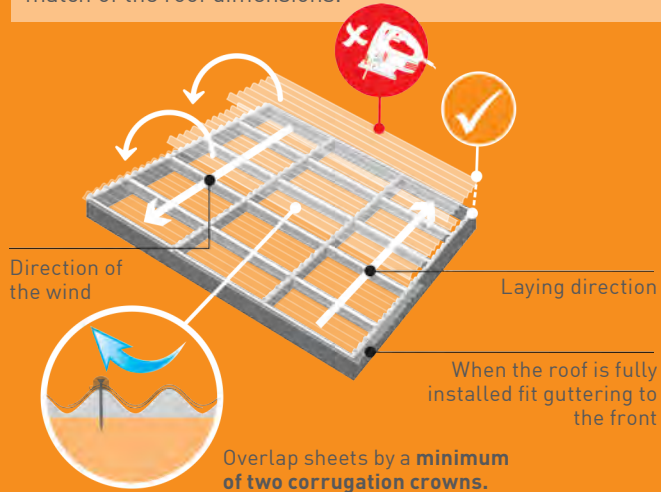


## CORRAPOL® : Installation Guide continued

### 3

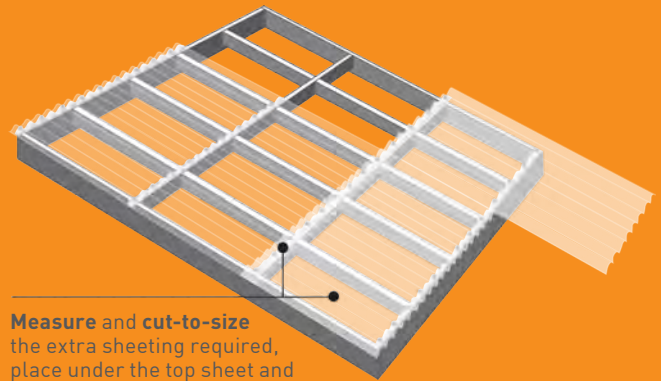
Install **REMAINING** CORRAPOL® sheet and eaves fillers

**TOP TIP** – To **avoid verticle cuts**, **overlap** the CORRAPOL® sheets by more than 2 corrugation crowns to the **EXACT** match of the roof dimensions.



### 4

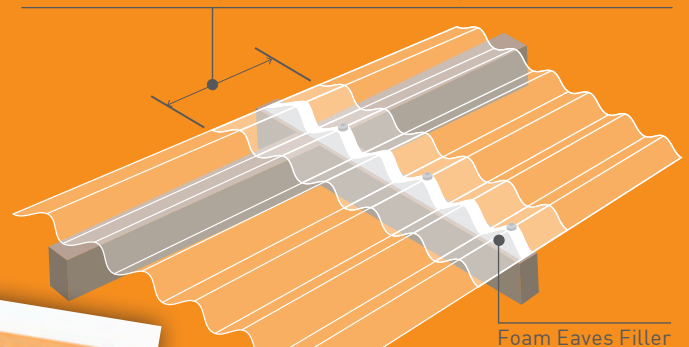
Installation of larger roofs – **OVERLAPPING OF SHEETS**



**Measure and cut-to-size** the extra sheeting required, place under the top sheet and screw fixings through both layers of the CORRAPOL® at every second corrugated crown.

#### **JOINING SHEETS (END TO END):**

If sheets need to be joined end to end, **ensure an over lap of at least 150mm for a 10° slope or 300mm for a 5° slope.**



Foam Eaves Filler

## CORRAPOL®-BT

The CORRAPOL®-BT range is available in four colours and the profile matches the CORRAPOL® STORMPROOF high profile, the CORRAPOL®-PVC and the CORRAPOL®-GRP ranges meaning you can create a wide variety of roof solutions. Please request the CORRAPOL®-BT brochure for more information.



### **WARNING : REGISTERED DESIGNS & PATENTS**

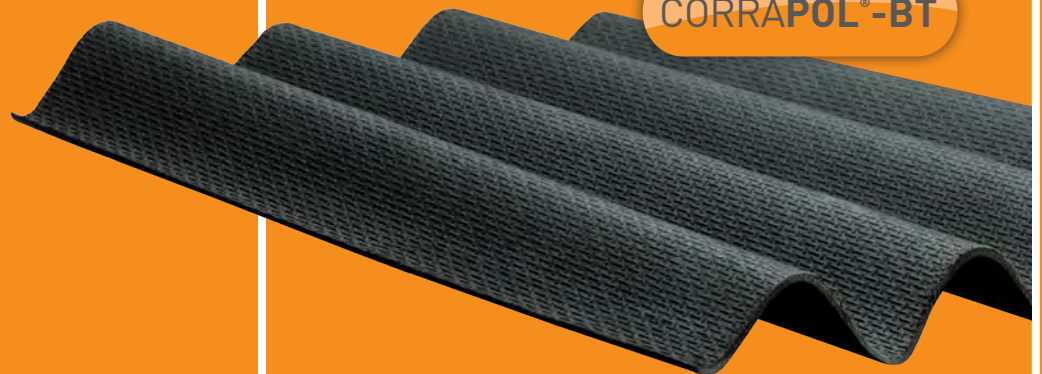
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Inasmuch as Clear Amber have no control over the circumstances in which our material may be used, or site specific parameters, we cannot guarantee that any particular results will be achieved. Users should carry out their own tests to determine the suitability of the material for their application.

# CORRAPOL<sup>®</sup>-BT

## Durable Bitumen **Corrugated Sheet** Technical Guide



## Waterproof Roofing Sheet

CORRAPOL®-BT is a Corrugated Bitumen impregnated sheet designed for waterproof roofing of sheds, log stores, garages and other outbuildings.

Available in several colours CORRAPOL®-BT sheets provide a roofing solution to suit many applications. CORRAPOL®-BT sheets are lightweight, easy to cut and quick to install.

Samples of CORRAPOL® sheets are readily available for testing and specification purposes.

### Common uses:

- ✓ Sheds
- ✓ Garages
- ✓ Log Stores
- ✓ Children's Playhouses

### Qualities:

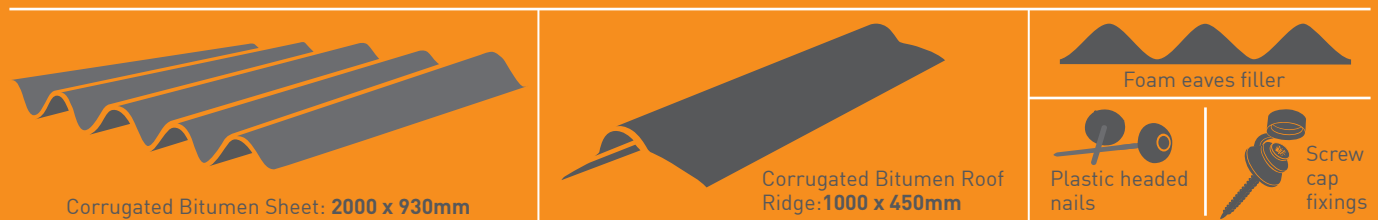
- ✓ Lightweight
- ✓ Easy to Cut to Size
- ✓ Simple Overlap Joints
- ✓ Fast to Install



## CORRAPOL®-BT : Colour Options



## CORRAPOL®-BT : Installation Guide

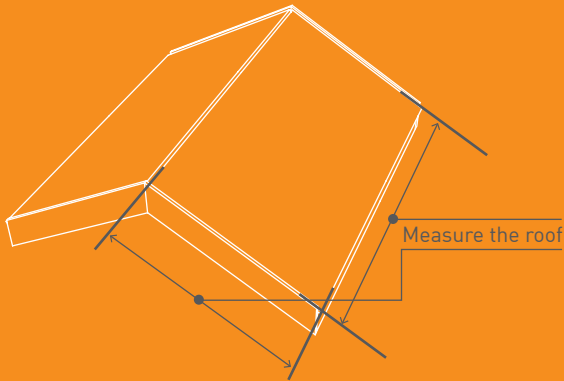


### Tools required

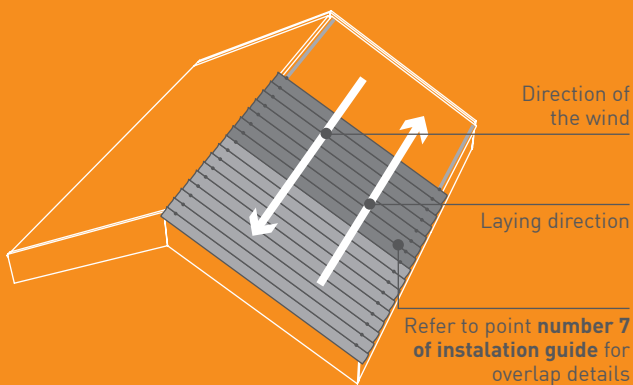


## Installation

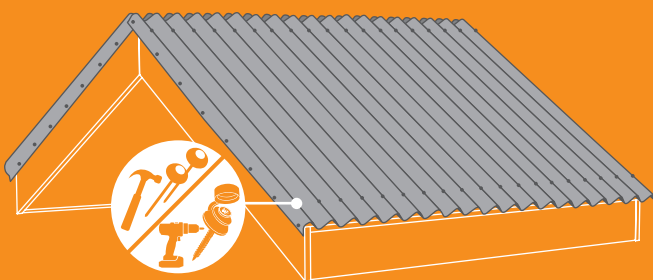
- 1 Take all **MEASUREMENTS** of the roof



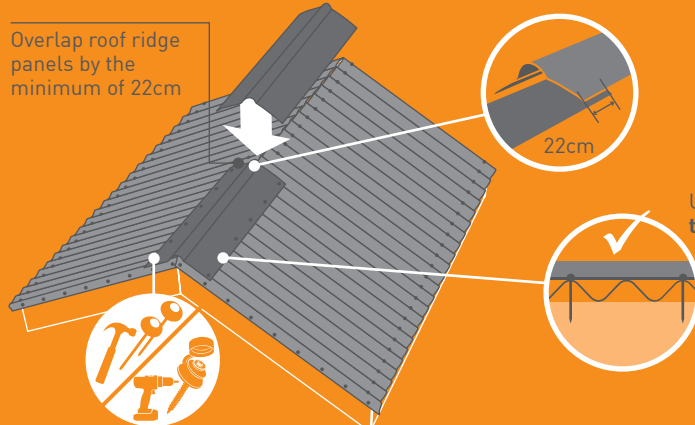
- 3 Install the **SECOND** CORRAPOL®-BT roofing sheet



- 5 **FOLD** and **FIX ROOF VERGES** on all sides of the roof

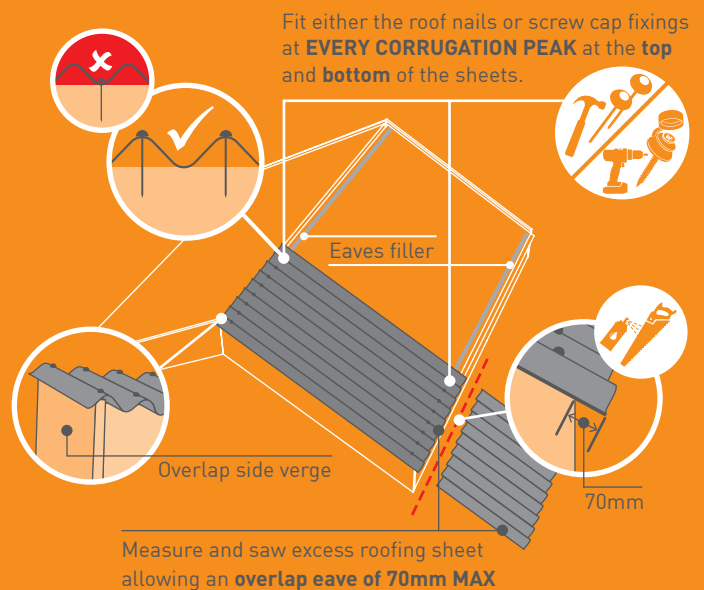


- 6 Install CORRAPOL®-BT **ROOF RIDGE** panels



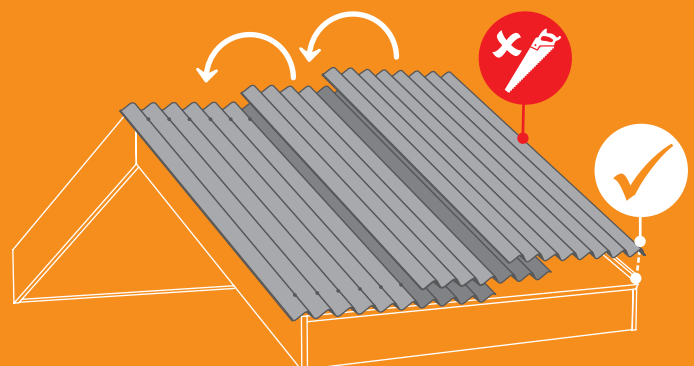
- 2 Install the **FIRST** CORRAPOL®-BT roofing sheet

**IMPORTANT** – To keep the roof watertight and weatherproof, install **CORRAPOL®-BT Eaves Fillers** along fixing points of the roof, making sure you **use either the plastic headed nails OR screw cap fixings** through the corrugation peak and not the trough.



- 4 Install the **FINAL** CORRAPOL®-BT roofing sheet

**IMPORTANT** – To **avoid verticle cuts**, overlap the roofing sheets by **more than two corrugation peaks** to the **EXACT MATCH** of the roof dimensions.



Use **nail or screw fixings** every **two corrugation peaks**



# CORRAPOL®-BT : Installation Guide CONTINUED

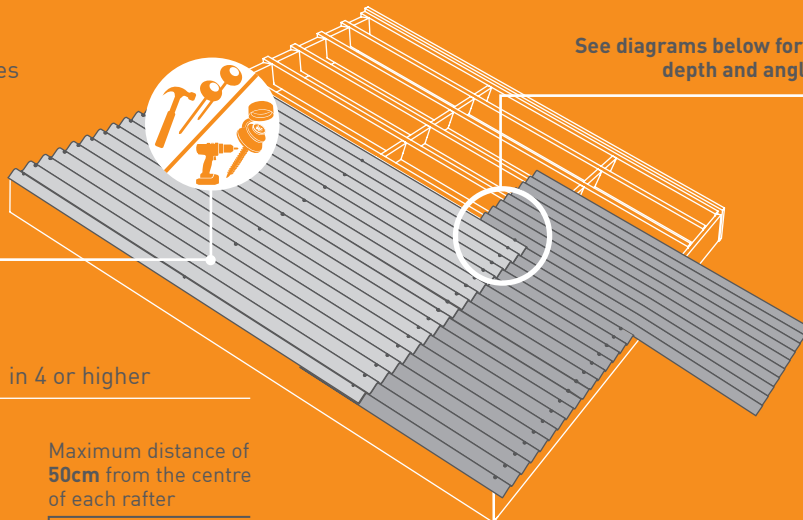
## 7

### DETERMINE OVERLAPS for larger slopes

Fix intermediate roof supports every **two** corrugation peaks



See diagrams below for overlap, depth and angle details

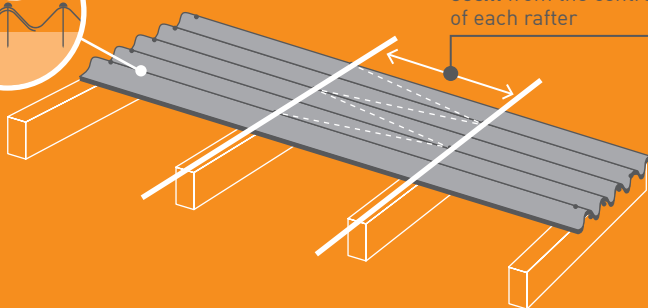


#### Roof slopes of 15° or greater: Gradients of 1 in 4 or higher

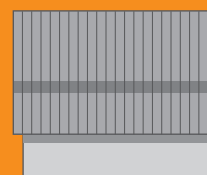


Overlap every sheet by **one** corrugation peak

Maximum distance of **50cm** from the centre of each rafter



#### Overlapping sheets

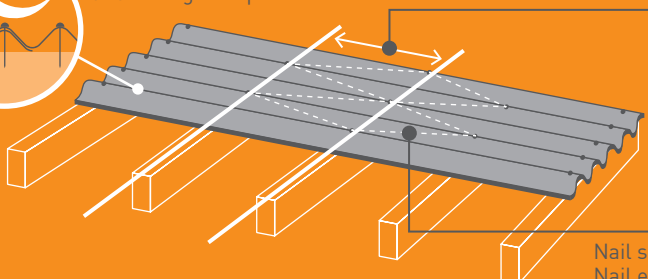


#### Roof slopes of 10° – 15°: Gradients of 1 in 6 – 1 in 4

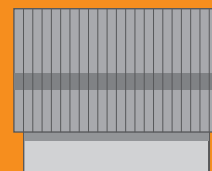


Overlap every sheet by **one** corrugation peak

Maximum distance of **40cm** from the centre of each rafter

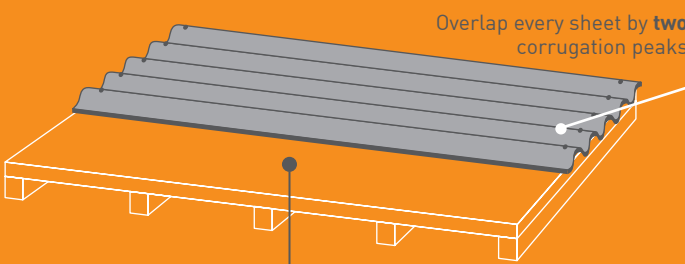


#### Overlapping sheets



Nail sheets every corrugation at the eaves and sheet overlaps.  
Nail every other corrugation on intermediate purlins.

#### Roof slopes of 5° – 10°: Gradients of 1 in 11 – 1 in 6

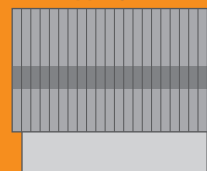


Overlap every sheet by **two** corrugation peaks



Fully supported timber boarded roof deck

#### Overlapping sheets



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**SNAPA®**

## **Snap Fix Glazing Bar System Technical Guide**



## Snap Fix Rafter Top Glazing Bar

The SNAPA® Rafter Top Glazing Bar is extruded as a low cost budget glazing bar. The SNAPA® glazing bar works well with 10mm, 16mm, 25mm, 32mm and 35mm AXIOME® multiwall polycarbonate sheet. Whilst SNAPA® bars are ideal for smaller DIY type projects, where greater longevity or strength are required, ALUKAP®-XR glazing bars are recommended.

The SNAPA® bar is very fast to install with an easy snap-fix connection.

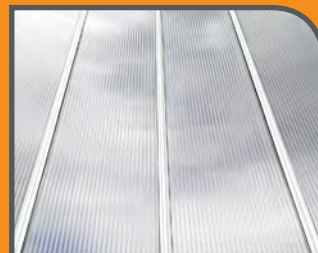


### Common uses:

- ✓ Canopies
- ✓ Covered Decking Areas
- ✓ Carports
- ✓ Verandas
- ✓ Covered walkways
- ✓ DIY

### Qualities:

- ✓ Quick snap fix fitting
- ✓ Installer friendly
- ✓ Easy to cut
- ✓ Economical solution



## SNAPA® : Lean-to Bar

SNAPA® bar glazing system has been designed and manufactured to with multiple click connection points so that it will work well with AXIOME® multiwall of almost any thickness. The high quality PVC profiles are extruded with a significant wall thickness providing a high degree of strength and rigidity.

### Lean-to Bar



Length	Description	Code
2.0m	SNAPA® Lean-to Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG18W
2.5m	SNAPA® Lean-to Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG19W
3.0m	SNAPA® Lean-to Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG13W
4.0m	SNAPA® Lean-to Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG15W
5.0m	SNAPA® Lean-to Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG14W
6.0m	SNAPA® Lean-to Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG16W

## SNAPA® : Gable Bar

Finishing off the last rafter on a roof has previously been a challenging compromise of time, aesthetics, and quality of waterproof seal. The new SNAPA® Gable Bar has been specially manufactured to overcome these challenges and now provides a fast and easy way to finish the last rafter glazing bar on any AXIOME® multiwall roof. This SNAPA® Gable bar now provides a single glazing bar solution with an easy snap fix connection, which finishes off the end of the roof with a single snap down action.

### Gable Bar



Length	Description	Code
2.0m	SNAPA® Gable Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG320W
2.5m	SNAPA® Gable Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG325W
3.0m	SNAPA® Gable Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG330W
4.0m	SNAPA® Gable Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG340W
5.0m	SNAPA® Gable Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG350W
6.0m	SNAPA® Gable Bar 10, 16, 25, 32, & 35mm - Inc Endcap White	AG360W

## SNAPA® : Endcap

The SNAPA® Endcap is designed to provide an aesthetically pleasing finish to the ends of the SNAPA® glazing bar. A simple screw with cap locates in to the top of the bar and covers the end section of the glazing bar whatever height of glazing is used.

### Endcap



Description	Code
SNAPA® Bar Endcap - White	AG17W

## ALUKAP®-XR : Endstop Bar

Issues with the lower end of polycarbonate glazing panels gave rise to the innovation of a substantial drip trim that will not warp, discolour, crack or fall off like the inferior plastic equivalents. This crucial area is all too often left to chance, and can cause costly damage to the glazing. The ALUKAP®-XR End Stop, puts a stop to that!

### Endstop Bar



Length	Code (6.4mm)	Code (10mm)	Code (16mm)	Code (25mm)	Code (28mm)	Code (35mm)	Code (78mm)
3.0m	-	AKX106	AKX112	AKX118	-	AKX130	-
3.6m	-	AKX108	AKX114	AKX120	-	AKX132	-
4.8m	AKX104	AKX110	AKX116	AKX122	AKX128	AKX134	AKX140

## Designed to Suit Almost any AXIOME® Multiwall Thickness

SNAPA® bar glazing system has been designed and manufactured to with multiple click connection points so that it will work well with AXIOME® multiwall of almost any thickness. The high quality PVC profiles are extruded with a significant wall thickness providing a high degree of strength and rigidity. The diagrams below show the SNAPA® bar being used with each option of AXIOME® multiwall sheet.

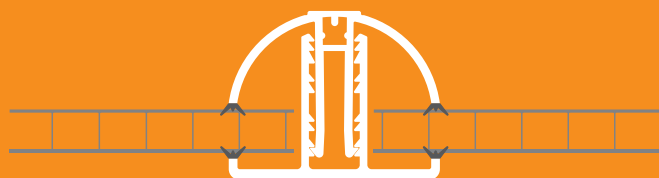


Diagram showing SNAPA® bar with **10mm AXIOME®**

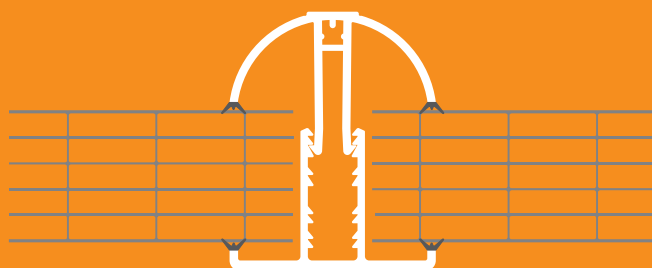


Diagram showing SNAPA® bar with **32mm AXIOME®**

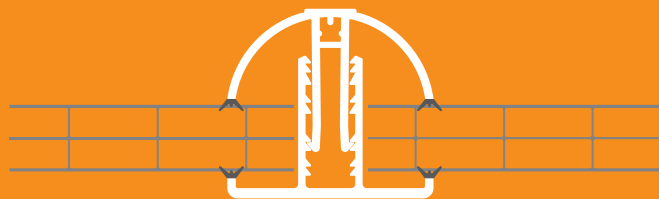


Diagram showing SNAPA® bar with **16mm AXIOME®**



Diagram showing SNAPA® bar with **25mm AXIOME®**

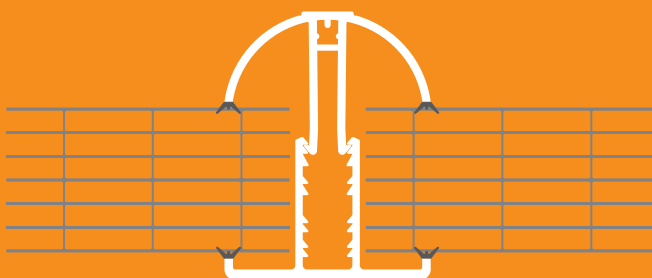
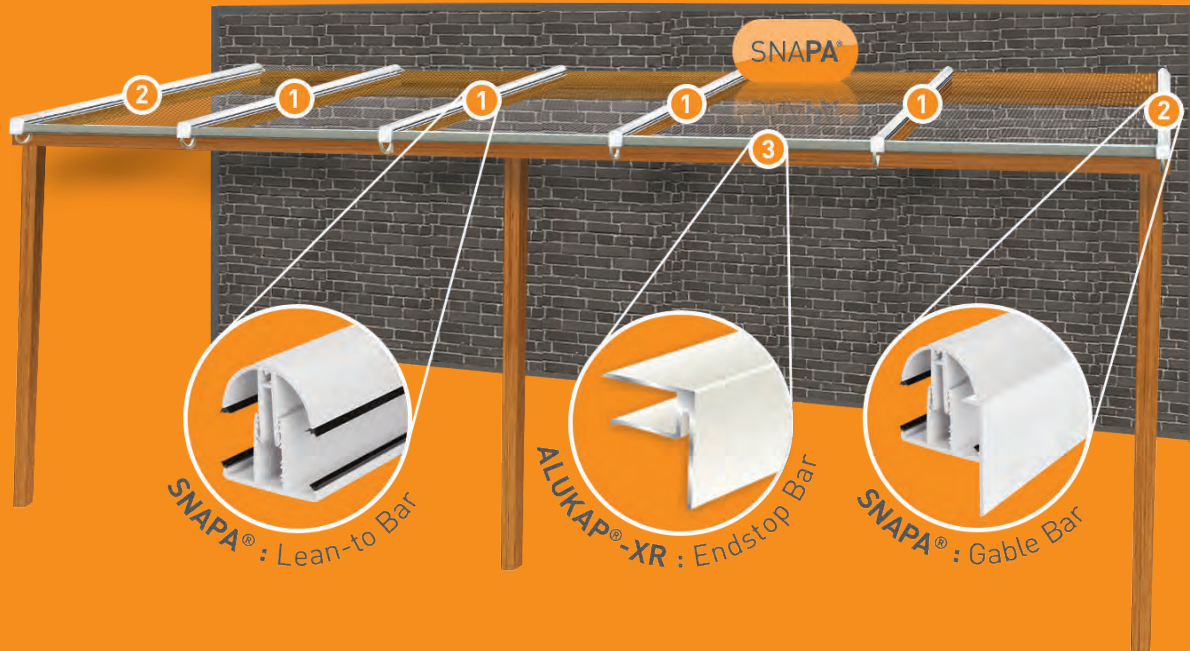


Diagram showing SNAPA® bar with **35mm AXIOME®**



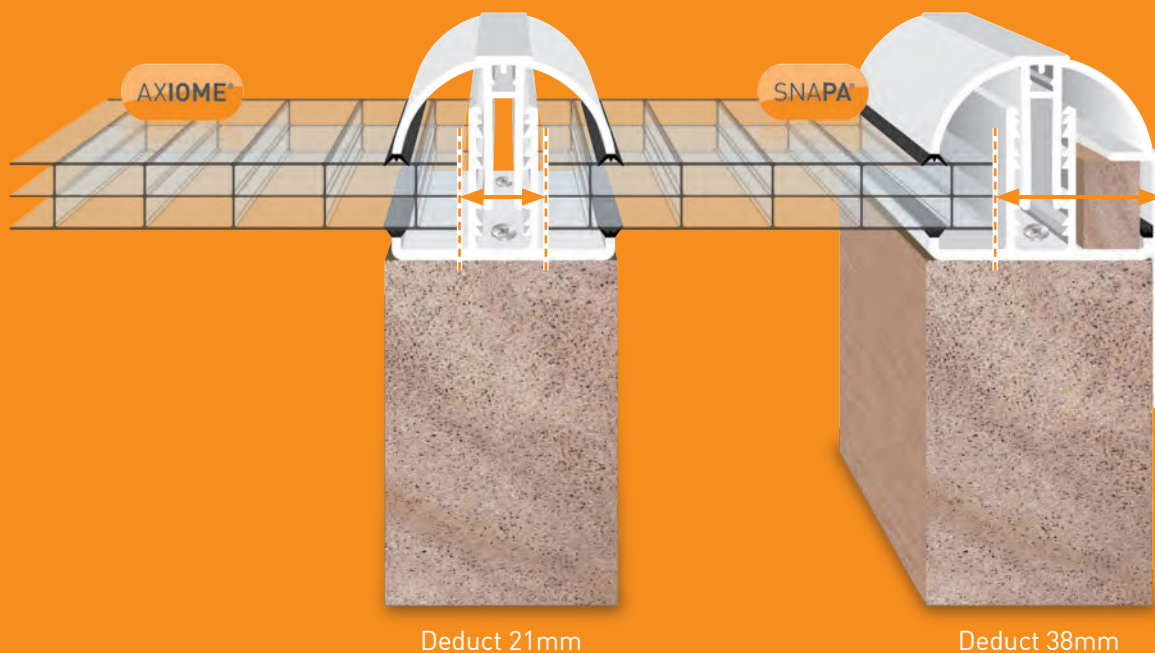
## SNAPA® : Typical Roof Component Assembly Example

### SNAPA® Rafter Supported Lean-to



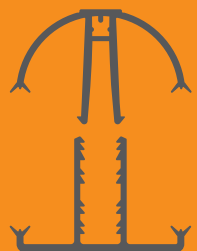
## SNAPA® : Glazing Deductions

Glazing deduction guidelines for the SNAPA® bar system are shown on this diagram. Samples are readily available to users to test and verify the exact sizes according to their site requirements.

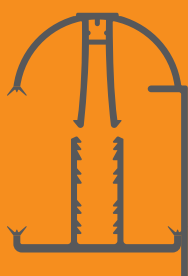




## SNAPA® : Installation Guide



SNAPA® Base Bar and Standard Top Clip Bar



SNAPA® Base Bar and Gable Top Clip Bar



SNAPA® End Cap



ALUKAP®-XR  
Anti-dust Tape  
(breathable)



Timber battens



Endstop Bar

## Tools required



Protective gloves and glasses



Circular saw and a cordless screwdriver with a drill bit holder / extension



Tape measure, Philips headed screwdriver, soft / rubber headed hammer, a straight edge tool and AXIOME® compatible sealant plus a sealant gun

## SNAPA® : Installation Guide

1

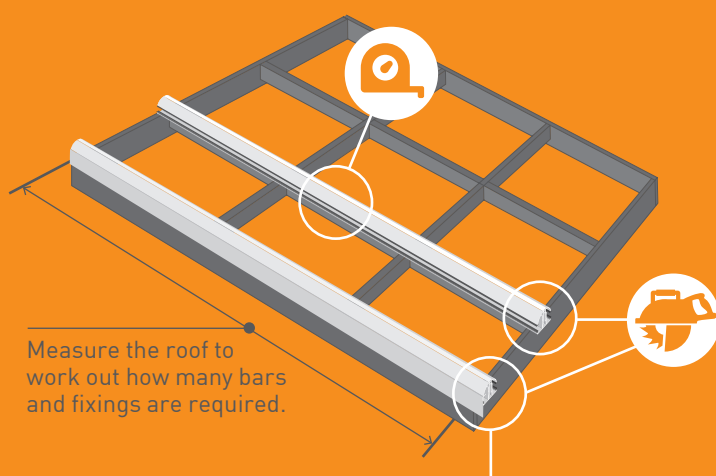
Take all **measurements** of the roof and glazing bars

**IMPORTANT:** Wear sufficient protective clothing

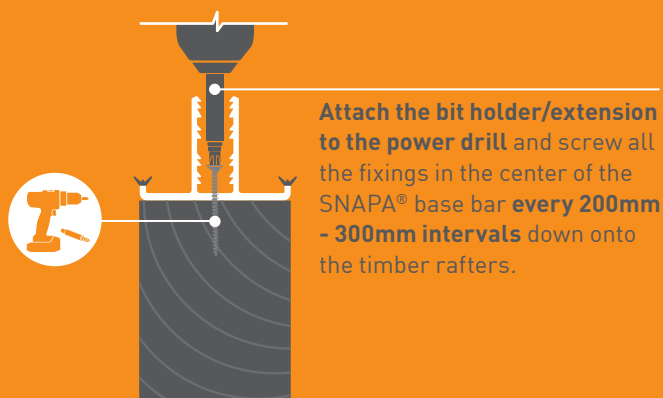
2

Fix **all the base bars** to the top of the timber rafters

**NOTE:** Remove the protective amber film supplied on the SNAPA® base bar before fixing them to the rafters.



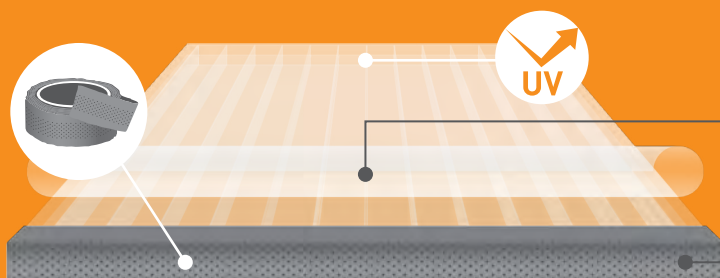
Measure and cut the SNAPA® bar and SNAPA® Gable bars to length, **30mm-40mm longer than the rafter** so they overhang into the correct position for the gutter end of the roof.



**Attach the bit holder/extension to the power drill** and screw all the fixings in the center of the SNAPA® base bar **every 200mm - 300mm intervals** down onto the timber rafters.

### 3 Prepare the AXIOME® sheets by **applying the ANTI-DUST TAPE**

**IMPORTANT** – Store the AXIOME® sheets in a **clean, dry area**. All adhesives suffer reduced initial bonding strength in cold conditions – **avoid applying tape below 5°C**. The AXIOME® branded tape side is **UV protected**.



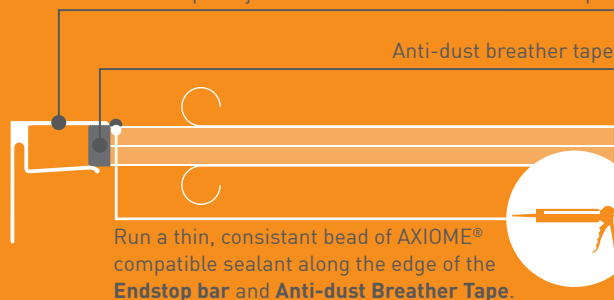
Ensure that you are working in a **clean dry area**, **pull the protective film back on both sides approximately 100mm from the open edge**, taking care not to scratch the surface.

Stick the **AXIOME® Anti-dust Breather Tape** onto the top surface in a straight line from one side to the other, allowing enough to wrap around and bond to the underside. **If it is necessary to join the tape mid-panel, ensure that there is a minimum 25mm overlap.**

### 4 Apply the **Endstop bar** to the AXIOME® sheet

**NOTE** - We recommend using the **ALUKAP®-XR Endstop bar** as a sheet closure at the bottom sealed end.

Cut the Endstop bar to the width of each AXIOME® sheet, and **push-fit on partway ONLY** so that the open edge of the Endstop bar just covers the anti-dust breather tape.



Run a thin, constant bead of AXIOME® compatible sealant along the edge of the **Endstop bar** and **Anti-dust Breather Tape**.

### 5 **PUSH** the **Endstop Bar** into place

Push the **ALUKAP®-XR Endstop bar** fully into place, so that the leading edge slides over the bead of sealant, creating a seal that eliminates capillary action.



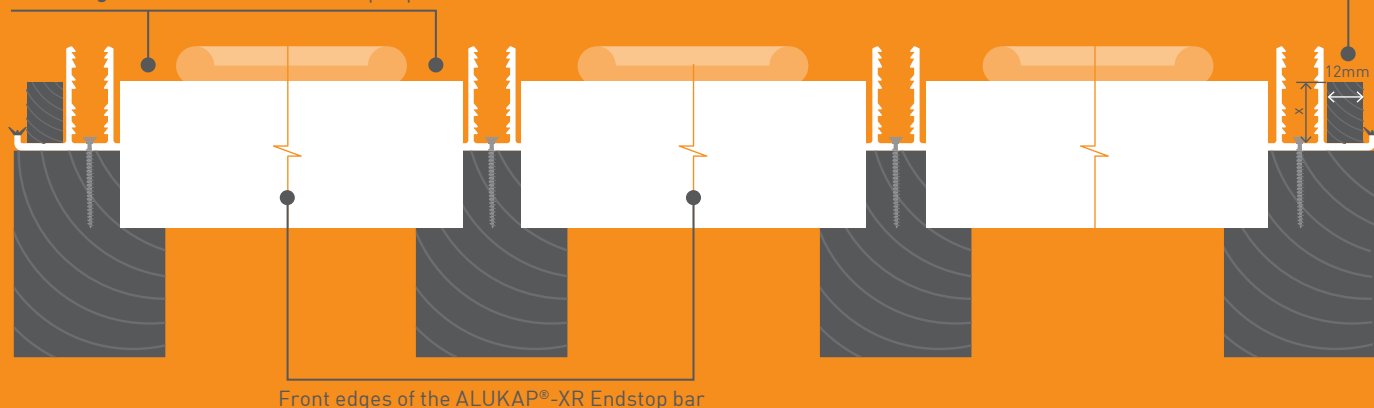
The AXIOME® sheet is now ready for installation.

### 6 Fit the **AXIOME® sheets** and **Endstop bars** to the SNAPA® base bars

Install the AXIOME® sheets into position allowing for a **2-3mm gap** either side for expansion.

**Pull back the protective film about 25mm on the remaining sides** to allow for the bar top caps.

**Measure and cut timber battens** to be placed on either side of the roof structure to give support to the SNAPA® Gable Top Clip Bars. The battens **width is 12mm** and **height (x)** equates to the **glazing thickness plus 2mm**.



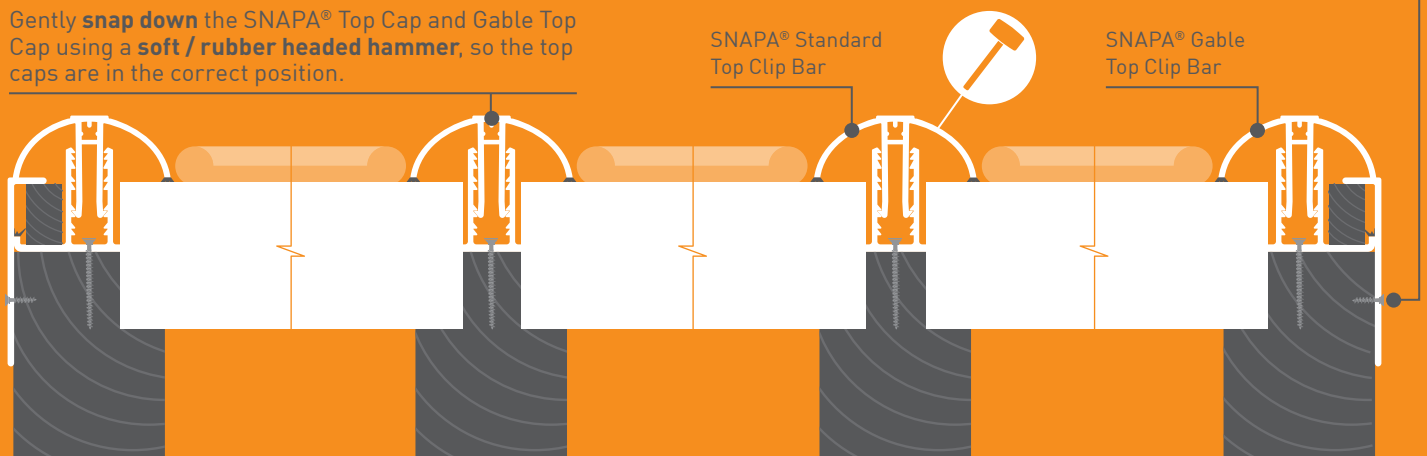
Front edges of the ALUKAP®-XR Endstop bar

## 7

Fit the **SNAPA® Top Clip Bars** to fix the glazing in place

Gently **snap down** the SNAPA® Top Cap and Gable Top Cap using a **soft / rubber headed hammer**, so the top caps are in the correct position.

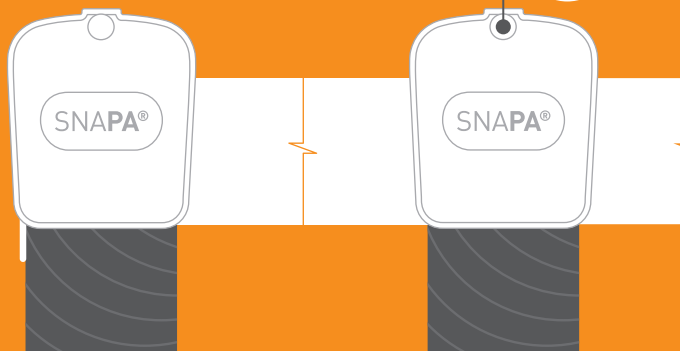
Add extra anchoring screws for roofs in exposed areas.



## 8

Remove the film and fit the **Endcaps** to the glazing bars

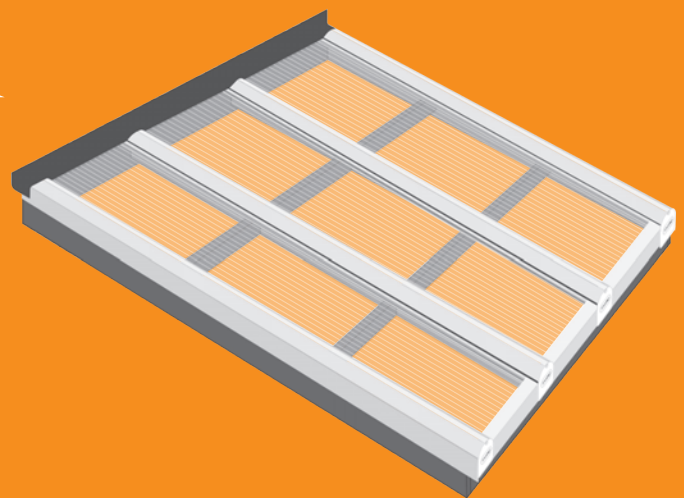
Screw on the **SNAPA® Endcap** covering the **open ends of the SNAPA® bars** to creating a neat finish to the roof



## 9

Completed roof structure

**IMPORTANT** – Once the SNAPA® bars and AXIOME® sheets have been fully installed, **remove the protective film from the top bars and sheets**, making sure that it's clean before removal. To clean the AXIOME® sheet use plenty of clean, soapy water and a soft, abrasive-free cloth.



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