ALSYNITE ONE | LASERLITE® POLYCARBONATE

INSTALLATION GUIDE

Version: 2.0 March 2026 | Issued by Alsynite One NZ Ltd

Related Documents: Laserlite® BPIR Declaration

IMPORTANT NOTICE

Carefully read all installation instructions before you start. For installation in cyclonic regions, contact your nearest Alsynite NZ office for special instructions.

SAFETY INFORMATION

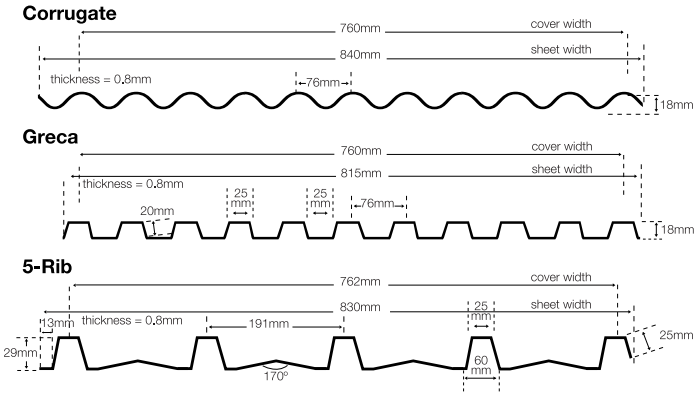
- Always exercise extreme care when working on a roof. Polycarbonate sheeting is not designed to support foot traffic. Always use crawling boards or roof ladders supported on structural members. Always wear eye protection when using cutting tools.
- For safety precautions, Alsynite recommends the use of safety mesh for installations above 3m.
- Rainwater collected from roofs should be appropriately filtered or treated before being used for potable water.. Check with your local water authority for further advice.

INSTALLATION INFORMATION

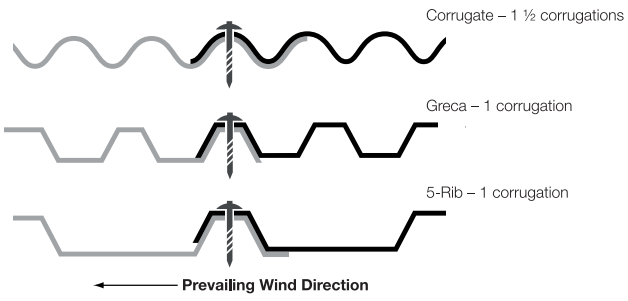
- Minimum recommended roof pitch 5° (88 mm rise per metre). This will ensure adequate water run off.

- Allow for ventilation, particularly at the highest point to minimise heat build-up and provide air circulation. Good ventilation will also minimise condensation in cold weather.
- Ensure the UV surface protected side faces the sun. This is the side of the label and the inkjet marking. When installed as a wall or fence it is recommended that the UV protected side is facing the most sun. The life of the sheet may be shortened and discolouration may occur due to the unprotected side being exposed to UV radiation.
- The sheet can be easily cut with a pair of shears, a fine-toothed handsaw or a circular saw with a cut-off blade suitable for plastic.
- Temperature changes will cause expansion and contraction, so make allowances for thermal movement. Fixings must be centred within the expansion hole to allow movement.
- To ensure maximum performance of the sheet, and to avoid buckling, fixings must be installed through oversized holes (approximately 11–12 mm) to allow for thermal movement.

PRODUCT RANGE



SIDE LAPS



WEIGHT	CORRUGATE	GRECA	5 RIB
Kg per Lineal Metre	0.92	0.93	0.92
Kg per m2	1.10	1.13	1.11

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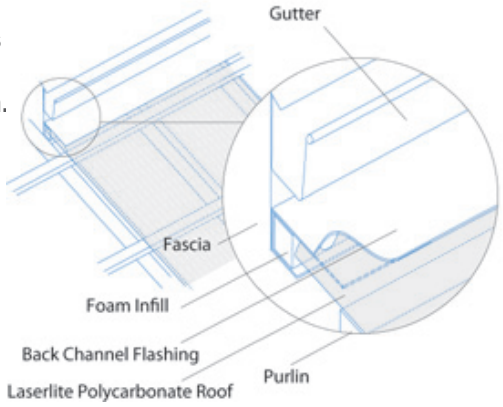
FIXING SPACINGS

In normal conditions, use the fixing spacings shown **in the table below.** As a guide, you will need approx. 7 fixings per lineal metre. This depends on your purlin spacings and wind conditions. In high wind areas, fix corrugated and greca on every second corrugation on each purlin/batten. It is suggested that barge capping be used. Fix the sheet through the crests for roofing and through the valleys for walls.
Use 65mm fixings for 5-Rib and 50mm fixings for Greca/Corrugated.

PROFILE	END PURLINS	MID PURLINS
Corrugated	Every 2nd Crest	Every 3rd Crest
Greca	Every 2nd Crest	Every 3rd Crest
5-Rib	Every Crest	Every Crest

For roof laying, start with the lower sheets first, keeping side laps away from prevailing wind. Allow an overhang of 50mm.

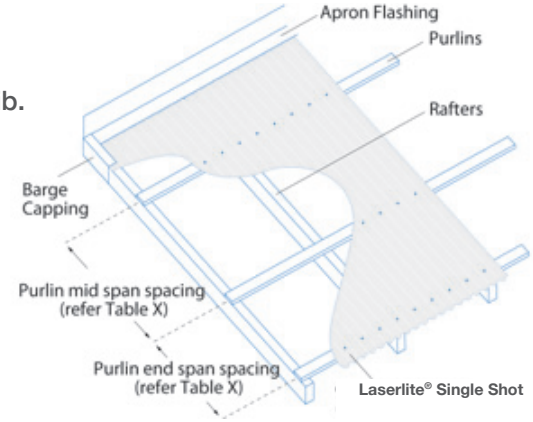


MAXIMUM PURLIN SPACINGS

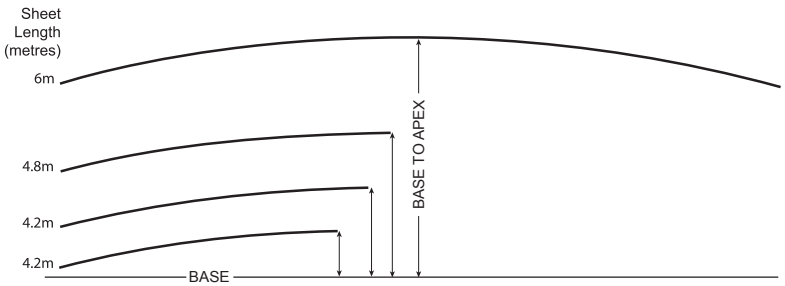
For roofing, purlin/batten spacings should be no more than those shown in the table below. For curved structures, the maximum radius of 6,000mm for Corrugated and Greca profiles and 14,000mm for 5-Rib. For walls, nogging spacings should be no more than 1,200mm.

Use Noise Stop Tape on all battens, purlins or noggings to minimise the noises associated with expansion and contraction.

PROFILE	END SPAN	MID SPAN
Corrugated	800mm	1000mm
Greca	900mm	1200mm
5-Rib	900mm	1200mm



MAXIMUM RECOMMENDED CURVES



SHEET LENGTH	DEPTH OF CURVE	
	CORRUGATE/GRECA	5-RIB
6.0m	800	600
4.8m	600	400
4.2m	400	300
3.6m	200	200

CHEMICAL PROPERTIES: Laserlite® Polycarbonate Roofing is affected by methylated spirits, benzene, petrol, ketones, acetone, phenols, chlorinated and aromatic hydrocarbons, petroleum-based paints, abrasive cleaners and solvents.
HANDLING, STORAGE AND CLEANING: Store sheets on a flat surface in a well protected and shaded area, out of direct sunlight. Stacked sheets stored in the sun will cause heat build-up and possibly distortion, even if covered. If damage occurs in this situation, warranty is void. Prevent moisture getting between sheets as this may cause whitening. Clean sheets regularly with warm soapy water (mild detergent) and a soft sponge. Take care not to scratch the sheet. Hose down thoroughly.

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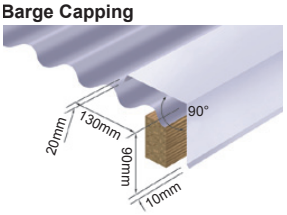
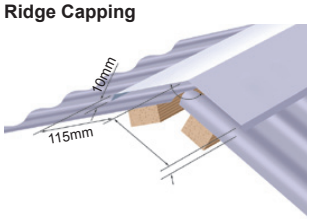
POLYCARBONATE FLASHINGS

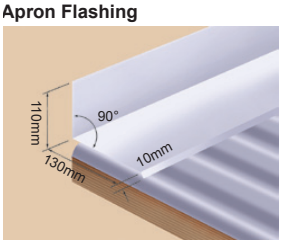
Barge Capping



Ridge Capping

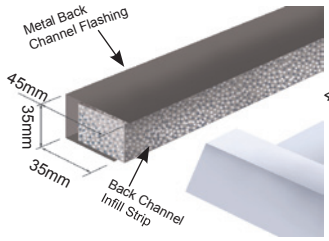


Apron Flashing

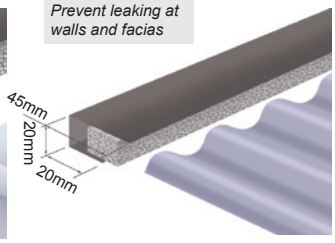


Note: Available in Clear colour and 3m and 6m lengths. Other flashings dimensions can be supplied. Contact us for more information.

METAL FLASHINGS



Prevent leaking at walls and facias



Available in Grey and Titania colour and 3.6m lengths.

FOAM INFILLS & TAPES

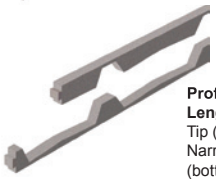
Foam infills revent leaking at walls and facias and noise stop tape reduces creaking.

Foam Infills
Colour: White

Prevents rain, dust and wind entering eaves

Profile: Greca
Length: 940mm

Profile: Corrugate
Length: 975mm



Profile: 5-Rib
Length: Wide Tip (Top) 950mm Narrow Tip (bottom) 750mm

Noise Stop Tape
Length: 25m

FIXINGS

Fix through the sheet crest when used for roofing applications. Pre drill fixing holes 2–3 mm oversized to allow for thermal expansion. All Alsynite fasteners are mechanically plated to comply with AS 3566 Class 4. The Laserlite® Single Shot Polycarbonate Fastener pre-drills a 12mm nominal oversized hole to allow for sheet expansion with its unique blade cutter in one step, saving up to 50% installation time. No more pre-drilling is required.

Help your Laserlite® perform better.

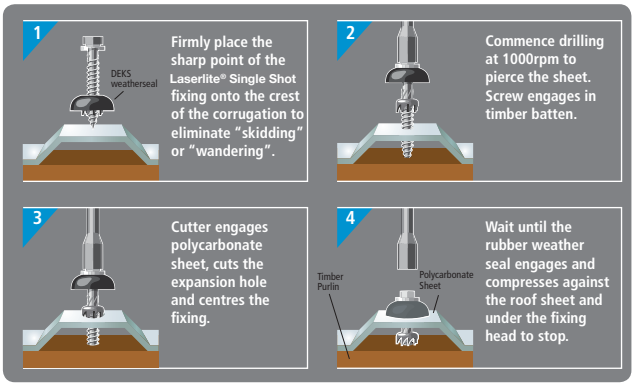
Prevent your Laserlite® Polycarbonate buckling due to changes in temperature by cutting an oversized hole in one action.

Save 50% Installation time*

Unique blade cuts an oversized hole in the Laserlite® Polycarbonate and its strengthened tip drills through the steel or timber batten all in one action. No more pre-drilling required.

Specifications

- Coated to AS3566 Class 4
- 12 gauge, 50mm and 65mm lengths
- 26mm DEKS EPDM washer and hex head
- Superdrive self drilling tip
- Drills through timber and steel up to 1.9mm thick
- Cuts a 12mm expansion hole
- Suitable for use at a drill speed of 1,000 RPM



For very high wind zones contact us for specific installation fastenings recommendations.

CAUTION: To maximise the life of your Laserlite® roofing, Alsynite recommends to avoid exposing your polycarbonate sheeting to excess heat from patio heaters. A distance of 1m should be kept between the sheets and the heater, adequate ventilation at all times and temperature to be below 90°C beneath sheeting. If temperature underneath your sheet rises above 90°C, immediately remove the patio heater from underneath the polycarbonate sheeting.

IMPORTANT: These instructions are designed to prevent leaking and alleviate the requirement for sealants. Sealants, especially silicone are incompatible with polycarbonate. They will damage the sheet, restrict expansion and contraction, and void the warranty. Use the appropriate flashings and infill strips to complete your project.