

SOLASAFE

POLYCARBONATE SHEETING



SOLASAFE blocks

Enjoy the freedom of outdoor living safe from UV danger

Solasafe polycarbonate sheeting provides 99.9% protection from harmful UV rays that cause sunburn and skin damage.

Outdoor family and children's play areas are part of the New Zealand lifestyle, and adding an outdoor living area to your home can enhance your family life and add value to your property.

Selecting the best roofing solution is the first step to ensure you get the maximum benefit from your investment.

Look at the benefits!

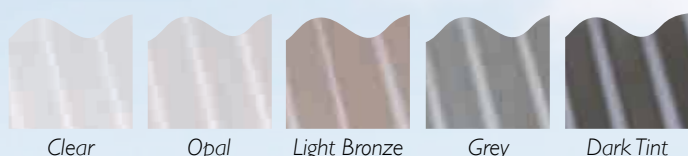
Solasafe is available in a range of colours and profiles to suit your home and surroundings. Clear sheets transmit some 90% of glorious daylight. See the 'light' and 'heat' transmission tables for the percentage applicable to the various colours.

In cooler climates clear sheeting allows good heat transmission while in hot climates tinted sheets provide a reduction in transmitted heat as well as reduced glare. Often tinted sheets are used to blend in with existing colour schemes or other roofing.

Inbuilt UV protection

Today UV rays are stronger than ever due to the degree of ozone layer depletion, Solasafe polycarbonate provides two-way protection.

Solasafe not only blocks 99.9% of harmful UV rays so you can enjoy the sun without sunburn, the integral surface treatment prevents UV from degrading the sheets and helps to prolong its life under the harsh New Zealand sun.



Fire Protection

Solasafe has achieved an Internal Surface Finish Group number of I-S according to performance determined under the conditions described in ISO 9705:1993 required by NZBC clause C3.4(A). Performance is achieved through MBIE Guidance on European Classification.

Strong and lightweight

Solasafe sheeting is manufactured from polycarbonate, an advanced polymer with optical and physical properties that can't be matched by other materials. With impact strength up to 150 times that of tempered glass, normal hail won't cause damage.

Solasafe polycarbonate is easy to handle and install. Sheets can be curved, so you can create a great look. Solasafe is stable at temperatures of -40° to +110°. It does not distort or soften in heat but it is advisable to **store under cover** prior to installation.

Peace of mind lifetime warranty

Solasafe polycarbonate sheeting is warranted by Ampelite to give long service under normal usage. Protection against excessive yellowing of the sheet (as detailed in Warranty) is for lifetime from date of purchase.

Damage from heavy hail up to 25mm in diameter in high winds is covered for ten years.



Correct installation is important

Carefully follow all Ampelite fixing instructions in this brochure. Allowance needs to be made when drilling screw holes so that the sheet can move freely as it expands and contracts. Screw holes must have a minimum diameter of 10mm for sheet lengths up to 4.2m. Lengths over 4.2m and up to 6.0m require 12mm

out 99.9% of the har

diameter holes. To fix corrugated and greca profiles use 50mm x 10g screws and for the 5-Rib profile use 65mm x 12g screws. All screws must be fitted with 26mm Ampelite grey domed weather-proof seals. If using other fixings or materials they must be compatible with polycarbonate sheeting e.g. Neoprene or EPDM. **Avoid over tightening!**

An alternative method of fixing which also speeds up installation, is to use 'Clearfix' combination drill/cutter and weather-proof seal assemblies. These fasteners self drill and create the correct clearance holes in the sheet in one operation. To reduce noise caused by friction due to expansion and contraction we recommend using Ampelite Anti-noise tape, (a 25mm x 3mm white self adhesive tape) along the top of battens.

Solasafe is UV protected on one side only. Please read the label on the sheet prior to installation and check each sheet label thoroughly to ensure that the UV protected surface faces the correct way. Sheets incorrectly installed will not withstand the weathering, and discolouration will result. When used vertically, face the protected side of the sheet in the direction of the most intensive sunlight or exposure to weather.

If new sheeting is to be used with existing polycarbonate sheeting please check your colour prior to installation as some minor variation may occur.

When polycarbonate is correctly installed additional sealing is seldom needed. If sealing is required at side or end laps, use a co-polymer sealant specifically formulated to be compatible with polycarbonate.

Incompatible sealants weaken the sheeting and their use voids the Warranty. Refer to Ampelite for the best sealants.

Cleaning

Use only a soft brush and soapy water. No abrasives should be used. To prevent possible staining we recommend cleaning when ever bird soil is apparent.



Ample UV Rays

Light transmission

| | Clear | Opal | Light Bronze | Grey | Dark Tint |
|------------|-------|------|--------------|------|-----------|
| Corrugated | 91% | 55% | 36% | 26% | 17% |
| Greca | 91% | 55% | 36% | 26% | N/A |
| 5 Rib | 91% | 55% | 36% | 26% | N/A |

Light transmission determined in accordance with AS/NZS 4257.4
N/A – Not Available

Heat transmission

| | Clear | Opal | Light Bronze | Grey | Dark Tint |
|------------|-------|-------|--------------|------|-----------|
| Corrugated | 82.5% | 35.2% | 60.6% | 50% | 38.9% |
| Greca | 82.5% | 35.2% | 60.6% | 50% | N/A |
| 5 Rib | 82.5% | 35.2% | 60.6% | 50% | N/A |

N/A – Not Available

Sheet coverage

| | 1 | 2 | 3 | 4 | 5 |
|------------|-----|------|------|------|------|
| Corrugated | 760 | 1620 | 2380 | 3140 | 3900 |
| Greca 760 | 760 | 1570 | 2330 | 3090 | 3850 |
| 5 Rib | 760 | 1570 | 2330 | 3090 | 3850 |

Sheet lengths

| | | |
|--------------------------|------------|---------------------------|
| Clear | 1.8 - 6.0m | All Profiles |
| Opal, Light Bronze, Grey | 1.8 - 6.0m | Greca, Corrugated, 5 Rib* |
| Dark Tint | 1.8 - 6.0m | Corrugated only |

Available lengths: metres 1.8, 2.1, 2.4, 2.7, 3.0, 3.6, 4.2, 4.8, 5.4, 6.0

Purlins and rafters maximum spans

| | End | Mid |
|---------------------|-----|------|
| Corrugated (0.8mm*) | 800 | 900 |
| Greca 760 (0.8mm*) | 900 | 900 |
| 5 Rib (0.8mm*) | 900 | 1000 |

*Nominal thickness

When rafter spacing coincides with sheet overlaps the roof appears join free. Note: We recommend the use of Anti-noise self adhesive foam tape along Battens or Purlins to minimise friction noise generated by expansion and contraction of sheet.

If sealing is required at overlaps or fixings, **use only a co-polymer** sealant which is specifically formulated to be compatible with polycarbonate.** Never use any type of ordinary silicone, or any other sealants, as they weaken the sheet and cause fractures. Use of an incorrect sealant voids the Warranty.

**Available from Ampelite.

Solasafe Warranty



The following benefits are in addition to consumer rights conveyed by government regulations and the Trade Practices Act.

In the event of any claim under this Warranty, the liability of Ampelite (NZ) Ltd (hereinafter titled 'Ampelite') is limited to the replacement or pro-rata replacement of the faulty sheet(s). Such faulty material must be returned freight pre-paid by the purchaser; to the nearest Ampelite branch, together with proof of purchase documents. The product is intended for use in domestic building applications. Costs associated with the removal and refixing of sheets, or any loss, or consequential damage of any kind are not covered by this Warranty. Sheet failure due to incorrect installation, including the use of silicone and sealants other than a co-polymer sealant specifically formulated to be compatible with polycarbonate, or fair wear and tear/abrasion, are not covered by this Warranty.

Ampelite warrant 'Solasafe' polycarbonate sheeting for a LIFETIME against:

- Excessive discolouration of clear sheets** subject to these conditions:
 - The test method employed to assess discolouration will be that specified under Determination of Colourfastness AS/NZS4257.7.
 - Discolouration caused by atmospheric deposits or dirt, chemical reaction, abrasion and like events, are not covered by this warranty.
- Light transmission loss of clear and coloured sheets** subject to these conditions:
 - The loss of diffused light transmission from that of the sheet when new, shall not exceed more than 0.8% per year for lifetime from the date of purchase.
 - The test method employed to assess any loss of light transmission will be that specified in AS/NZS4257.4.
 - Loss of light transmission caused by atmospheric deposits or dirt, chemical reaction, abrasion and like events, are not covered by this warranty.
 - This product is intended for domestic use only and must be installed and cleaned in accordance with Ampelite's recommendations.

Ampelite warrant 'Solasafe' polycarbonate sheeting for a period of 10 years against HAIL DAMAGE:

Fracturing of sheet by hailstones up to 25mm in diameter accompanied by winds up to 75km/hr.

Damage caused by the impact of objects other than hail is excluded from this Warranty.

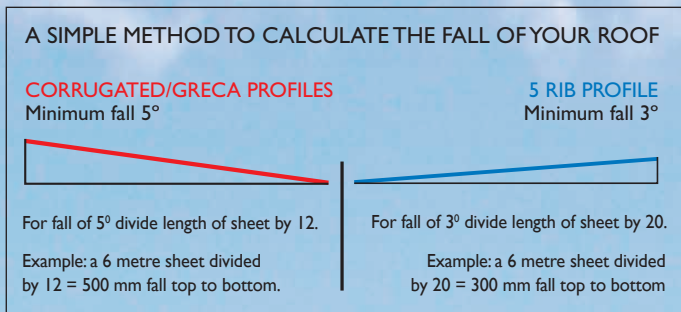
How to install Solasafe

'Solasafe' is intended for **domestic use** and can be used in some industrial and commercial installations. It is fixed and flashed on similar principles to steel roofing.

The fixing procedures in this brochure are based on **normal** weather conditions, for extreme climatic conditions seek advice from your nearest Ampelite branch.

Note: **Minimum recommended fall for corrugated and greca is 5°**, this is approximately 83mm per metre of sheet length. As an example: a 3.6 metre sheet requires a minimum fall of 300mm. With **5-rib profile**, 3° fall is sufficient – over 3.6 metres this is 180mm.

We strongly recommend **using 5-Rib when the roof pitch is minimal**. If insufficient fall is allowed, sheets may sag and leak at the side laps.

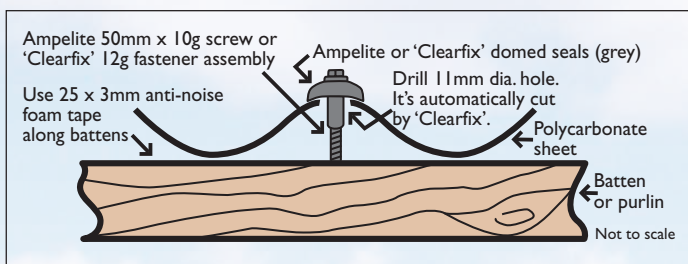


For installation of **polycarbonate sheeting where it is to lap with metal roofing**, please contact your nearest Ampelite branch.

Before fixing sheets apply Ampelite Anti-noise self-adhesive foam tape along the battens or purlins to minimise the noise generated by sheet movement. Start by fixing the first sheet at the end farthest from the usual wind direction.

The side laps then face away from the wind. If end laps are necessary, start laying at a bottom corner. Polycarbonate has UV surface protection on **one** side only; it **must** be installed as directed on the label.

SIDE LAPS. Corrugated profile is side lapped 1.5 corrugations. Greca is lapped 1 rib, but depending on the degree of exposure and weather-proofing required, this can be increased to 2 ribs.



SCREWS, WEATHERPROOF SEALS AND SEALANT. Roofing sheets are crest fixed, but walls can be valley fixed. It is important to use only 26mm Ampelite grey domed seals, that are chemically compatible with polycarbonate.

If sealing is required at side and end laps, or screw seals, **use a co-polymer sealant specifically formulated to be compatible with polycarbonate. Incompatible sealants weaken the sheeting and their use voids Warranty.**

DRILLING SCREW HOLES. To allow for the expansion and contraction of sheets, holes must be drilled oversize.

Screw holes must have a minimum diameter of 10mm for sheet lengths up to 4.2m. Lengths over 4.2m and up to 6.0m require 12mm diameter holes. To fix corrugated and greca profiles use 50mm x 10g screws and for the 5-Rib profile use 65mm x 12g screws.

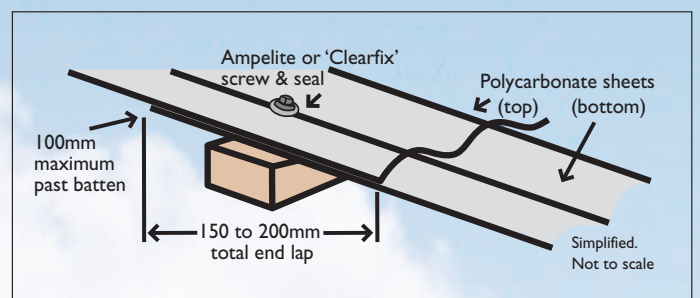
CLEARFIX DRILLING SCREW. An alternative method of fixing which also speeds up installation, is to use self drilling combination drill/cutter and weather-proof seal assemblies.



These fasteners self drill the sheet and create the correct clearance hole in one operation. A very easy, effective method.

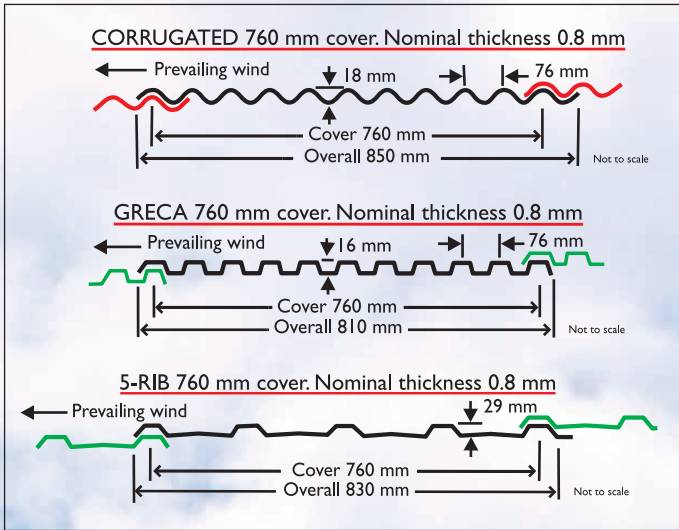
CUTTING OF SOLASAFE SHEET. Polycarbonate is best cut with sharp snips, small cuts can be made with strong, sharp scissors.

If a power saw is used it should be fitted with a fine tooth blade designed to cut plastics. Do not use high speed cut-off wheels or similar as they cause melting.



SPANS, OVERHANG AND END LAPS. Please refer to the Span Tables on the inside pages and do not exceed the measurements shown.

Overhang at the eave must not exceed 100mm and be less in high wind areas. Total endlap at battens or purlins should not exceed 200mm as shown above.

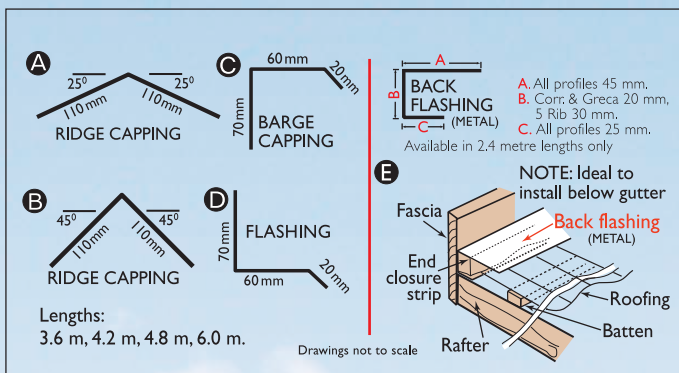


CLEANING. Use only a soft brush and soapy water. No abrasives. We recommend cleaning twice a year and when bird soil and dirt is apparent.

CONDENSATION. Under single skin roofs and especially in cold weather, some condensation is generally unavoidable. Good ventilation will always help minimise condensation.

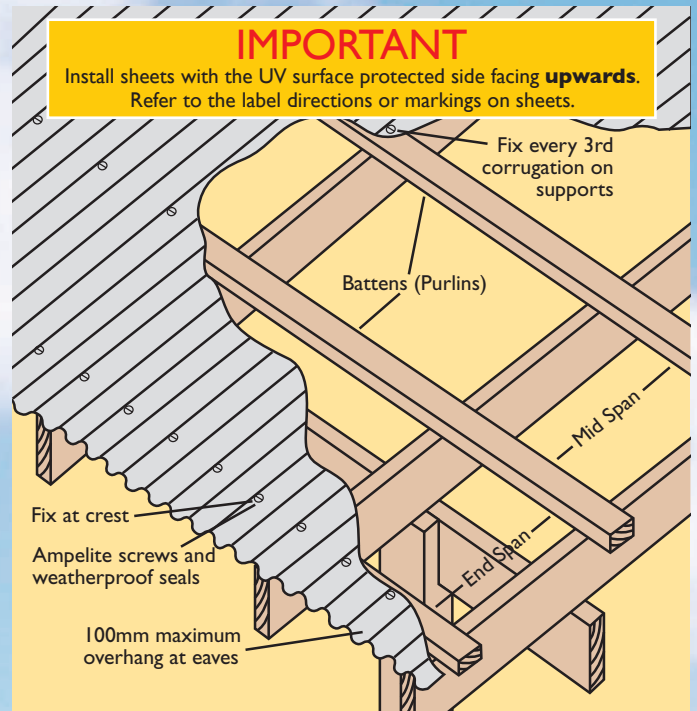
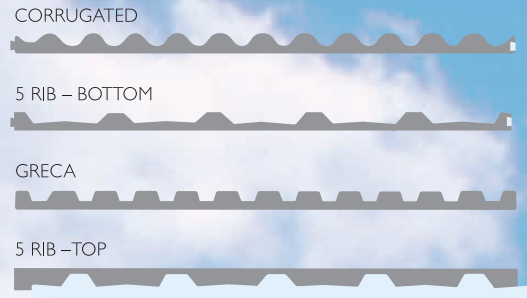
STORAGE. Sheets should be stored in cool, sheltered surroundings. Do not place heavy materials on the sheet. Always support the sheets when moving. Sheeting exposed to sun and rain or stored under tarps etc, can be damaged either by distortion or condensation between the sheets. Damage caused by incorrect storage or handling is not covered by the warranty.

Capping and flashing

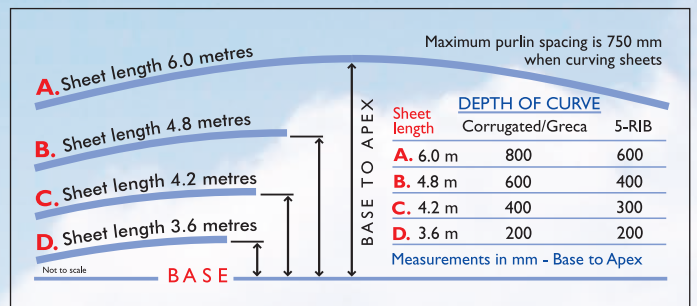


End closure strip and anti-noise tape

We recommend the use of self adhesive foam tape on battens and end closure strips.



Maximum recommended curves



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Available from:

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