



A Bayer  Company



Laserlite Polycarbonate Roofing.
Only Laserlite.



ALSYNITE
creating natural light

To many people across Australia and New Zealand,
the word **Laserlite** actually means polycarbonate roofing.

It's a reputation forged by being the best.

When people think about translucent roofing materials
they think of **Laserlite** first.

And the reasons are very simple.



Laserlite is backed by a lifetime product warranty.

Only **Laserlite** offers an extensive range of colours, profiles, light transmission levels, accessories and offers a 99.9% UV protection rating.



Only **Laserlite** is a certified product under the stringent Australian Standard Guidelines, earning it the coveted Australian StandardsMark emblem.

Laserlite is made in Australia



makrolon®

Laserlite uses high quality Bayer Makrolon® polycarbonate resin designed for high impact resistance and excellent transparency.

Laserlite can be used in high wind including cyclone areas.



Laserlite is suitable for use in bushfire prone areas, designed for fire resistance and to self extinguish.

Make your installation complete

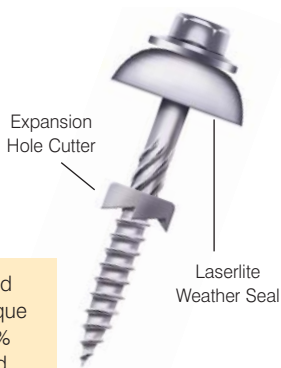
To make your installation complete there are a number of fixings and accessories required to ensure you achieve the most professional finish.

Laserlite Fixings

LASERLITE

ONE SHOT

Laserlite one-shot pre-drills a 11mm oversized hole to allow for sheet expansion with its unique blade cutter in one step saving you up to 50% installation time. No more pre-drilling 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.

Easy Installation

No more pre-drilling means installation is faster and easier. No extra expense of specialist tools. No extra effort changing tools.

Professional Finish

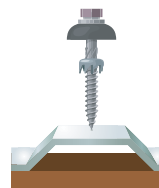
Automatically centres the oversized holes to allow the sheet to expand and contract in both directions equally, for the most professional finish.

*50% claim based on number of steps.

Easy Installation

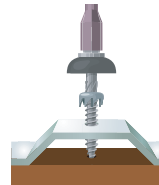
Stage 1

Firmly place the sharp point of the ONE SHOT® fixing onto the crest of the corrugation to be fixed, to eliminate "skidding" or "wandering".



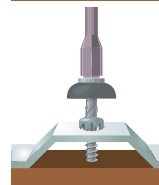
Stage 2

Commence drilling at 1000rpm (timber one-shot), 2000rpm (steel one-shot) to pierce the sheet. Screw engages in timber or steel batten.



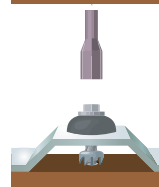
Stage 3

Cutter engages polycarbonate sheet, cuts the expansion hole and centres the screw.



Stage 4

Wait until the rubber weather seal engages and compresses against the roof sheet and under the fixing head, to stop.



Available for both timber and steel battens

TIMBER

One Shot



Standard



- Roma/Greca 50mm, Trimdek 65mm
- 12 gauge, 11 threads per inch
- Suitable for use with treated timber
- Type 17 (shape of tip)

STEEL

One Shot



Standard

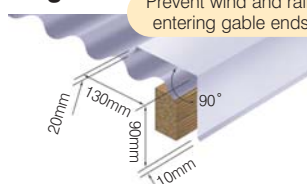


- One Shot Roma/Greca/Trimdek 55mm
- Standard Roma/Greca 45mm, Trimdek 55mm
- 12 gauge, 14 threads per inch
- Suitable for use with battens gauges 0.75mm to 4.5mm

All Laserlite Fixings are mechanically plated to comply with AS 3566 Class 3.

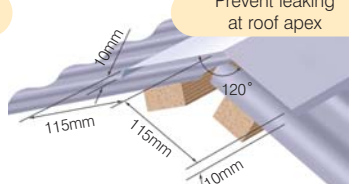
Laserlite Accessories

Flashings



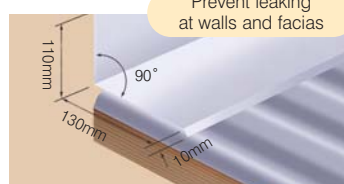
Polycarbonate Barge Capping

Colour: Clear. Length: 3.0m



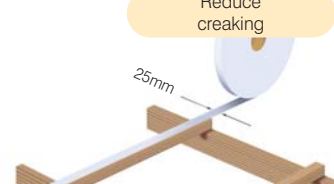
Polycarbonate Ridge Capping

Colour: Clear. Length: 3.0m



Polycarbonate Apron Flashing

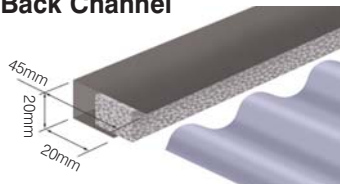
Colour: Clear. Length: 3.0m



Noise Stop Tape (Purlin Tape)

Colour: White
Length: 25.0m

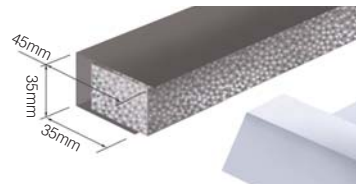
Back Channel



Back Channel Flashing (Metal)*

*Use with Back Channel Infill Strips.

Colours: White and Grey
Profile: Roma, Greca Length: 3.6m



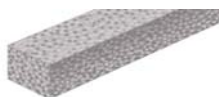
Back Channel Flashing (Metal)*

*Use with Back Channel Infill Strips.

Colours: White and Grey
Profile: Trimdek Length: 3.6m

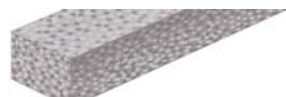


Prevent leaking at walls and facias



Back Channel Infill Strips

Profile: Roma, Greca
Colour: Grey Length: 3.6m

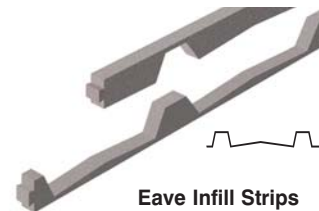


Back Channel Infill Strips

Profile: Trimdek
Length: 3.6m



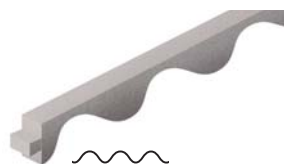
Eave Infill Strips



Eave Infill Strips

Profile: Trimdek
Length: 760mm
Qty: Pack of 4

Prevent rain, dust and wind entering eaves



Eave Infill Strips

Profile: Roma. Length: 975mm
Colour: White
Qty: Pack of 4



Eave Infill Strips

Profile: Greca. Length: 760mm
Colour: White
Qty: Pack of 4

Laserlite 2000. New Zealand's most popular choice.

Laserlite 2000 offers the most extensive range of designer colours to enjoy your outdoor living all year round.

Only Laserlite gives you the peace of mind that comes from being able to spend more time outside, knowing that you and your family are protected from the elements. Your pergola, carport and even your greenhouse can benefit from the durability, high impact resistance and 99.9% UV protection of Laserlite 2000.

Available in an extensive range of colours and in three profiles to suit your lifestyle. Backed by a lifetime warranty for peace of mind.

	Clear	Opal	Classic Cream	NEW Stone*	Bronze Tint	Grey Tint	Gumleaf	Ocean Blue
Colours~								
Transparent	✓				✓	✓		
Translucent		✓	✓	✓			✓	✓
Profiles (all colours)	Roma 		Greca 		Trimdek 			
Benefits	• High impact resistance • Durable							
Product Certification	 Australian Standard AS/NZS 4200.5 Licence 1811	 Made in Australia from imported Resin	 Laserlite Lifetime Warranty	 99.9% UV Protection 99.9% UV Protection	 HIGH WIND AREAS	 BUSH FIRE RESISTANT		
~ Some colours may not be available ex-stock.								

~ Some colours may not be available ex-stock.



Laserlite Apollo. Advanced performance, contemporary design.

Only Laserlite Apollo combines advanced heat reflecting performance and light transmission. Available in the largest range of contemporary metallic colours to suit any lifestyle.

Laserlite Apollo's secret for advanced performance is the millions of heat reflective metallic particles that are encapsulated in each polycarbonate sheet. They provide a lustrous metallic or pearl appearance, as well as extremely efficient heat reflecting properties. So it not only looks cool, it keeps you cool as well.

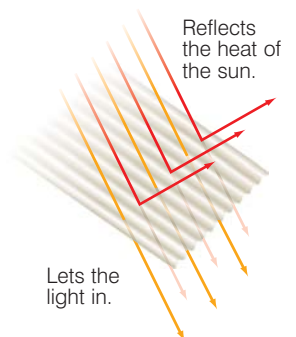
In fact, it also provides protection from 99.9% of harmful UV radiation, has around 250 times the impact resistance of glass and is backed by a lifetime warranty. Laserlite Apollo is available in a range of contemporary colours to suit any lifestyle.

NEW						
	Arctic Ice	Platinum	Olive Mica	Gun Metal	Metallic Bronze*	Steel
Colours~						
Transparent		✓	✓	✓	✓	✓
Translucent	✓					
Profiles (all colours)	Roma 		Greca 			
Benefits	• Heat reflective metallic particles • High impact resistance • Durable					
Product Certification	 Australian Standard AS/NZS 4200.5 Licence 1811  Made in Australia from Imported Resin  Laserlite Lifetime Warranty  99.9% UV Protection 99.9% UV Protection  HIGH WIND AREAS  BUSHFIRE RESISTANT ~ Some colours may not be available ex-stock.					



Laserlite XPT. Unrivalled heat reflective technology.

Laserlite XPT offers unrivalled heat reflective technology which lets the light in and keeps the heat out, providing comfort and shade to enjoy your outdoor living.



Laserlite XPT is one of the most technologically advanced polycarbonate roofing products in the world. Its specially co-extruded cap layer cleverly singles out heat carrying infra red light and reflects it away from the sheet, whilst allowing visible light to pass through. It also protects you from 99.9% of harmful UV radiation.

Laserlite XPT is available in a range of soft and subtle colours and is backed by a lifetime warranty.

Only Laserlite can give you such peace of mind.

	Satin Cream	NEW Ivory*	NEW Satin Sage*	Eucalypt	Alpine Blue
Colours~					
Translucent	✓	✓	✓	✓	✓
Profiles (all colours)	Roma 		Greca 		
Benefits	• Heat reflective co-extruded layer • High impact resistance • Durable				
Product Certification	Certified Product Australian Standard AS/NZS 4200.5 Licence 1011 Made in Australia Imported Resin Laserlite Lifetime Warranty 99.9% UV Protection 99.9% UV Protection HIGH WIND AREAS BUSHFIRE RESISTANT				
	~ Some colours may not be available ex-stock.				



Installation Instructions

Carefully read all installation instructions before you start.

- For installation of roofs over 3 metres in height or for cyclonic regions, contact your nearest Alsynite New Zealand office for special instructions.
- Always exercise extreme care when working on a roof. Use walking boards along purlins. Never walk directly on the sheeting.
- Always wear eye protection when using cutting tools.
- Laserlite does not recommend the collection of drinking water from any roof without appropriate precautions and filtration. Check with your local water authority for further advice.
- For safety precautions Laserlite recommends the use of safety mesh for installations above 3m.

1. Ensure that your roof pitch is at least 5°, i.e. 88mm rise per lineal metre. This will ensure adequate water run off.



2. 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.
3. For roofing, purlin/batten spacings should be no more than those shown in Table X – Maximum Purlin Spacings. For curved structures, the maximum purlin spacing should be 750mm and a minimum radius of 6000mm for Roma and Greca profile and 14000mm for Trimdek profile. For walls, nogging spacings should be no more than 1200mm. Use Laserlite Noise Stop Tape on all battens, purlins or noggings to minimise the noises associated with expansion and contraction.

4. 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.
5. 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.

6. In normal conditions, use the fixing spacings shown in Table Y – Fixing Spacings. As a guide, you will need approximately 7 fixings per lineal metre. This depends on your purlin spacings and wind conditions. In high wind areas fix Roma 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.
7. For roof laying, start with the lower sheets first, keeping side laps away from prevailing wind. Allow an overhang of 50mm. Temperature changes will cause expansion and contraction, so make allowances for thermal movement. Resistance to movement can cause buckling.

8. Temperature changes will cause the sheet to expand and contract. To ensure maximum performance of the sheet, and to avoid buckling, it is necessary to oversize the holes and centre the fixings. It is recommended that Laserlite One-Shot fixings are used. They come complete with their own hole saw that cuts an expansion hole as you drill. The screw is centred every time. The cutter holds the plug of material removed and grips the purlin when the fixing is tight enough.

- If using standard fixings, pre-drill your fixing holes. Use a 10mm drill for sheets up to 4.2m long and a 12mm drill for sheets longer than 4.2m. Fix the sheet through the centre of the pre-drilled holes, perpendicular to the purlins/battens. A (5/16") Drill hex driver bit should be used. Only tighten the fixings enough to prevent rattling. Over-tightening may cause distortion and undue stress with possible failure resulting. Use only Laserlite branded fixings as these are designed to be compatible with Laserlite Polycarbonate Roofing. Any failure of the sheet due to fixings other than Laserlite branded will void the Laserlite warranty.

9. Side laps will differ by profile. Install as shown in Table Z.

10. End overlaps should be 150mm for steep pitch or 200mm for shallow pitch.

Important. Sealants - These instructions are designed to prevent leaking and alleviate the requirement for sealants. Sealants, especially silicone, are incompatible with polycarbonate. They will damage the sheet, restrict expansion and contraction, and void the warranty. Use the appropriate Laserlite flashings and infill strips to complete your project and help protect your outdoor entertaining areas from the weather, without the need for sealants.

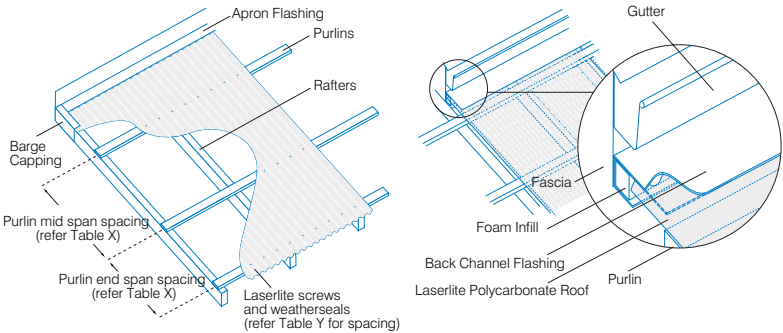
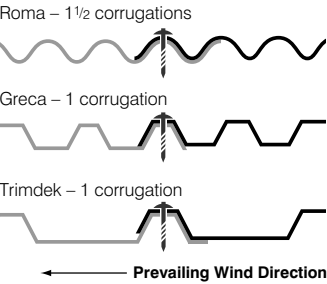
Table X – Maximum Purlin Spacings

Profile	End Span	Mid Span
Roma	800mm	1000mm
Greca	900mm	1200mm
Trimdek	900mm	1200mm

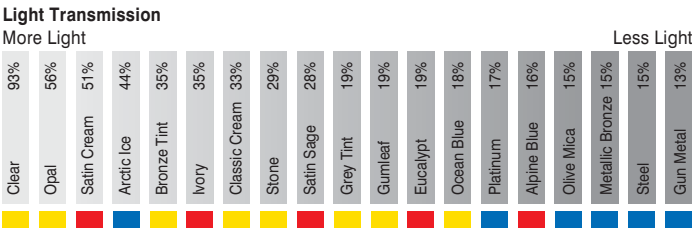
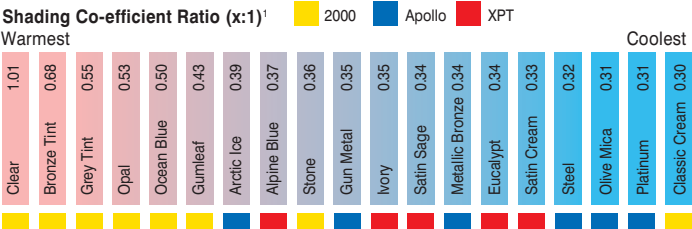
Table Y – Fixing Spacings

Profile	End Purlins	Mid Purlins
Roma	Every 2nd crest	Every 3rd crest
Greca	Every 2nd crest	Every 3rd crest
Trimdek	Every crest	Every crest

Table Z – Side Laps



Light and Heat Transmission

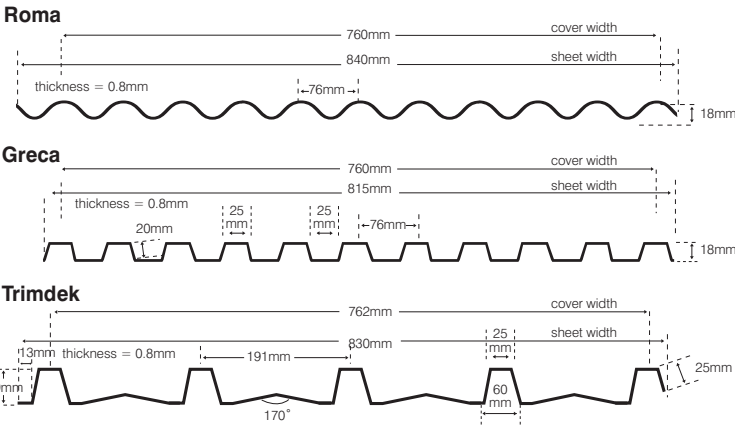


¹Shading co-efficient: A ratio of the warming effect of the sun's rays through a sheet divided by the sun's warming effect through 3mm float glass. **The lower the figure the cooler it is under the sheet.**

*New colours (Stone, Ivory, Satin Sage and Metallic Bronze) still awaiting certification to AS/NZS 4256.5

Product Range

Dimensions - Laserlite Polycarbonate roofing is available in 3 designer profiles.



Weight	Roma	Greca	Trimdek
Kg per Lineal Metre	0.92	0.93	0.92
Kg per m ²	1.10	1.13	1.11

Available Sizes

Standard lengths in metres 1.8, 2.4, 3.0, 3.6, 4.2, 4.8, 5.4, 6.0, 7.2

Long lengths - Lengths up to 10 metres can be ordered (conditions apply)

Technical Data

Thermal Expansion ¹	2.1mm per 3m per 10°C
Thermal Conductivity	0.17W/m°C
Vicat Softening Point	135°C (AS1462)
Tensile Strength	65Mpa (AS1145-1989)
Impact Strength	Exceeds 12 joules (AS4257.6-1994) approx 250 times more than glass ²
Corrugation Retention	No change for up to 2 hours at 100°C

¹Thermal Expansion – calculate from ambient temperature at time of installation.

²Impact resistance can decline with age.



UV Protection

Laserlite Polycarbonate Roofing prevents the transmission of more than 99.9% of harmful UV radiation, measured to standard ISO 9050:2003. Its co-extruded UV barrier protects the sheet from UV degradation and discolouration. It remains stable under extreme climatic conditions (-20° to +120°C).



Wind Load

Laserlite Polycarbonate Roofing is suitable for use in high wind areas. Roma and Greca profiles meet the requirements of AS 1170.2- 1989 SAA Loading code Part 2 – Wind Loads. Roma and Greca profiles also meet the requirements of TR440 (Guidelines for the testing and evaluation of products for cyclone prone areas) for fatigue loading, for the permissible stress design pressure of 3.0kPa, for a multiple span of 600mm end span and 900mm internal spans using 14 gauge hex head screws with cyclone assemblies. Deemed to comply to the Darwin Cyclone Area certification numbers M/133/1 and M/133/2 apply. Please visit our website at www.laserlite.co.nz for further details and specific installation instructions.



Fire Performance

Laserlite Polycarbonate Roofing is self extinguishing, stops the spread of flame and also has excellent fire resistant properties. Therefore, this product complies with many fire related tests, including Heat and Smoke Release Rates (AS/NZS 3837:1998), Radiant Heat Test (FES025 c Version 2), Heat Radiation (NF P92-501), test for meltable materials (NF P 92-505), Spread of flame propagation (NF P 92-504), Early Fire Hazard Test (AS 1530.3-1999) and with CSIRO Appraisal for Bush Fire prone areas.

Compliances

Impact Resistance	AS/NZS 4257.6:1994
99.9% UV Resistant	ISO 9050:2003
Cyclone Testing	TR440
Heat & Smoke release rates	AS/NZS 3837:1998
Radiant Heat Test (Bush fire attacks)	FES025 C Version 2
Multi Layered materials	NF P 92-507
Heat Radiation	NF P 92-501
Test for meltable materials	NF P 92-505
Spread of flame propagation	NF P 92-504
Durability Test	NF P 92-512
Sandbag Impact Test	AS/NZS 4040.4:1996
Resistance to wind pressures for non cyclone regions	AS 4040.2:1992
SAA Loading code Part 2 – Wind Loads	AS 1170.2:1989
Early Fire Hazard Test	AS 1530.3:1999
Plastic roof and wall cladding material – Polycarbonate ¹	AS/NZS 4256.5
Design and Installation ²	AS/NZS 1562.3:1996
Diffuse Light Transmission	AS/NZS 4257.4:1994
Colourfastness & Impact Resistance following UV exposure	AS/NZS 4257.7:1994
Outdoor Durability	AS 1745.1:1989
Dimensional Properties	AS/NZS 4257.1:1994

¹StandardsMark Product Certification Licence number 1811 in relation to AS/NZS 4256.5 ongoing compliance. Independent third party monitoring of compliance is conducted by SAI Global Limited, a JAS-ANZ accredited certification body.

²Installation and design shall be carried out in accordance with AS/NZS 1562.3:1996 using good trade practice and in meeting the requirements of E2 and B2 of the New Zealand Building Code. Laserlite standard installation instructions apply as indicated in this brochure.

Handling, Storage and Cleaning

1. 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.
2. Prevent moisture getting between stored sheets as this may cause whitening.
3. Clean sheets regularly with warm soapy water (mild detergent) and a soft sponge. Take care not to scratch the sheet. Hose down thoroughly.

Laserlite Polycarbonate Roofing is generally unaffected by acids, alcohols, glycols, mineral oils, animal and vegetable fats, kerosene, and non-abrasive cleaners. However, it is affected by methylated spirits, benzene, petrol, ketones, acetone, phenols, chlorinated and aromatic hydrocarbons, petroleum-based paints, abrasive cleaners and solvents.



Warranty

Loss of Light Transmission – Lifetime Warranty

The product will not lose more than 8% of light transmission for the first 10 years and thereafter, no more than 1% per year for lifetime from the purchase date (when tested in accordance with ASTM D 1003-1995). This warranty applies from the date of original purchase and is valid only to the original purchaser of the product (claims must be accompanied by an original purchase receipt). The product must be for domestic use only and must have been stored, installed and cleaned in accordance with Laserlite's recommendations.

Weather Breakage – 5 Year Warranty

From the date of purchase the product will not break as a result of hailstones measuring up to 25mm in diameter. Damage caused by objects other than hail is excluded from this warranty. It is the responsibility of the consumer to obtain a copy of the full warranty conditions. These are available from any Alsynite New Zealand office or website. Any claim should be made in writing to: Alsynite NZ Limited, PO Box 10-409 Te Rapa, Hamilton NZ.

Distributed by



Manufactured by



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Colours depicted in this brochure are representations offered only as a guide and should not form the basis of a colour selection. Slight colour variation may occur between production runs. Transmitted light and colour may vary in intensity depending on weather conditions.

The information contained in this brochure is to the best of our knowledge accurate, but all recommendations are made without any warranty whatsoever, since the conditions of use are beyond our control. This brochure cancels and supersedes all previous publicised information.

The company reserves the right to alter and revise, without notice, the information contained herein.

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makrolon®

All Laserlite Polycarbonate Roofing products are manufactured from high-tech, high quality Bayer

Makrolon® polycarbonate resin for high impact resistance, light weight, excellent transparency, UV stability and excellent fire resistance.