

Lexan* Thermoclear*

Twinwall & Multiwall



Applications

Typical applications

- Covered Walkways
- Pergolas
- Shopping Centres
- Sports Complexes
- Swimming Pool Enclosures
- Industrial Glazing
- Greenhouses
- Screening/Partitioning



Specification

"The translucent sheeting shall be 'Ampelite Lexan* Thermoclear*' multiwall sheet as distributed by Ampelite Australia Pty Ltd. to comply with AS/4256 parts 1 & 5: 2006.

The sheet shall have a gauge of *10 mm and a width of **1050 mm.

The sheeting shall be fixed in accordance with Ampelite's ***H-Bar system.

Both the sheeting and glazing bars will be supplied to conform with the nominated colour.

Sheeting shall be installed in accordance with Ampelite fixing instructions and AS1562.3:2006 Design and installation of sheet roof and wall cladding Part 3: Plastic."

*Insert nominated gauge. **Insert nominated width. ***Insert nominated glazing system.



UV Protection

Ampelite Lexan* Thermoclear* has been used on many of the largest sports stadiums in the world, including the Sydney and Beijing Olympic stadium. This is largely due to the proprietary surface coating technology, which has superior resistance to outdoor weathering.

According to accelerated 4,000 hours weathering tests, Ampelite Lexan* Thermoclear* multiwall sheet is superior to other available polycarbonate multiwall glazing products. This is reflected through a superior ten year limited written warranty.

Ampelite Lexan* Thermoclear* is also warranted for 10 years against hail damage and excessive loss of light transmission. Please consult your nearest Ampelite office for full warranty details.



Sample 1: $\Delta Y_i = 0$



Sample 2: $\Delta Y_i = 2$
Lexan Thermoclear Plus Sheet Warranty



Sample 3: $\Delta Y_i = 10$
Typical Multiwall PC sheet Warranty

Handling, Storage and Cleaning

Ampelite Lexan* Thermoclear* system should be stored and protected against atmospheric influences like sun, rain, etc. Prolonged exposure to sunlight may cause the protective masking stick making removal difficult.

Stacking of sheets should be on a flat surface with the longest lengths on the bottom. As with all glazing materials, care should be exercised when handling and transporting in order to prevent scratches and damage to the edges of the sheets.

Periodic cleaning using correct procedures can help prolong service life. Contact Ampelite for cleaning recommendations.

Sealants

Most silicones are incompatible with polycarbonate. They will damage the sheet, restrict expansion and contraction and void the warranty. Expansion and contraction is allowed for in the specialized glazing system. Therefore silicone is not generally required. Should one be required Ampelite can provide one that is compatible.

Safety Recommendations

Consider all safety requirements when working at heights. Never walk on or apply your load directly to sheeting. A temporary wooden board or other device, supported by roof members should always be used.

All safety practices must comply with the applicable local and statutory building regulations. For most applications above 3m safety mesh should be used. Some sheet structures may be used without safety mesh as per AS1562.3:2006. Please consult your nearest Ampelite office for details.

For more information on new products or installation instructions, please visit our website at www.ampelite.com.au

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Lexan* Thermoclear*

Twinwall & Multiwall



Architectural polycarbonate glazing system



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Quality System
Quality Endorsed Company
AS/NZS ISO 9001
QEC 4787
SAI GLOBAL

Lexan* Thermoclear*

Twinwall & Multiwall

The most flexible polycarbonate glazing system

Ampelite Lexan* Thermoclear* is a high quality low maintenance glazing material that is built to last. Lexan polycarbonate resin delivers high impact strength, an excellent balance of low weight and high stiffness and naturally very clear transparency.

UV Protection

The Ampelite Lexan* Thermoclears* versatility allows for a multitude of applications including roofing, wall cladding, glazing and partitioning. The sheeting is suitable for use in vertical, sloped or curved scenarios.

Ampelite Lexan* Thermoclear* blocks 99.9% of harmful UV radiation. The proprietary surface treatment represents the next generation in surface coating technology. Both sides of the sheeting feature UV protection giving superior resistance to outdoor weathering and greater design flexibility.

Fire Performance

Ampelite Lexan* Thermoclear* is suitable for use in bushfire prone zones BAL's 19 and below. It is flame resistant, self extinguishing, stops the spread of flame and develops minimal smoke. Ampelite Lexan* Thermoclear* complies with AS/NZS 1530.3: 2006 for simultaneous determination of ignitability, flame propagation, heat release and smoke release; AS/NZS 3837: 1998 for heat and smoke release rates for material and products using an oxygen consumption calorimeter; AS3959 Construction of buildings in bushfire-prone areas. Contact Ampelite for further details.

Benefits

- **Certified under Australian Standards** - Exceptional performance in our harsh Australian environment.
- **Wind Resistance** - Suitable for use in high wind areas, conforms to Australian Standard 1170.2.
- **Energy Efficient** - Excellent thermal performance, saves on heating and cooling costs.
- **Impact strength** - 250 times higher than glass and 30 times higher than acrylic.
- **Environmental** - In many cases Ampelite Lexan* Thermoclear* multiwall sheet may be recycled.
- **Warranty** - Backed by a superior 10 year limited written warranty.
- **Light Weight** - 1/6 the weight of standard glass, easy to handle.
- **Less Structure** - Far less structure required compared to glass or traditional translucent materials.
- **Minimum waste** - The sheeting can be easily cut to any width and length.

Standard Colours

OPAL

CLEAR

BRONZE

GREY

METALLIC GREY

Comparison to Glass

	10mm Multiwall	10mm Standard Clear Glass
Thermal U-value	3.0 W/m2k	5.7 W/m2k
Impact Resistance	250	1
UV Resistance	99.90%	0%
Weight	1.7kg/m2	25kg/m2
Sound Insulation	19db	28db

Sheet Colours, Sizes and Spanning

A MINIMUM OF 5 DEGREE FALL IS REQUIRED

Colours 10 mm – Clear, Opal, Bronze, Grey, Metallic Grey
16 mm – Clear, Opal

Widths 700 mm, 1050 mm

Lengths 2.0 m, 2.5 m, 3.0 m, 3.5 m, 4.0 m, 4.5 m, 5.0 m, 5.5 m, 6.0 m, 7.0 m

Other sizes and colours may be available. Please confirm availability before ordering.

	700 mm		1050 mm	
	Rafters	Purlins	Rafters	Purlins
10 mm	720 mm	not required	1070 mm	not required
16 mm	720 mm	not required	1070 mm	not required

Above figures based on 1.5kPa. For installation in high wind areas, please contact Ampelite.

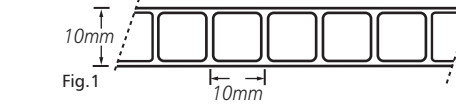
Sheet mass

10 mm	1700 gsm	16mm	2700 gsm
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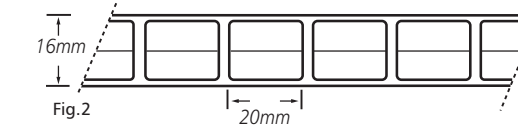
Available Sheet Structures

Ampelite recommend using standard gauge 10 mm twinwall sheeting for most residential and smaller commercial applications. The 16 mm gauge is often specified for larger projects.

10mm twin wall Sheet structure



16mm twin wall Sheet structure



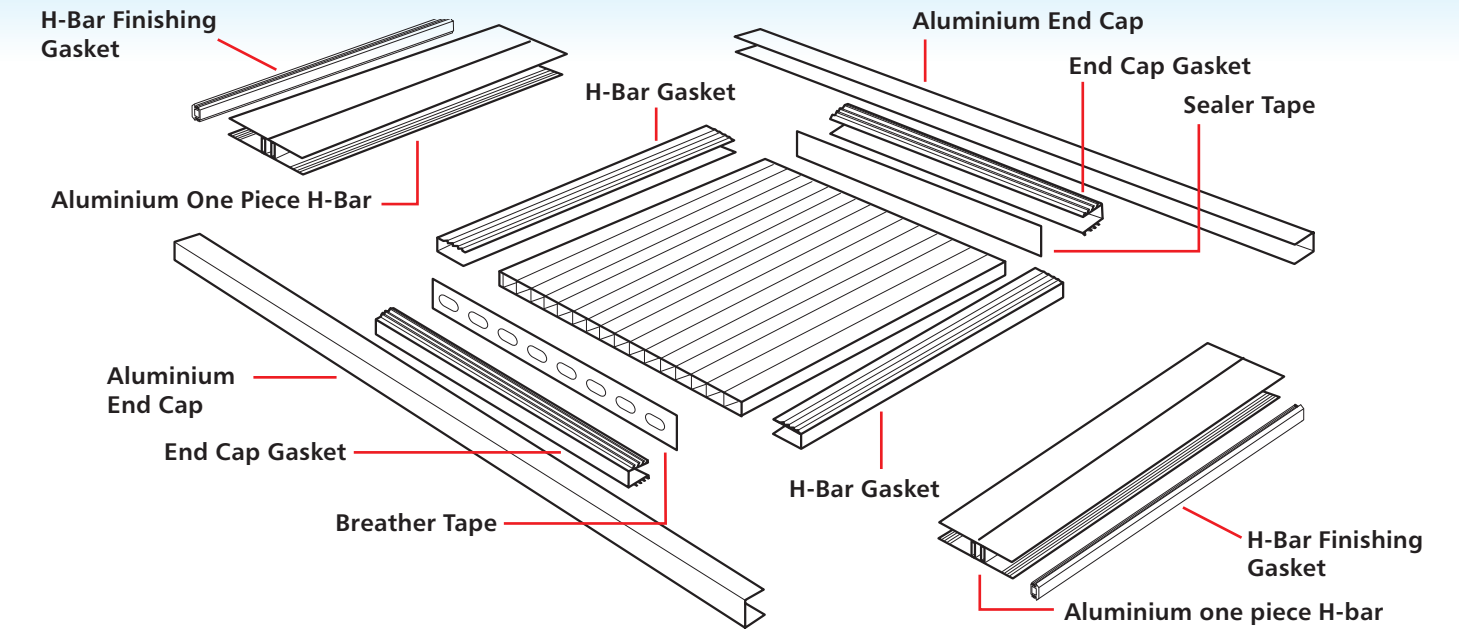
A range of other gauges to suit almost any project are available subject to order quantities. Please consult your nearest Ampelite office for current stock lead time.

Light and Heat Transmission

10mm Twinwall			
U-Value: 3.0 W/m2k	LT	HT	
Clear	81%	80%	
Opal	64%	68%	
Bronze	35%	55%	
Grey	20%	50%	
Metallic Grey	16%	29%	
16mm Tripplewall			
U-Value: 2.27 W/m2k	LT	HT	
Clear	74%	78%	
Opal	63%	67%	

The Glazing System Expanded

The Lexan Thermoclear sheeting with the H-Bar gasket simply slide into the H-Bar ready for fixing to the structure. The glazing bars allow for the thermal expansion and contraction of the sheets. This eliminates the need for fixings through the sheet.



Accessories

Aluminium H-bar

Standard Colours: Natural Anodised, White, Primrose, Black

Standard Lengths: Natural Anodised - 4m, 5m, 6m, 7m
White, Primrose, Black - 7m

H-Bar Finishing Gasket

Colour: Black
Standard Gauge: 10mm
Standard Length: 14.0m rolls, 7.0m rolls

Aluminium End Cap

Standard Colours: Natural Anodised, White, Primrose, Black
Standard Lengths: 6.5m

End Cap Gasket

Colour: Black
Standard Gauge: 10mm
Standard Length: 14.0m rolls, 8.0m rolls

H-Bar gasket

Colour: Black
Standard Gauge: 10mm
Standard Length: 14.0m rolls, 8.0m rolls

Sealer Tape

24mm wide x 50m roll
Ridge

Breather Tape

24mm wide x 33m roll
Gutter

Flexibar System

Versatile system, recommended for use in curved applications or where non-standard gauge sheeting is to be used.

