

WONDERGLASS[®] GEL

GEL COATED POLYESTER SHEETING

UNSURPASSED PROVEN PERFORMANCE



AMPELITE

World Class Fibreglass technology



**Quality
Endorsed
Company**
AS/NZS ISO
9001
QEC 4787

Ampelite is a wholly Australian owned company. All Ampelite fibreglass roofing products sold in Australia are Australian made. Profits remain in Australia, taxes paid in Australia benefit our community.



- Surface erosion (fibre show) is eliminated.
- Superior resistance to yellowing and hazing.
- Minimal loss of light transmission over life.
- Long Warranty – your protection for 25 years.
- 99% protection from UV rays.
- More cost effective over life of building.



AMPELITE, Australia's most experienced and largest manufacturer of fibreglass roofing introduced 'Wonderglas GC' gel coated sheeting to Australia in 1994, adapting the process originally developed by BP chemicals in the United States, to expressly combat Australia's very harsh environment.

WONDERGLAS GC RETAINS STRENGTH AND FLEXIBILITY. Over the life of the sheet strength and flexibility is retained, it does not lose its tensile strength or become brittle as happens with film surface coated and polycarbonate materials. Generally speaking, film coated fibreglass reinforced polyester sheeting has a history of failure under Australian conditions. While it has been a means of delivering natural light, the shortcomings of erosion, combined with loss of light transmission, discolouration and water penetration, have called for a decided improvement. Wonderglas GC, with a UV resistant Gel Coat of 100 microns in thickness, replacing surface film of just 20 microns, has provided this improvement.

Since then Wonderglas GC has been proven in many thousands of installations throughout Australia and New Zealand, and in many Asian regions. Ampelite's policy of continual product improvement, as new technology and materials are available, ensures product leadership. The highly UV resistant resins used in the manufacture of Wonderglas GC provide the ultimate in protection – ahead of even the latest surface film technology. The 100 micron thick gel coat is integral with the sheet, (chemically cross bonded), and no delamination is possible. The gel coated sheet surface becomes an almost impenetrable barrier that reduces surface erosion and loss of light transmission to negligible proportions. The proven performance of Wonderglas GC remains unsurpassed and puts this Australian made product at the cutting edge of world resin technology.

CHEMICAL RESISTANCE. In addition to exceptional performance, even under adverse conditions, Wonderglas GC has very high resistance to a range of common chemicals. So much so, that entire industrial plants are clad with gel coated woven mat reinforced fibreglass ('Webglas GC' also an Ampelite product) to eliminate corrosion.

SPECIAL PURPOSE VARIATIONS OF WONDERGLAS GC. The benefits of Ampelite's 'Cool-lite' Heat Reduction sheeting, or 'SR76' Fire Retardant sheeting can be incorporated into Wonderglas GC. Many installations utilise these options, sometimes combining them.

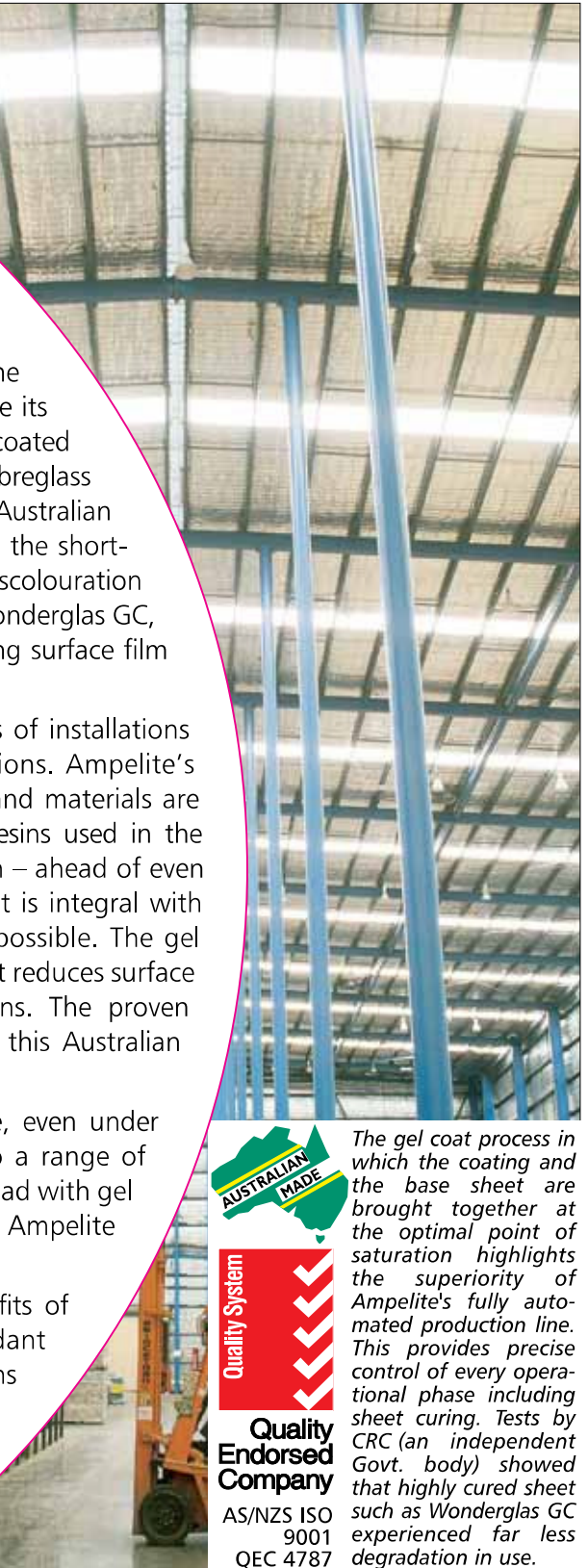
AMPELITE QUALITY. Australian made Wonderglas GC premium grade glass reinforced gel coated polyester sheeting is manufactured to AS/NZS 4256.3 1994 under Licence 986. Ampelite is a Quality Endorsed Company complying with AS/NZS ISO 9001:1994, Licence QEC 4787.



Quality Endorsed Company

AS/NZS ISO 9001
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The gel coat process in which the coating and the base sheet are brought together at the optimal point of saturation highlights the superiority of Ampelite's fully automated production line. This provides precise control of every operational phase including sheet curing. Tests by CRC (an independent Govt. body) showed that highly cured sheet such as Wonderglas GC experienced far less degradation in use.



Wonderglas GC has excellent stability

Materials Expansion Comparison. 0°C to 40°C temperature variation. Sheet length 12 metres.

	Fibreglass	Polycarbonate	Steel	Aluminium
Thermal expansion	14.4 mm	32.4 mm	5.8 mm	11.5 mm
Thermal co-efficient	3.0×10^{-5} cm/cm °C	6.75×10^{-5} cm/cm °C	1.2×10^{-5} cm/cm °C	2.4×10^{-5} cm/cm °C

Spanning

Series	2400	3050	3660	4270	4880
Corrugated	1200	1500	1700	-	-
5 rib	1500	1700	2000	2300	-
Spandek	1600	2000	2300	2600	2800
500 Decking	1400	1700	2000	2300	2600
Kliplok 700	1400	1700	2000	2300	2600

Unit: mm

Physical Properties

Tensile strength	80 MPa (Min. requirement 50 MPa)
Impact strength	8 Joules
Shear Strength	90 MPa
Modulus of elasticity	5500 MPa
Compressive strength	135 MPa
Flexural strength	150 Mpa
Specific gravity	1.45
Thermal expansion	3.0×10^{-5} cm/°C
Thermal conductivity	158 watt/m°C
Water absorption	.2% in 24 hours/26°C
Curved roof radius – Corrugated & 5 rib	
	2400g/m ² minimum radius: 4.0 metres
Recommended service temperature:	
	range -20°C to +96°C

Light & Heat

Colour	Series	Light	Heat
Ice Clear	2400	74%	68%
Opal	2400	72%	64%

Grades

Series	Weight (Kg/m ²)
2400	2.4
3050	3.05
3660	3.66
4270	4.27
4880	4.88

Materials

Ampelite use the best materials available with the World's latest resin technology.

Hail Resistance

Ampelite Warrant series 2400 (and upwards) Wonderglas GC premium grade gel coated industrial fibreglass sheeting against damage from hailstones up to 20 mm in diameter accompanied by winds up to 100 km/hr. for 10 years.

Specification

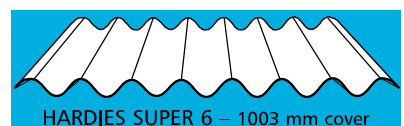
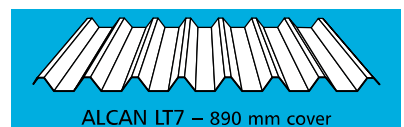
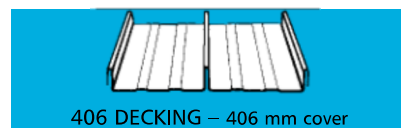
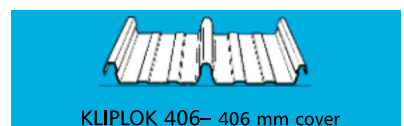
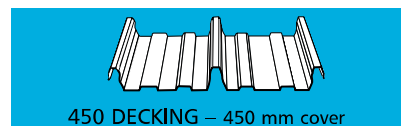
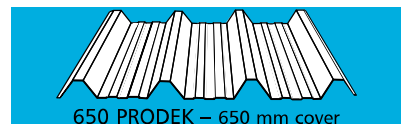
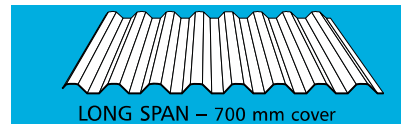
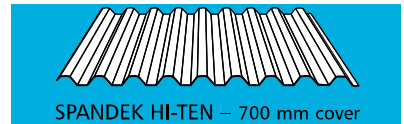
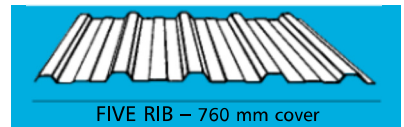
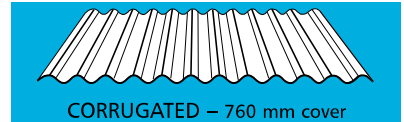
"The translucent sheeting shall be Ampelite 'Wonderglas GC' fibreglass reinforced polyester with a 100 micron thick gel coat as manufactured by Ampelite Fibreglass Pty Ltd. to comply with AS/NZS 4256 parts 1 & 3: 1994. The weight of the sheet shall be *2400g/m² and be manufactured to conform with the nominated profile and colour. Sheeting shall be installed in accordance with Ampelite fixing instructions and with AS 1562.3:2006 Design and installation of sheet roof and wall cladding Part 3: Plastic."

*Insert actual sheet weight required.

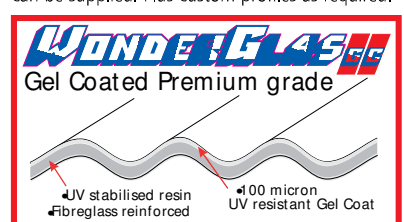
Superior features of Wonderglas GC

- Light transmission is maintained.** Loss of light transmission after 10 years is just 10% compared to a loss of 30% for standard 20 micron surface film protected fibreglass sheeting. Wonderglas GC has a highly UV resistant gel coat of 100 microns.
- Very high resistance to yellowing and discolouration.** Over 10 years changes are negligible and are covered by warranty. Only minor changes may occur in later years.
- Surface erosion (fibre show) is eliminated.** It is covered by warranty for 25 years.
- Low surface erosion.** This also improves weathering properties. The 100 micron gel coated surface provides an impenetrable barrier and the sheet is warranted against water penetration for 25 years. Inbuilt UV protection eliminates 99% of harmful UV rays.

Profiles



In addition, most current and superseded profiles can be supplied. Plus custom profiles as required.



The Wonderglas GC 100 micron gel coat provides unsurpassed performance. In comparison, surface film is just 20 microns in thickness.

Wonderglas GC durability and cost effectiveness.

Fibreglass sheeting has progressively overcome UV attack with the development of UV Stable Resins, and has retarded weathering by the application of surface films. However, surface films, are just 20 microns thick, and only prolong weathering and do not defeat it. The newer surface films have no history in actual use, and must rely on 'Weatherometer' testing to predict likely deterioration over a long period of years. The introduction of Wonderglas GC in 1994 has proved to be a very significant advance in fibreglass sheeting. Wonderglas GC has a highly UV resistant gel coat 100 microns thick chemically cross bonded to the UV resistant base resin. The gel coat is 5 times the thickness of surface film, it is integral with the sheet and cannot delaminate. Premium grade Wonderglas GC permanently withstands weathering, retards fading, maintains excellent light transmission, and has higher resistance to a range of common chemicals than standard fibreglass sheeting. Actual usage has proved that gel coated Wonderglas GC is eminently suitable for long term industrial and commercial use.

In determining the cost effectiveness of Wonderglas GC over a term of 25 years, or the life of the building, consideration must be given to the benefits. These include lower maintenance or replacement costs, the continuing benefit of excellent natural lighting with only minor deterioration over the product's lifetime. Also, lack of brittleness and high resistance to hailstones over many years. Finally, the sound weatherproofing of the building and its better appearance long after other materials have failed.

It is estimated that commonly used surface film protected fibreglass sheeting can actually cost up to 300% more based on replacement of product at useful life intervals, at present day cost per square metre. Testing undertaken by CRC (an independent government body) in Report No. CRC-P-TR-030 came to the conclusions that: 'Gel coat was the most resistant coating. A correctly formulated gel coat being more effective than the use of weather resistant thermoplastic surface films.'

Wonderglas GC has also been tested at Allunga Qld, through the Allunga Exposure Laboratory. Allunga is an independent laboratory that specialises in natural weather testing, and is well known in Australia and overseas. All methods of testing are performed to strict Australian Standards. The Altrac system (in which the sample tracks the sun), is generally accepted to have a 5:1 weathering value. The Wonderglas GC result was a light loss of 22% over a period equivalent to 20 years exposure. The test product still displays a very smooth, glossy surface with no fibreshow at all.

The Wonderglas GC technology was developed in the United States through BP Chemicals, and has been in the American market for in excess of 25 years and widely used throughout Australia since 1994.

**25
YEAR
WARRANTY**

Warranty



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

Ampelite Australia Pty Ltd warrant 'Wonderglas GC' glass reinforced polyester sheeting over:

(A) a period of 25 years (pro-rata cover) for the following:

1. The product will not allow water penetration through the actual sheet.
2. The product will not de-laminate or allow protrusion of reinforcing fibres through the sheet surface.

(B) a period of 10 years (pro-rata cover) for the following:

1. Remain structurally sound and shatter resistant under normal conditions. This includes fracturing of sheet by hailstones up to 20 mm in diameter accompanied by winds up to 100 km/hr.
2. Excessive yellowing of sheets leading to loss of light transmission exceeding 10% of the original light value when installed below a latitude of 26° South of the equator. Installations above this latitude will be covered by individual warranty based on known climatic conditions.

Warranty conditions:

- (a) The product must be installed strictly in accordance with AS 1562.3:2006 Design and installation of sheet roofing and wall cladding Part 3: Plastic, and with the Manufacturer's recommendations and specifications which are available from Ampelite offices.
- (b) The product must not be affected by failure to remove debris, or failure to keep the surface clean or to provide free drainage of water from the product's surfaces.
- (c) The sheet shall not be directly exposed to the range of chemicals known to cause deterioration of polyester materials.
- (d) Sheet failure or damage due to vandalism, fire or natural disasters, improper storage or installation is not covered.

Replacement or refinishing

From the date of installations in latitudes below 26° South, and during the applicable warranty period, Ampelite Australia Pty. Ltd. will, upon verification and acceptance of a claim supply a replacement panel at a cost to the user calculated as follows: 1/120th if warranted for 10 years, or 1/300th if warranted for 25 years, of the original price paid for each month of service obtained prior to the submission of the claim, or refinish the defective panel to restore minimum surface integrity.

INSTALLATION The product must be installed strictly in accordance with AS1562.3:2006 (Design and installation of sheet roofing and wall cladding Part 3: Plastic), and Ampelite's recommendations which are available from all state offices.



Ampelite Australia Pty Ltd ABN 91 487 122 629



Wonderglas GC premium grade industrial fibreglass sheeting meets the requirements of AS/NZS 4256.3:1994

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Qld: Tel 07 3808 6211. Fax 07 3808 4799. **SA & NT:** Tel 08 8260 7391. Fax 08 8260 7397.

WA: Tel 08 9302 6833. Fax 08 9302 6855. **NZ:** Tel 09 634 5366. Fax 09 622 2060.

www.ampelite.com.au