



# Webglas GC and GC+

Solves roofing and cladding problems  
in highly corrosive environments



The toughest,  
strongest fibreglass  
sheeting available!

- Webglas GC & GC+ are also available with Ampelite's FS Firecheck fire resistant system
- Complete roofing and cladding can be manufactured coloured opaque or translucent



PROUDLY AUSTRALIAN OWNED  
PROUDLY AUSTRALIAN DESIGNED  
PROUDLY AUSTRALIAN MADE

# Webglas GC and GC+



Webglas GC+ Beige coloured opaque together with clear translucent. Note the Ampelite stainless steel fixing caps and screws installed every ridge for cyclonic loads.

## Applications

- Fertilizer & agricultural chemical plants
- Corrosive chemical processing
- Petrochemical environments
- Wastewater treatment
- Marine environments
- Mining industry
- Paper and pulp manufacturing
- Salt extraction and desalination plants
- Power stations
- Skylighting where safety mesh is not desirable
- Galvanising plants
- Brick and tile manufacturing

### Webglas GC roofing & cladding panel uses

- Roofing & cladding for industrial and commercial buildings
- Structural daylighting panels
- Single-skin or insulated systems
- Walkable roof options
- Cooling towers

### Webglas GC roofing & cladding features

- Coloured opaque or translucent panels
- Corrosion resistant
- Strongest FRP building panels
- Superior UV protection
- Range of profiles & colours
- Life cycle cost savings
- Long, maintenance-free life
- Blocks 99.9 % of UV

## Webglas GC (GC = gel coated surface)

*Why Webglas GC provides superior performance and durability to traditional building products.*

This 3660 gsm sheeting doesn't just rely on bulk for safety and strength. At its heart is heavy gauge woven web matting which provides continuous reinforcement in every direction. The overall strength is such, that wire safety mesh is not required. This is a particularly important benefit in aggressive and corrosive environments that can quickly destroy metal. Where corrosion resistance is vital, complete buildings may be clad and roofed with 'Webglas GC' which can be manufactured 100% coloured opaque, or translucent to transmit natural light. For extreme environments, where high levels of acids or alkalis may occur, 'Webglas GC+' which incorporates chemically resistant resins, will provide additional protection. Webglas GC is totally corrosion resistant, it cannot rust and is impervious to water, vapours and gases.

What really sets Webglas apart from traditional building materials is its combination of strength, resistance to a wide range of chemicals and low surface erosion. The warranty covers surface erosion and physical properties for 20 years. The extraordinary resin technology used in the highly UV resistant surface coating is the same as that used for Ampelite's premium grade 'Wonderglas GC' sheeting. With its history of outstanding performance in the most challenging environmental conditions, Webglas GC is at the pinnacle of GRP roofing and cladding.

## 20 Year Warranty

*Roofing panels safe for foot traffic.*

As the industry standard for walkable fibreglass panels, 'Webglas GC' provides the strongest support for foot traffic of any fibreglass building panel designed for profiled roofing. The materials strength and stiffness offers installers and maintenance workers greater confidence and safer support when compared to other translucent roofing. Please see the Load/Span tables in this guide and contact Ampelite for assistance with any project.

The additional reinforcing provided by the heavy woven mat construction eliminates the need to install wire mesh below the sheet. This makes 'Webglas GC' particularly suitable for use in the public buildings and schools, or wherever there may be access to the roof. Although 'Webglas GC' is trafficable, traditional boarding is recommended to prevent possible surface damage.

## Translucent Colours



Ice Clear

Opal

Cool-Lite

## Opaque Colours



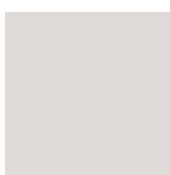
Rivergum



Slate Grey



Heritage Red



Gull Grey



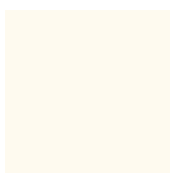
Dune



Mist Green



Beige



White



Bronze Olive

*Opaque  
Colour Chart  
– Colours are  
representative  
only*

Please consult with your Ampelite office for other colour options.

## Stability

### Material Comparisons

	Webglas GC	Fibreglass	Polycarbonate	PVC	Steel	Aluminium
Thermal Expansion 0°C to 40°C temperature variation. Based on a sheet length of 12 metres.	9.1 mm	14.4 mm	32.4 mm	30.2 mm	5.8 mm	11.5 mm
Thermal co-efficient	1.9 x 10 <sup>-5</sup> cm/cm °C	3.0 x 10 <sup>-5</sup> cm/cm °C	6.75 x 10 <sup>-5</sup> cm/cm °C	6.3 x 10 <sup>-5</sup> cm/cm °C	1.2 x 10 <sup>-5</sup> cm/cm °C	2.4 x 10 <sup>-5</sup> cm/cm °C
Thermal conductivity	0.096 W/m.K	0.158 W/m.K	0.21 W/m.K	0.15 W/m.K	47.5 W/m.K	23.5 W/m.K
Density	1685 kg/m <sup>2</sup>	1400 kg/m <sup>2</sup>	1200 kg/m <sup>2</sup>	1380 kg/m <sup>2</sup>	7850 kg/m <sup>2</sup>	2850 kg/m <sup>2</sup>

## Span and Fastener Table

Sheet application	Fastener Spacing	No. of Fixings M <sup>2</sup>	Skylight Strip *Complete Roof		
			1.0kPA	2.0 kPA	Maximum
Corrugated	every 2nd crest	6.5	1.9 m	1.5 m	1.5 m
5 Rib	every crest	5.2	2.1 m	1.6 m	1.7 m
Spandek	every 3rd crest	3.8	2.2 m	1.6 m	1.9 m
Super 6	every 2nd crest	3.3	2.6 m	2.0 m	2.1 m
LT7	every 2nd crest	3.9	2.1 m	1.6 m	1.7 m
Box Rib 5	every crest	5.4	2.2 m	1.8 m	1.9 m

\*Maximum span for complete 'Webglas GC' roof, allowing for concentrated load testing as per AS1562.1

## Light/Shade Factors

	Light transmission	Shading co-efficient
Ice Clear	60%	0.69
Opal	56%	0.46
Opaque	0%	0.12

## Curved Roof Radius

3660 g/m<sup>2</sup> Corrugated and 5 Rib.

Minimum Radius 7.5 metres

## Fixings, Flashing and Capping

In corrosive environments, Ampelite recommends Grade 316 Stainless Steel Fasteners and Ampelite proprietary Grade 316 Stainless Steel 36mm diameter Fixing Caps with EPDM Washers. All flashings should be Stainless Steel.

## Physical Properties

Tensile strength (minimum)	110 MPa <small>Minimum Requirement 50 MPa</small>
Impact strength	10 joules
Shear strength	90 MPa
Modulus of elasticity	5.3 GPa
Compressive strength	151 MPa
Flexural strength	181 MPa
Specific Gravity	1.6
Water absorption	0.2% in 24 hours/26°



Webglas GC+ – Galvanising Plant, NSW

## Product Description

### Webglas GC

Polyester resin base sheet with Gel Coated surface and continuous woven mat reinforcement.

### Webglas GC+

Chemically resistant resin base sheet with Gel Coated surface and continuous woven mat reinforcement.

All resins are UV stabilised and acrylic modified to provide excellent weather resistance. If cleaned regularly the sheeting retains its original bright appearance over many years. Both products withstand environments that corrode or destroy metal and many plastics in a short period of time.

Webglas GC+ provides additional protection where there are high concentrations of alkalines or acids. See the 'Chemical Resistance' table for details.

### Technical Support

Projects involving corrosive environments often require supportive evidence regarding product suitability or manufacturers recommendations regarding the use of a particular material. Ampelite can provide extensive technical support and even further product development if necessary. Contact your local Ampelite office if you require this service.

## Environmental

### Declare Label

Webglas GC is a participant product in the Living Future Institute's Declare program. Declare is a voluntary self-disclosure program aiming to transform the building materials industry through ingredient transparency. Project teams pursuing the Living Building Challenge™ (LBC) can confidently select Webglas GC as an LBC Compliant product. The Living Building Challenge™ is widely regarded as the built environment's most rigorous performance standard for buildings.

### Embodied Energy – Cradle to grave

A square metre of roof made from Webglas GC consumes 43% less energy during its life cycle. When compared to other roofing and cladding products such as galvanised steel, a square metre of Webglas GC will emit 58% less greenhouse gases and has a 67% less environmental impact. This equates to a lessening of the effects on human health, the ecosystem quality and resource use during the Webglas GC life cycle.

**'Composites: Calculating their Embodied Energy'** Study by Life Cycle Engineering & Management Research Group, UNSW.

### Specification

The sheeting shall be Ampelite Webglas GC or Webglas GC+ Gel Coated reinforced fibreglass as manufactured by Ampelite Australia Pty. Ltd. to comply with AS/NZS4256.3: 2006. The weight of the sheet shall be 3660 g/m<sup>2</sup> and be manufactured to conform with the nominated profile and colour.

Sheeting shall be installed in accordance with Ampelite fixing instructions and with AS/NZS 1562.3:2006 Design and installation of sheet roof and wall cladding Part 3: Plastic.



Webglas GC+ – Sewage Treatment Plant, Anglesea, VIC



Webglas GC+, Gull Grey Opaque & Translucent – Galvanising Plant, Perth WA



Webglas GC insulated EFAS panel – Grocery Store, Geelong VIC

# Webglas GC and GC+



Webglas GC+ – Brick Factory, Albury, NSW



Webglas GC opaque and translucent combination – Fertilizer Plant Geelong VIC

## Standards

Webglas GC and Webglas GC+ fully comply with the requirements set out in the National Construction Code 2016 (NCC) for Class 2 to Class 9 Buildings.

Testing to Standards include;

- AS/NZS 1170.2:2011
- AS/NZS 4256.3:2006
- AS/NZS 1562.3:2006
- AS/NZS 4040.1:2016

When manufactured with the FS Firecheck protection the following additional standards are met:

### AS/NZS 3837:1998 (GROUP 2 Classification)

Methods of test for heat and smoke release rates for materials and products using oxygen consumption calorimeter.

### International Standards Testing Authority: TUVSUD PSB Pty. Ltd. Singapore

### BS 476-6:1989 + A1: 2009 (Fire Propagation Index 12.6)

Fire tests on building materials and structures – Part 6: Method of test for fire propagation for products.

### BS 476-7:1997 (CLASS 2 Surface Spread of Flame)

Fire tests on building materials and structures – Part 7: Method for classification of the surface spread of flame of products.

### ASTM E108: 2001 (CLASS A)

Standard test method for fire tests of roof coverings.

## Material Comparisons

### Chemical Group

	Webglas GC	Webglas GC+ CR Resin	Polycarbonate	PVC
<b>Organics</b>				
Acetic Acid 25%	LS	R	LS	NR
Ethanol	R	R	NR	LS
Heptanol	R	R	R	LS
Kerosene	R	R	R	LS
Turpentine	R	R	LS	LS
Urea	R	R	LS	LS

### Acids

Hydrochloric Acid Conc.	LS	R	NR	LS
Hydrochloric Acid 10%	R	R	R	R
Hydrochloric Acid 40%	NR	R	NR	LS
Nitric Acid	R	R	R	LS
Oleic Acid Conc.	R	R	R	NR
Phosphoric Acid Conc.	LS	R	NR	R
Phosphoric Acid 30%	LS	R	NR	R
Sulphuric Acid 30%	LS	R	NR	R
Sulfurous Acid	NR	R	NR	LS
Sulfurous Acid 3%	R	R	LS	LS

### Alkalines

Amonium Hydroxide 10%	LS	R	NR	R
Amonium Sulphate	LS	R	LS	R
Sodium Hypochlorite (Chlorine)	LS	R	R	NR
Sodium Hydroxide 10% (Caustic)	LS	R	NR	R
Sodium Hydroxide 25% (Caustic)	LS	R	NR	R

### Salts

Ammonium Carbonate	R	R	NR	NR
Copper Chloride	R	R	R	R
Nickel Chloride	R	R	R	R
Pottasium Carbonate	R	R	R	LS
Sodium Carbonate	R	R	R	LS
Zinc Sulphate	R	R	R	R

**KEY: R = Recommended LS = Limited Service NR = Not Recommended**

Recommendations are based on total immersion at 40° and therefore may be conservative.

For more information on new products or installation instructions, please visit our website at [www.ampelite.com.au](http://www.ampelite.com.au)

Ampelite is proudly Australian owned. Profits remain in Australia and taxes paid benefit our community.



**Ampelite Australia Pty Ltd**  
ABN 91 487 122 629

Plumbing Merchants Association  
Supplier Of The Year  
2006, 2007, 2008, 2009,  
2011, 2014 & 2016



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

The following benefits are in addition to any rights and remedies conveyed by The Australian Consumer Law.

### Ampelite Australia Pty Ltd warrants Webglas GC glass reinforced composite sheeting over:

1. A period of 20 years (pro-rata cover) for the following:
  - The product will not allow water penetration through the actual sheet.
  - The product will not de-laminate or allow protrusion of reinforcing fibres through the surface of the sheet.
  - The product will remain structurally sound and shatter resistant under normal conditions. This includes a loss of tensile strength of up to 25% deterioration.

### Warranty Conditions:

- The product must be installed strictly in accordance with the Design and Installation of Sheet Roof and Wall Cladding Part 3: Plastic AS/NZS 1562-3, 2006 and Ampelite's (the manufacturer) recommendations and specifications.
- 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 products surfaces.
- The sheet shall not be directly exposed to the range of chemicals known to cause deterioration of composite materials unless pre-determined.
- Sheet failure or damage due to vandalism, fire or natural disasters, improper transport, storage or installation is not covered.
- The warranty is non-transferable and requires a proof of purchase.
- This document supersedes all other Ampelite representations inferred or implied.

### Replacement or Refinishing

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: 1/240th warranted for 20 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.

This warranty is made expressly in terms of replacement or refinishing and does not cover:

- Contingent liability such as transport, hoisting or labour to remove and or install replacement end product.
- Injury to persons, damage to property, loss of income, profit or business, or any other indirect loss arising from or caused in any way by the defective product.