

WONDERCLAD GC PRODUCT TECHNICAL STATEMENT

PRODUCT DESCRIPTION

Ampelite introduced Wonderglas S-996 gel-coated sheeting to New Zealand in 1995 expressly to combat our very harsh environment. Its highly UV-resistant gel coat provides Wonderglas S-996 with the ultimate impenetrable barrier, reducing surface erosion and loss of light transmission to negligible proportions.

Wonderclad GC uses the same S-996 gelcoated system and is a coloured fiberglass cladding specially designed for areas where corrosion resistance is vital. Complete buildings can be roofed and clad using Wonderclad GC and is recommended for use where steel and other roofing or wall cladding materials deteriorate or corrode at an unacceptable rate. For extreme environments where high levels of acids or alkaline may occur, Wonderclad GC+ which incorporates vinyl ester resins will provide additional protection.

The warranty covers water penetration for 25 years. The thickness of the sheet shall be as required to meet the purlin/girt spans in the chosen commercial roofing profile.

FEATURES

Wonderclad GC uses Silmar S-996 gel coat that was specifically designed as a clear gel coat for roofing. The composition of our gel coat has not changed since we started supplying Wonderglas S-996 in 1995 and continues to be a preferred solution for commercial buildings throughout the country. The same special resin technology used in the highly UV resistant surface coating is used for Ampelite's premium grade Wonderclad GC, now very widely used in major projects around New Zealand and Australia. Wonderclad GC therefore provides a low maintenance roofing and cladding guaranteed for a specific lifetime.

This makes Wonderclad GC particularly suitable for use in commercial & industrial buildings.

- Manufactured to most New Zealand long run metal roofing profiles.
- The top (weather side) is gel coated with S-996 highly UV resistant resin. This part of the process is identical with all of Ampelite's GC premium grade sheeting and provides virtually undiminished performance for 25 years.
- Wonderclad GC uses Ampelite's Proprietary SL Group 3 "Bromine Free" Fire Retardant Resin System as standard. Wonderclad GC manufactured in New Zealand after the 15 October 2020 will now use Ampelite's proprietary Group 3 Bromine Free' fire retardant resin system that is currently used to manufacture our SL sheeting products.
- Surface erosion is eliminated and covered by Warranty for 25 years. Low surface erosion also improves weathering properties. The gel coated surface provides an almost impenetrable barrier and is warranted against water penetration for 25 years.

INSTALLATION

Wonderclad GC sheeting shall be installed in accordance with Ampelite fixing instructions and with AS/NZS 1562.3:1996, Design and installation of sheet roof and wall cladding, Part 3: Plastic, the requirements of the NZ building code and the NZ Metal Roofing Manufacturers Association Code of Practice.

FOR FULL INSTALLATION DETAILS PLEASE DOWNLOAD A COPY OF OUR INSTALLATION GUIDE:

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Please note these additional important requirements:

Wonderclad GC shall be installed using the fastening length applicable to the chosen profile. The sheeting must be installed by pre-drilling 12mm oversize holes to allow for expansion and contraction. The fixing screws shall be located in the centre of the rib must not be over tightened to an extent that the sheet buckles, allowing water penetration at the seal or sheet overlap. Fixing should be made at every second crest at both ends of the sheet, and every third crest at intermediate purlin's. Wonderclad GC sheeting shall only be installed using Metal profiled washers along with an EPDM washer which fits the profile correctly ensures the fixings remain watertight.

Pan fixing is recommended for cladding. Fixing shall occur in every pan at sheet ends and every other pan at intermediate.

To ensure accuracy Ampelite recommends the following:

- 1- Install screws into the Wonderclad GC sheeting in the same manner as metal.
- 2- When completed, remove fixings from the Wonderclad GC sheet.
- 3- Using the existing screw hole as a guide, re drill over sizing the hole.
- 4- Re install the fixing screw. (Note how the screw is centrally located in the hole.)
- 5- Do not over tighten the screw putting undue pressure on the Wonderclad GC sheet.

SPAN TABLES BY ROOF PROFILE – 1.5Kpa Wind Load. Concentrated loads as per AS1170.2.F

SPANNING	1.5KPA		
Gauge	1.1mm/1800	1.4mm/ 2400	1.7mm/ 3050
Corrugate	1000	1200	1300
SixRib	1000	1200	1300
Low Rib Trapezoidal, 5 Rib, Trimdek, etc	1200	1500	1700
Metric, Windek, MC1000, Ribline 960, Kliplok 406	1200	1500	1700
Steelspan, Topspan	1600	1800	2100
Multispan, MC930, Maxispan	1600	1800	2000
BB900, ST900, Multirib LT7, ST7, RT7, ST963, etc	1400	1700	1900
Trough Profiles, DD300, DD400, HiRib, etc	1200	1400	1700
Supersix	1600	1800	2100

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BUILDING CODE COMPLIANCE

The product will, if used in accordance with the Ampelite installation and maintenance requirements, assist with meeting the following provisions of the building code for a period of 20 years:

- Clause B2 Durability: Performance B2.3.1
- Clause C3 Fire affecting areas beyond the fire source: Buildings C3.3
- Clause E2 External moisture: Performance E2.3.1, E2.3.2
- Clause F2 Hazardous building materials: Performance F2.3.1

EVIDENCE MEETS NZBC

Test information available from Ampelite (NZ) Ltd and past history of use of Wonderclad GC products in New Zealand indicate that, provided the product use and maintenance is in line with the guidelines contained in the current literature referenced, Ampelite S-996 gel coated roofing & wall cladding systems can be expected to meet the performance criteria in clause B2, C3, E2 and F2 of the New Zealand Building Code, for a period of not less than 25 years.

TESTING & SUPPORTING EVIDENCE

The product has and can make available the following additional evidence to support the above statements:

Wonderglas GC (now Wonderclad GC) has been tested at the Allunga Exposure Laboratory in Allunga QLD, a world renowned testing facility. All methods of testing are performed to strict Standards. The Altrac system (in which the sample tracks the sun), is generally accepted to have a 5 to 1 weathering value. The Wonderclad GC result was a light loss of 22% over a period equivalent to 20 years exposure. The test samples still displayed a very smooth, glossy surface with no fibre show at all

ISO5660 (2002), "Reaction to fire test". Fire Group 3 Rating Testing conducted by Centre of Advanced Composite Metals, Engineering, University of Auckland.

NZ Metal Roofing Manufacturers Association Inc. (NZMRM)
Code of Practice

STANDARDS

Ampelite NZ Limited is an AS/NZS ISO 9001: 2002 SAI Global Certification accredited company providing Quality Assurance in Manufacturing, Supply and Servicing. License number QEC 4787 was certified and issued to the company on the 20 June 1995.

Ampelite Manufactures its products to Australian/New Zealand Standard AS4256.3: 1994, described as "Plastic roof and wall cladding materials – Part 3 – Glass fibre reinforced polyester (GRP)".



World Class, Quality
PLASTIC ROOFING PRODUCTS

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