

## WONDERGLAS S-996 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.

Wonderglas S-996 is recommended for commercial and retail applications where excellent long-term light transmission is required. The warranty covers light transmission & water penetration for 25 years. The thickness of the sheet shall be as required to meet the purlin spans in the chosen commercial roofing profile.

### FEATURES

Wonderglas S-996 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 Webglas 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 Wonderglas S-996, now very widely used in major projects around New Zealand and Australia. Wonderglas S-996 therefore provides a low maintenance roofing and cladding guaranteed for a specific lifetime.

This makes Wonderglas S-996 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 Ampelites GC premium grade sheeting and provides virtually undiminished performance for 25 years.
- Loss of light transmission after 25 years is just 30% compared to a loss of 30% after 10 years for standard fibreglass. Very high resistance to yellowing and discolouration. Over 10 years the change is negligible and covered by Warranty, only minor changes occur in later years. In addition, inbuilt UV protection eliminates 99% of harmful rays.
- Wonderglas S-996 uses Ampelite's Proprietary SL Group 3 "Bromine Free" Fire Retardant Resin System as standard. Wonderglas S-996 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

Wonderglas S-996 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 INSTALLION GUIDE:

## WONDERGLAS S-996 PRODUCT TECHNICAL STATEMENT (Cont'd)

**Please note these additional important requirements:**

Wonderglas S-996 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. Wonderglas S-996 sheeting shall only be installed using Metal profiled washer along with an EPDM washer which fits the profile correctly ensures the fixings remain watertight.

**To ensure accuracy Ampelite recommends the following:**

- 1- Install screws into the Wonderglas S-996 sheeting in the same manner as metal.
- 2- When completed, remove fixings from the Wonderglas S-996 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 Wonderglas S-996 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	2.2mm/3660
Corrugated	1000	1200	1300	1400
SixRib	1000	1200	1300	1400
Low Rib Trapezoidal, 5 Rib, Trimdek, etc	1200	1500	1700	1900
Metric, Windek, MC1000, Ribline 960, Kliplok 406	1200	1500	1700	1900
Steelspan, Topspan	1600	1800	2100	2400
Multispan, MC930, Maxispan	1600	1800	2000	2300
BB900, ST900, Multirib LT7, ST7, RT7, ST963, etc	1400	1700	1900	2200
Trough Profiles, DD300, DD400, HiRib, etc	1200	1400	1700	2000
Supersix	1600	1800	2100	2400

## WONDERGLAS S-996 PRODUCT TECHNICAL STATEMENT (Cont'd)

### 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
- Clause G7 Natural Light

### EVIDENCE MEETS NZBC

Test information available from Ampelite (NZ) Ltd and past history of use of Wonderglas S-996 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, F2 and G7 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 Wonderglas S-996) 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 Wonderglas S-996 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**

## **WONDERGLAS S-996 PRODUCT TECHNICAL STATEMENT (Cont'd)**

### **COMPANY CONTACT:**

**Ampelite (NZ) Ltd  
79 Captain Springs Road  
Onehunga  
Auckland**

**Ph: 09 634 5366  
Email: [warranty@ampelite.co.nz](mailto:warranty@ampelite.co.nz)  
Website: [www.ampelite.co.nz](http://www.ampelite.co.nz)**

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