Ampelite's Dualroof Insulated Skylite

DUALROOF

Increases thermal efficiency and guards against condensation

The Ampelite Dualroof System uses the fundamental principals of double-glazing to create a simple yet functional insulated skylight system.

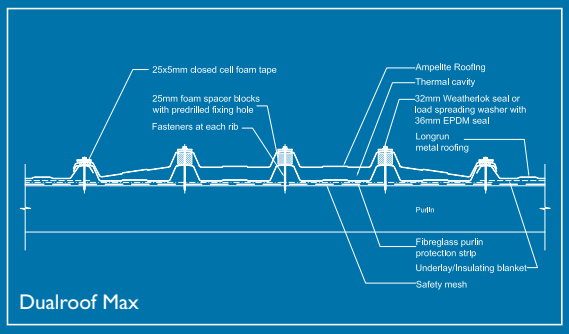
In today's environment of conservation, the reduction of energy consumption and the importance of environmentally friendly products cannot be overlooked. Heat loss and condensation build up form single skinned skylights can diminish the benefits derived from natural daylight. This is where the Ampelite Dualroof System provides a solution. The system provides natural daylight whilst also ensuring minimum loss of heat with no condensation problems.

The Ampelite Dualroof Insulated Skylight and Anti Condensation System has been specifically designed for the New Zealand climate, with simplicity and ease of installation a high priority. Whilst the system is not unique in theory, in practice it provides a long-term cost saving and environmental benefit for years to come.

Systems available:

DUALROOF MAX

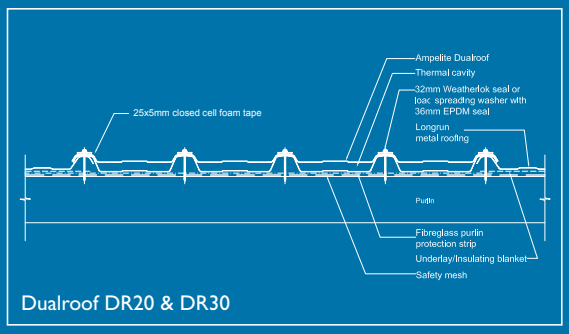
To get the maximum performance from a double skinned skylight the two sheets of fibreglass roofing should not touch at any point to maintain an air cavity between sheets. Areas where the sheets touch can allow heat to escape and this air cavity between the sheets needs to be air tight as air flow between the two sheets can impact on the thermal performance of the system. Dualroof MAX utilises high density foam spacer blocks to hold two sheets of the same profile apart and maintain the air cavity and a closed cell foam tape to seal the sides and ends of the sheets.



Dualroof Max

DUALROOF DR20 AND DR30

DR20 and DR30 are designed to be easily installed with most commercial roofing profiles. DR20 and DR30 consists of 2 sheets of fibreglass roofing that have differing profile heights. This allows the top sheet to sit on the rib of the bottom sheet creating a 20mm air gap between the pans of the sheets. DR20 and DR30 does not have the same thermal performance of Dualroof MAX but still out performs standard single skinned skylights.



Dualroof DR20 & DR30

WONDERGLAS GC OR COOLITE IR TOP SHEET

The special resin technology used in the highly UV resistant surface coating of the top sheet is the same as that used for Ampelite's premium grade "Wonderglas GC", now very widely used in major projects around New Zealand. For improved visible light transmission and lower heat transmission, we suggest using our Coolite IR Solar control sheeting as the top skin of our Dualroof System.

BEST IN MARKET 25 YEAR WARRANTY INCLUDING LOSS OF LIGHT

NEW ZEALAND MADE

AMPELITE makes light work!

Independent engineers' testing has established the benefits of the Ampelite Dualroof System. When compared to other sky lighting products, the Ampelite Dualroof System displays superior thermal properties. Please refer to the tables below.

LIGHT AND HEAT TRANSMISSION

SOLAR SPECTRUM 200 - 2500 Nm	
Solar Heat Transmitted	234 w/m²
Solar Heat Reflected	307 w/m²
Absorbed Heat Radiated In	54 w/m²
Absorbed Heat Radiated Out	187 w/m²
Total Heat In	288 w/m²
Solar Heat Transmitted	29.9%
Solar Heat Reflected	39.3%
Absorbed Heat Radiated In	6.9%
Absorbed Heat Radiated Out	23.9%
Total Heat In	36.8%
Shading Co-efficient	0.42

Test was conducted using to clear sheets as the top and bottom skin. Light and heat transmission factors can change depending on the colour of the top sheet'

INSULATION VALUE = R

DR MAX	0.30 m².k/w
DR20	0.26 m².k/w
DR30	0.26 m².k/w

Thermal resistance calculated to NZS 4214 - 2006

AVAILABLE COLOURS AND PROFILES

The Dualroof system in available with a Clear or Opal top sheet and a clear bottom sheet. Other colours can be produced to order for viable quantities Dualroof MAX is available in all current profiles (shown on separate publication) such as Corrugated, 5 rib, LT7, BB900 etc, plus most superseded profiles are available.

SHEETING GRADES AND THICKNESS

Series	Weight (Kg/m²)	Thickness
1800	1.8	1.1mm
2400	2.4	1.4mm
3050	3.05	1.7mm
3660	3.66	2.0mm
4270	4.27	2.3mm
4880	4.88	2.6mm

EXPANSION DATA

Material	Thermal Expansion	Thermal Co-efficient
Materials Expansion Comparison. 0° to 40° Temperature Variation. Sheet Length 6 metres.		
Fiberglass	7.2mm	3.0 x 10^{-5} cm/cm°C
Polycarbonate	16.2mm	6.75 x 10^{-5} cm/cm°C
Steel	2.9mm	1.2 x 10^{-5} cm/cm°C
Aluminium	5.8mm	2.4 x 10^{-5} cm/cm°C

SPANNING CAPACITY

Spanning (1.5 kpa) - DUALROOF MAX		
Profile	**1.1mm**	**1.4mm**
Corrugated	1000mm	1200mm
Sixrib	1000mm	1200mm
5 Rib	1200mm	1500mm
Trimline	1200mm	1500mm
MC700, 750, 770	1200mm	1500mm
Metric, Windek, M1000	1200mm	1500mm
Ribline 960	1200mm	1500mm
Steelspan, Topspan	1600mm	1800mm
Multispan, Maxispan	1600mm	1800mm
LT7, ST7, Silbery	1400mm	1700mm
BB900, ST900, Multirib	1400mm	1700mm
DD400, BB400, BB300	1200mm	1400mm
Kilplok 400	1200mm	1500mm
Hirib 500	1200mm	1500mm
Supersix	1600mm	1800mm

Spanning (1.5 kpa) - DUALROOF DR20-30		
Profile	**1.1mm**	**1.4mm**
DR20	1400mm	1700mm
DR30	1600mm	1800mm

For information regarding recommended spans in high wind and cyclonic regions please contact your local Ampelite office.

PHYSICAL PROPERTIES

Tensile Strength	80 Mpa
Impact Strength	8 Joules
Shear Strength	90 Mpa
Modulus of Elasticity	5500 Mpa
Compressive Strength	135 Mpa
Specific Gravity	1.45
Thermal Expansion	3.0 x 10^{-5} cm/°C
Water Absorption	.2% in 24hrs./26°C
Recommended Service Temperature Range	-20° to +95°C

WARRANTY

Dualroof features a 25 year warranty. For full warranty details, please contact your nearest Ampelite office.

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Contact us for more information

- **Auckland** 09 634 5366
- **Palmerston North** 06 356 5936
- **Christchurch** 03 349 4674

www.ampelite.co.nz

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