

Specification

Ampelite Dualroof Premium Insulated Skylight System consisting of a Wonderglas Coolite IR4 top sheet and a Lexan Multiwall bottom sheet as supplied by Ampelite (NZ) Limited. The Dualroof Premium system should have an effective cover of 900mm.

Optical Properties

The Dualroof Premium system shall be manufactured to produce the following final results.

Visible light Transmission	50%
Total Solar Transmission	36.50%
Shading Coefficient	55%

Thermal performance

Dualroof Premium has an R value of 0.3 m².k/w (Thermal resistance calculated to NZS 4214 – 2006).

Sheet Composition and Physical Properties

Outer side GEL coat layer	Silmar SIL12BE-996100 micron +/-10%
Under side film	Bondable polyester
Grade	2400 Kg/m² +10%
Gauge thickness	1.4mm +/-5%
Barcol hardness	50
Tensile Strength	95 MPa
Glass woven fiber content	27%

Warranty

The Wonderglas Coolite IR top sheet of the Dualroof Premium system is coated with a 100 micron Silmar SIL12BE-996 gel coat layer on the outer surface of the sheet forming a barrier which is resistant to the detrimental effects of UV light, minimizing

long term yellowing and maintaining mechanical properties. Wonderglas Coolite IR4 Industrial Fiberglass sheeting carries a 25 year warranty in respect of light transmission and water transmission.

Installation

The Ampelite Dualroof Premium system 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:

Please note these additional important requirements:

The Dualroof Premium system shall be installed using the fastening length applicable to the main roof. 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 and 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. Dualroof Premium 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 Dualroof Premium system in the same manner as metal.
- 2- When completed, remove fixings from the Dualroof Premium system.
- 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 Dualroof Premium sheeting.

Purlin Protection

Safety mesh must be incorporated under the Dualroof Premium roof sheeting. Where the Dualroof Premium roof sheeting passes over safety mesh sitting on the supporting purlin, a Purlin Protection strip must be placed directly under the Dualroof Premium sheeting. This profile strip will protect the Dualroof Premium system from damage.

Side laps

The metal roof sheets will need be laid with the correct spacing's left for the skylights. The Dualroof Premium system is manufactured to overlap and be supported by the adjacent roof or wall cladding. A 25x5mm compressive foam tape will need to be applied at the side laps between the steel and Dualroof Premium sheeting.

Side Stitching

It is recommended to install additional side stitching fasteners. These fasteners will bond the Dualroof Premium system and the adjacent sheeting together with appropriate allowances for the differential expansion rates of the materials. Ampelite recommends

either Ampelite Lap Stitch or a T17 coarse treaded self drilling screw with the same metal profiled washer and seal being use on the primary fasteners these instances.

The Lap Stitch is a compressed fastener designed to secure the side laps of fiberglass sheets (fiberglass onto fiberglass). It consists of a neoprene sleeve with an embedded nut, plus a stainless screw with matching washer. When drawn up properly, it offers equal bearing on both sides of the secured sheets and draws them together without cracking or crazing.

When the Dualroof Premium sheeting is lapped onto metal sheeting a T17 coarse treaded self drilling screw with the same metal profiled washer and seal being use on the primary fasteners, fastened into the top of the rib, provides a firm seal in the lapping joint. The table below indicates the recommended spacing for side stitching fasteners.

Max Spacing of Fasteners
600mm

End Laps

All end laps must have a minimum of 300mm overlap. Ampelite recommend the use of either a 25mm x 5mm closed sell foam tape or a bead of sealant at the top and bottom of the fastening point. End lapping should only be applied to roofs with a minimum pitch of 3 degrees.

Mid Span Supports

Dualroof Premium system may be installed using a mid span supports to control sheet flutter in high winds.

Span Information

Please contact your local Ampelite branch with the wind load in Kpa and we will provide you with the correct span data.

Sealing at flashings

The use of end stops is recommended to prevent wind driven water from running passed the flashing and into the building. Typically a metal angle is folded to the height of the profile rib and fastened to the end of the sheet with rivets. Neutral cure sealant is then applied where the Fiberglass sheet meets the metal angle.

Wall Cladding

Pan fixing is required at each girt, and use of Ampelite grey dome 22 mm weather seals ensures a weather tight seal. Over tightening or flattening the weather seal must be

