

Specification

Ampelite Dualroof DR20 Insulated Skylight System consisting of a Wonderglas Coolite IR4 top sheet and a Permaglas clear bottom sheet as supplied by Ampelite (NZ) Limited. The Dualroof DR20 system should have an effective cover of 900mm.

Optical Properties

The Dualroof DR20 system shall be manufactured to produce the following final results.

Visible light Transmission	55%
Total Solar Transmission	36.50%
Shading Coefficient	49%

Thermal performance

Dualroof DR20 has an R value of 0.26 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 DR20 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 DR20 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 DR20 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 purlins. Dualroof DR20 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 DR20 system in the same manner as metal.
- 2- When completed, remove fixings from the Dualroof DR20 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 DR20 sheeting.

Purlin Protection

Safety mesh must be incorporated under the Dualroof DR20 roof sheeting. Where the Dualroof DR20 roof sheeting passes over safety mesh sitting on the supporting purlin, a Purlin Protection strip must be placed directly under the Dualroof DR20 sheeting. This profile strip will protect the Dualroof DR20 system from damage.

Side laps

The metal roof sheets need be laid with the correct spacing's left for the skylights. The Dualroof DR20 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 DR20 sheeting.

Side Stitching

It is recommended to install additional side stitching fasteners. These fasteners will bond the Dualroof DR20 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 DR20 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.

Profile Rib Height	Max Spacing of Fasteners
30mm and more	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.

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 avoided. Fixing shall occur in every pan at both ends of the sheeting, and every other pan at intermediate grits.

End Closure Strip

Foam filler strip is available to suit most profiles. This strip should be installed at the ends of the sheets to exclude dirt, birds and vermin.

Cutting

Should cutting of the Dualroof DR20 sheeting onsite be necessary the use of a circular saw with a small tooth blade suitable for plastic sheeting is recommended. Care should be taken to achieve a cut with minimal damage to the sheet.

Storage

The sheeting should always be stored in a dry and fire safe area. Do not store heavy materials on top of sheets as they may fracture.

Non-trafficable

Ampelite translucent sheeting is a non-trafficable material. Sheets should be handled with care to avoid damage to the surface coating. Guarantees will not apply to sheeting that has been damaged in handling, or mechanical damage as a result of foot traffic.

Labeling

Every translucent sheet shall be labeled with the manufactures license number, manufacturer's name, sheet type, date of manufacture, batch number an weight.

Standards

As a minimum the manufacturing process shall comply with AN/NZS 4256 and where this standard conflicts with this specification this specification shall take precedence.

Quality Assurance

The manufacture shall be AS NZS ISO 2000 accredited and shall to The Warehouse Ltd satisfaction that the correct manufacturing process has been followed and that the translucent sheet is within the specified tolerances. The manufacture shall be AS NZS ISO 2000 accredited and shall demonstrate to The Warehouse Ltd satisfaction that the correct manufacturing process has been followed and that the translucent sheet is within the specified tolerances.

Approved Manufacture

Ampelite (NZ) Ltd

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Attention: Kerry Andrew