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Introduction

This specification is for the preparation to supply and install Owens Corning asphalt roofing shingles. Installed over plywood substrate and roofing underlayment Owens Corning asphalt roofing shingles create a weather tight roofing system.

To achieve this asphalt roofing shingles must be installed exactly to the manufacturers recommendations, complete with all roof underlay's, flashings and accessories and must only be used in applications where the roof slope is 8 deg or greater. Owens Corning asphalt roofing shingles are available in various profile types and colours.

Documents

There are a number of reference documents referred to in this section that relate to Lightweight Roofing Systems but not specifically to asphalt roofing shingles

NZBC B1/AS1 Structure NZBC B2 Durability NZBC E2 External moisture AS/NZS 4680 Hot-dip galvanized (zinc) coatings on fabricated ferrous articles AS/NZS 2269 Plywood - Structural NZS 3602 Timber and wood based products for use in buildings NZS 3603 Timber structures standard NZS 3604 Timber framed buildings NZS 4203 General structural design and design loadings for buildings BRANZ Bulletin BU385 1999 – Asphalt Shingle Roofing Harrison Grierson Consultants- June 2008 Dept. Building and Housing Determination. (DBH) Ref #2009/80

Documents listed above should be read in conjunction with this specification and in the event there are interpretation variations between the two documents this specification should take precedence

Manufacturers Documentation

Owens Corning Asphalt Roofing Shingles Product Brochures & Material Data Sheets Owens Corning Asphalt Roofing Shingles Installation Instructions & Technical Detail Drawings

These are exclusively available from South Pacific Shingles (2003) LtdWeb:www.southpacificshingles.co.nzEmail:sales@southpacificshingles.co.nzTelephone:0064 9 573 3017Facsimile:0064 9 573 3018

Qualifications

All work must be undertaken by Approved Roofing Contractors as assessed by South Pacific Shingles (2003) Ltd or by persons assessed as accredited to carry our assessments on their behalf.

All Installers of the Owens Corning asphalt roofing shingles must be experience competent tradesmen, will have read and understood the materials and the techniques specified and outlined in the installation instructions document.

Structure

Work covered by this part of the specification must comply with NZBC B1/AS2 Structure -Performance must meet or exceed the requirements for loads produced from gravity, self weight, snow, wind, impact, temperature or creep.

Structural fixings and methods must comply with those outlined in the Owens Corning Installation Instructions document available from South Pacific Shingles Ltd.

Plywood substrate to comply with NZS 3602 2003 Timber Treatment and must be fixed in accordance with manufacturer's specification. Plywood substrate be F11 Stress Graded

Durability

If durability of 50 years is to be achieved, the design and installation work covered by this part of the specification must comply with NZBC B2 Durability, table 1 and also NZBC E2/AS1 2005

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Warranties

Manufacturers - Owens Corning International Warranty

Suppliers - South Pacific Shingles Material Warranty issued to Approved Contactors only as verification that the products have been purchased from an Owens Corning approved reseller.

Any work not carried out by those mentioned in the above clauses will need to be inspected and signed off by South Pacific Shingles Ltd or by persons assessed as accredited to carry our assessments on their behalf to validate product warranties

Warranty period from Date of completion of installation and completion of Inspection

Materials					
	Warranty Length	Wind	Wind Warranty Length	Non-Tropical Algae	Tropical Algae
Duration®Premium	50 YRS	130 MPH*/209 KPH	10 YRS	10 YRS	5 YRS
** Duration®	40 YRS	110 MPH*/177 KPH	5 YRS	10 YRS	5 YRS
Oakridge®	30 YRS	70 MPH/112 KPH	5 YRS	N/A	N/A
Supreme®	25 YRS	60 MPH/96 KPH	5 YRS	N/A	N/A

Not all of the Owens Corning products available in New Zealand are Algae Resistant shingles-Please check if your shingles are algae resistant

** Product only available to order – non stocked items 6-8 week lead-time.

Performance

General Performance

Performance of Owens Corning Asphalt Shingles is to NZBC B2 Durability and to NZBC E2 External Moisture. Approved Contractors accept responsibility for the weather-tight performance of the completed roof which includes minor penetrations through the roof and junctions with walls and parapets. All other penetrations through the roof either during construction or after completion are the responsibility of other trades.

Nailing

Nailing of Owens Corning Asphalt Shingles must be in accordance with the **Owens Corning Asphalt Roofing Shingles** Installation Instructions & Technical Detail Drawings. All fixings are to be 316 Stainless Steel within a designated sea spray zone and "Hot Dipped Galvanized" minimum standard is recommended for all other areas.

Co ordination of trades

If the Plywood substrate or is fixed to the building by other trades outside this specification then it is to be inspected by the Approved Contractor to ensure that it meets the fixing requirements as outlined in AS/NZS 2269 Plywood – Structural and also meets the standard of the manufacturers Specification & Installation Guide current at the time of installation.

Roof Loading

Completed roofing system to comply to NZBC B1/AS1 Structure- Light Weight Roofing System: A light roof is a roof with roofing material (cladding and sarking) having a mass not exceeding 20 kg/m2 of roof area. Performance must meet or exceed the requirements for loads produced from gravity, self weight, snow, wind, impact.

Accessories Approved for Use with Owens Corning Asphalt Shingle Roofing System

Plywood: CHH "Ecoply" F11 Structural, 15mm & 17mm, T & G, Untreated and H3.1 treated sheets in either 2.4 or 2.7m to suit truss or rafter spacing of up to 900mm centres in High & Very High wind zones on roof pitches above 20 deg. or 800mm max in High wind zones under 20 deg. Suitable for roofing mass up to 30kg/m2 (additional to plywood weight or 40kg/m2 including plywood). Treated plywood must be used around eaves where plywood is exposed to the gutter.

Eave drip edge Flashing and Barge Fascia Flashing: Folded metal flashings .55g prepainted coloursteel of similar cut to an overall girth of 120mm and 2.4m lengths. Eave drip edge flashings folded at 80mm at an angle of 120 deg on the back face and then folded again 5mm up the opposite direction from the remaining 40mm to form the drip edge. Barge fascia flashings folded at 50mm at an angle of 89 deg on the back face and then folded again 5mm up in the opposite direction from the remaining 70mm to form a drip edge.

Self Adhesive "Peel & Stick" Underlay: "Weatherlock" "Armourgard", "Stormshield", "Eave guard" "Henry Low Slope" Self adhesive underlayment used to cover the plywood substrate for roof pitches above 12 deg and under 17 deg. Where ice build-up is possible apply products to the plywood at the eaves to the plumb line of the exterior wall framing or soffit area. Follow manufacturer's instructions when installing.

Shingle Starter Strip: Owens Corning "Starter Strip" or IKO "Leading Edge" pre cut starter strip to eaves to prevent exposure at joins of first row of shingles.

Ragfelt Underlay: Standard or Plain #15 or 30 lb Bitumen impregnated roofing felt for use under the shingles and stapled tightly down to the plywood substrate.

SPS Ridge Vents: Manufactured from 3 layers or 4mm Black pack flute creating a 2.0m long x 10mm flexible vent installed continuously across the ridges and fixed down with the ridge capping to create a vented roof space. Sizes available 180mm, 230mm & 280mm wide.

Low profile and High profile vents: Used in areas where there are no ridges to vent the roof space. A hole is required to be cut into the plywood and the vents are to be fitted into the shingle rows to create a weather tight finish around them.

Hip & Ridge Capping: Owens Corning "Supreme" 3 Tab shingles, Owens Corning "Hip & Ridge" & Hi Style capping, IKO 'Hip & Ridge" Capping.

Shingle Nails: Stainless Steel Coiled gun nails, large flat headed, ring shanked or annular grooved. 25mm & 32mm x 3.05mm nail for use on Supreme, Oakridge & Duration Premium shingles as per manufacturers recommendations. 45mm x 3.05mm nails for use on ventilated Hip & Ridge capping.

Bitumen Adhesive &Sealants: Shell "Tixophalte", Holdfast "Shark seal" or other bitumen based adhesive sealants that are declared by the manufacturers as being compatible and suitable for use with Asphalt Shingle roofing materials. Use to provide additional cohesion for areas around valleys, penetrations, chimneys & barge flashings.

Stepped wall flashings: EPDM or Butyl rubber membrane flashings 250mm & 300mm rolls x 1mm thick to be cut to suit and used where shingle abuts to raking chimney walls & dormers. Product selected must be UV resistant, suitable for exterior applications and must be glued where necessary with the manufacturers approved adhesive.

Pipe penetration flashing: Either EPDM or Butyl Rubber flashing to be cut to size and used to flash around pipe penetrations through the asphalt shingles in accordance with the manufacturers Installation Instructions & Technical Detail Drawings current at the time of installation.

New products are tested from time to time for suitability and compatibility with the Asphalt Shingles. Please check if you are unsure if the product you want to use is approved for use with Owens Corning Asphalt Shingle Roofing System. Contact South Pacific Shingles for further advice before using any products not listed above as approved.

South Pacific Shingles