



## Duration Premium LAMINATE SHINGLES INSTALLATION INSTRUCTIONS



## SOUTH PACIFIC SHINGLES LTD

These laminated shingles are designed for new or re-roofing work over any properly built and supported wood roof deck having adequate nail holding capacity and a smooth surface.

### UL Class A Fire Resistance & Wind Resistance Ratings

When applied in accordance with these instructions, these shingles carry the Underwriters Laboratories Class A fire resistance rating, the top rating for residential shingles. They will resist exposure to fire in accordance with UL Standard 790. When applied properly, these shingles also meet UL wind resistance Standard 997. All laminated shingles have a factory-applied strip of special thermoplastic adhesive on each shingle. After direct exposure to the sun's heat, each course bonds securely to the course below (a matter of days in spring through fall seasons, in winter it varies depending on geographical location, roof slope and orientation of the house on the site, in relation to the sun).

### Other Roofing Materials

**Metal Drip Edges** - are required along rake and eaves edges of all decks.

**Underlayment** - is recommended for roofing over any bare deck, and *is required* for a UL Class A fire rating. Use only "breather type" material such as Asphalt Saturated Felt or Shingle Underlayment classified by UL as a Prepared Roofing Accessory to assure Class A fire performance and watertight performance from wind-driven rain.

**Nails** - must be hot dipped galvanized or stainless steel, 11 or 12 gauge, with heads at least 9mm in diameter.

**Staples** - must be stainless steel, 16-gauge minimum, with a 25mm minimum crown width and be cut with a divergent point.

**All Fasteners** - must penetrate at least 19mm beyond the thickness of the shingle layers.

**Venting** - roof cavities must be adequately vented using an approved venting system. Care should be taken to use appropriate fastenings and flashings to ensure a watertight installation.

**Bitumastic Adhesive** - Shell Tixophalte or equivalent is recommended.

## 1 Roof Substrate

Timber roof framing must be in accordance with NZS3604 or other applicable NZ standards.

The use of 15mm tongue & groove plywood is recommended. This will ensure a total roof mass of less than 20kg/m<sup>2</sup> being the maximum for Light Roof Framing under NZS3604. Chosen substrate must have a minimum thickness of 15mm. Thickness should be determined with respect to the manufacturers specifications for maximum support spacing. Sheet ends and joints must be well supported. The chosen substrate should be well fastened in accordance with the manufacturers specification.

Owens Corning and South Pacific Shingles recommend venting of all roof cavities. This prevents build up of hot or moist air in all seasons. See figure 1a and 1b for fascia to ridge venting set out. Gable louvres can be used as an alternate.

Fig 1a

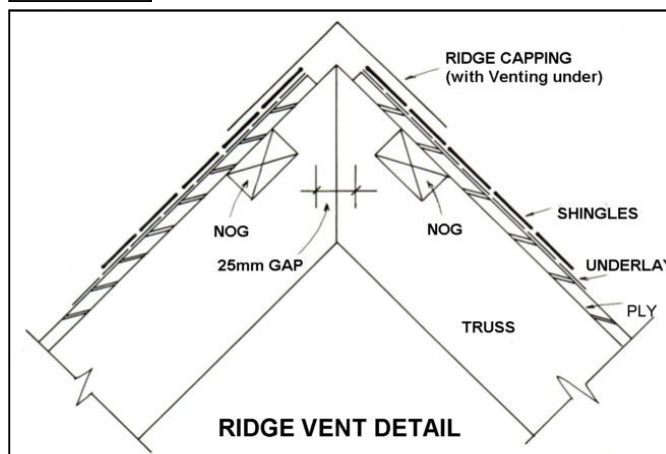
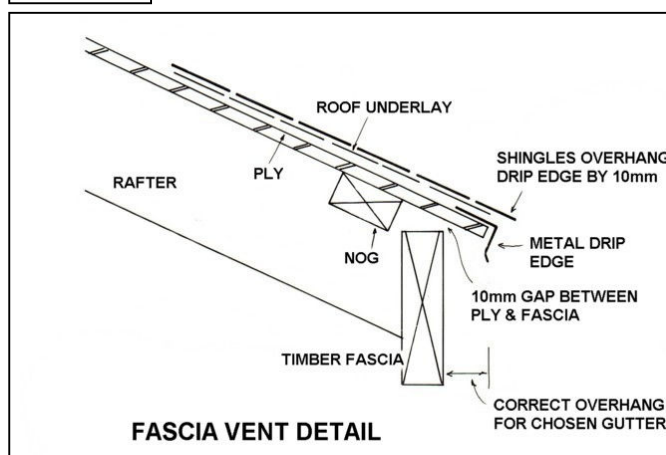


Fig 1b



## 2a Deck Preparation

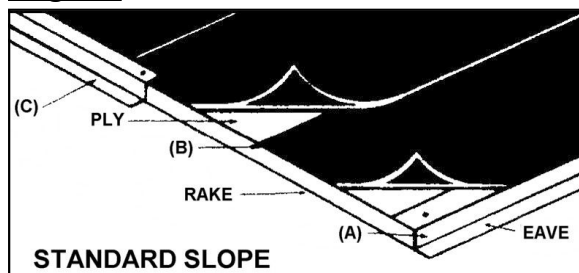
### For Standard Slope Decks (18 degrees or more)

Application of underlayment, metal drip edges and eaves flashing (**Fig 2a**) :

- (A) Apply one layer of underlayment over metal drip edge at eaves. Use only enough fasteners to hold.
- (B) Overlap successive courses 50mm. Overlap course ends 100mm. Side laps are to be staggered 1.8M apart.
- (C) Apply metal drip edge over underlayment at rake.

Note: Where ice-damming is possible, apply Owens Corning WeatherLock underlayment or equivalent eaves flashing at least 600mm beyond the inside wall line. When using a coated smooth roll or mineral surfaced roll roofing, apply over the underlayment. When using a specialty eaves flashing product, follow the manufacturers instructions.

**Fig 2a**



## 2b Deck Preparation

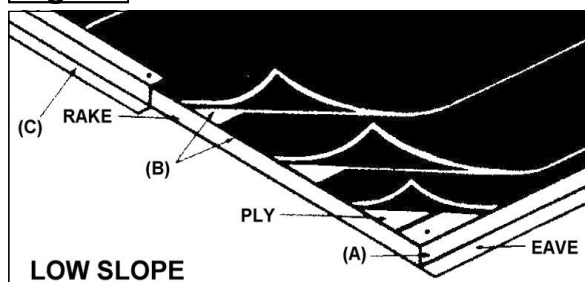
### For Low Slope Decks (12 to 17 degrees)

Application of underlayment, metal drip edges and eaves flashing (**Fig 2b**) :

- (A) Apply a double layer of underlay over metal drip edge at eaves. Use only enough fasteners to hold.
- (B) Subsequent courses of underlay should overlap the course below by 480mm. Side laps are to be staggered 1.8M apart. In some cases underlay should be interwoven to every third course of shingles. Consult South Pacific Shingles for further advice.
- (C) Apply metal drip edge over underlayment at rake.

Note: Where eaves flashing is required follow instruction as described in 1a above. For slopes under 12 degrees contact South Pacific Shingles for specific instructions.

**Fig 2b**



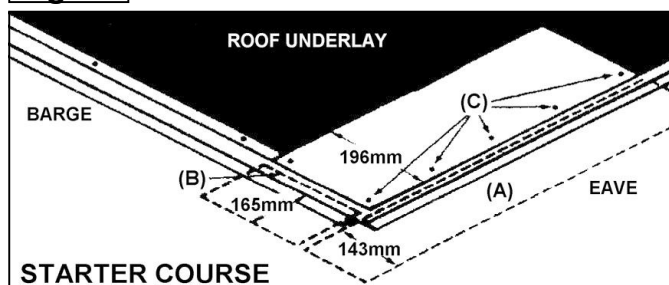
## 3 Shingle Application

Apply shingles over properly prepared roof deck, starting at the bottom of the roof and working across and up. This will blend shingles from one bundle into the next and minimizes any normal shade variation. Laminated shingles are applied with a 165mm offset. Caution must be exercised to assure that end joints are no closer than 50mm from a fastener in the shingle below and that side laps are no less than 100mm in succeeding courses. Refer to course application steps for specific instructions. See Fig 7a & 7b for barge details.

### 3a Starter Course (Fig 3a)

- (A) Trim tabs off all starter course shingles.
  - (B) Trim 165mm off rake end of first shingle. Extend 10mm beyond rake and eaves, and fasten.
  - (C) Complete rest of starter course with full sheets.
- Note: Start at rake edge. Use five fasteners for each shingle, placed 75mm up from the eaves.

**Fig 3a**



### 3b Shingle Courses (Fig 3b)

#### First Course

- (A) Apply first course starting with a full shingle, in line with the starter course. Fasten securely according to instructions.

Note: Complete course with full shingles. The fastening line should not be used for course alignment of shingles.

#### Second Course

- (B) Begin second course by positioning first shingle 165mm from the end of the underlying shingle, and flush with the top of the overlay tab (dragon tooth).
  - (C) Leave 143mm exposure, fasten securely, and trim excess overhang at rake. Maintain 10mm drip edge overhang. Retain offcut for use in subsequent courses.
- Note: Complete course with full shingles.

#### Third Course

- (D) Begin by positioning the first shingle 165mm from the end of the underlying shingle, flush with the top of the dragon tooth pattern.
- Complete by repeating step (C).

## 3b Continued

### Fourth Course

(E) Begin fourth course by positioning the first shingle an additional 165mm from the end of the underlying shingle, flush with the top of the dragon tooth pattern. Complete by repeating step (C).

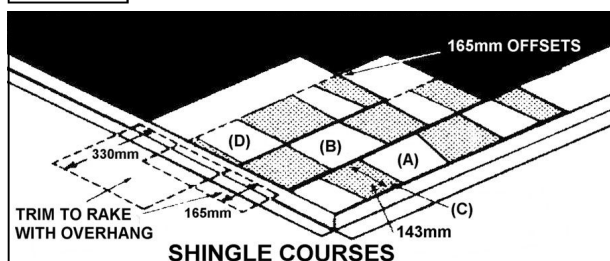
Note: Complete course with full shingles.

### Fifth Course

(F) Begin fifth course by positioning full shingle flush with rake edge and leave 143mm exposure. Complete by repeating step (C).

Note: Complete course with full shingles. For succeeding courses repeat pattern to maintain offsets.

**Fig 3b**



## 4 Valley Construction (Fig 4)

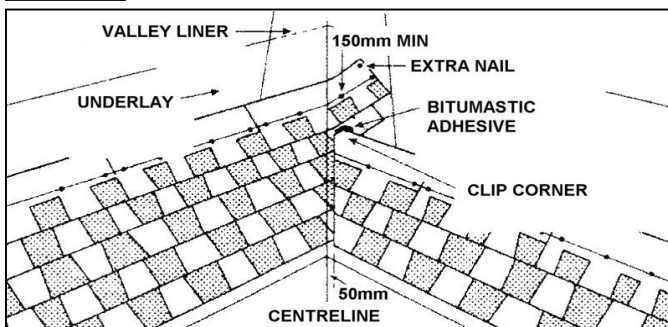
A closed cut valley is recommended and is applied as follows :

(A) Lay a 900mm wide valley liner of smooth surface roll roofing or Owens Corning WeatherLock underlayment or equivalent product. Fasten on outer edges only.

(B) Lay all shingles on one side of valley and across centerline of valley a minimum of 300mm. Fasten a minimum of 150mm away from centerline on each side of valley.

(C) Strike a chalk line 50mm from the centerline of the unshingled side. Apply shingles on the unshingled side up to the chalk line and trim, taking care not to cut the underlying shingles. Clip upper corners of these shingles, cement and fasten.

**Fig 4**



## 5 Fastening Instructions (Fig 5)

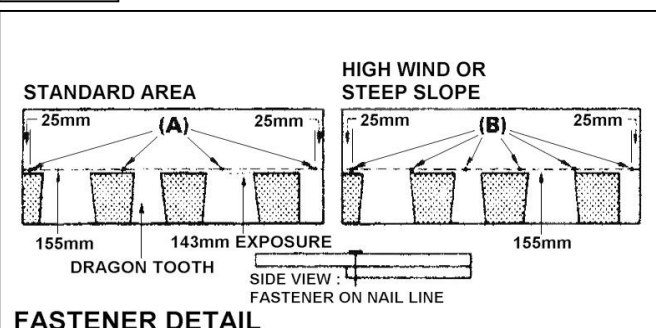
Place fasteners 155mm from bottom edge of each shingle and 25mm from each end.

(A) Use four fasteners in normal wind areas. Spaced 300mm apart.

(B) Use six fasteners, spaced evenly, per shingle for high wind and steep slopes.

Note: Do not fasten below the 155mm nail line. Fasteners must penetrate both segments of the shingle. Fasteners must be driven perpendicular to the roof surface so that heads or crowns sit level to the shingle but do not cut into the shingle surface.

**Fig 5**



## 6 Hip & Ridge Application (Fig 6)

Supreme (3 Tab) shingles are used for Hip & Ridge capping.

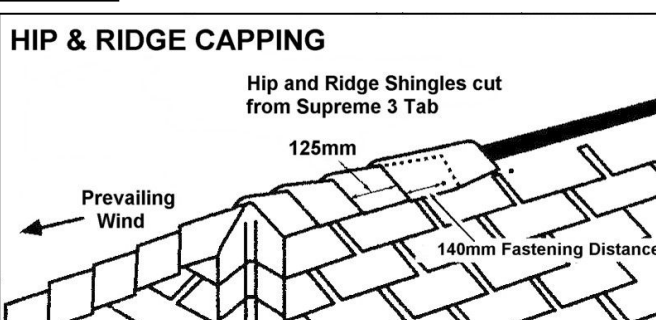
Cut full 'three tab' shingles into three 300mm x 300mm Hip & Ridge shingles.

Start hips at the eave and work up to ridge. Apply ridge only after hips have been applied, beginning on end of ridge opposite prevailing wind direction. Leave 125mm exposure per shingle for Hip & Ridge application.

Bend over the hip or ridge and fasten on each side 140mm from exposed end, 25mm up from the edge. Cover exposed nails with asphalt plastic cement.

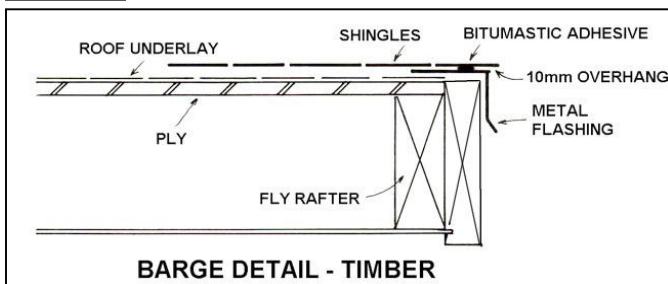
Note: Do not cut Hip & Ridge shingles from full size laminated shingles.

**Fig 6**

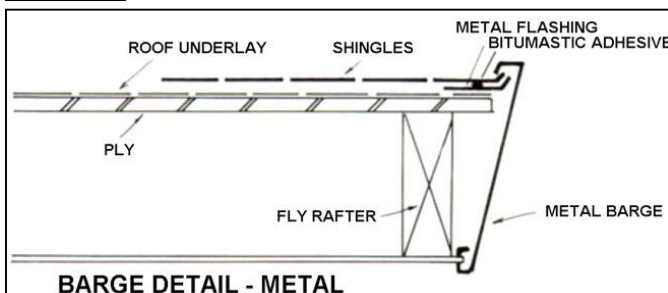




**Fig 7a**



**Fig 7b**



## 8 Precautionary Notes

*Neither Owens Corning nor South Pacific Shingles will be responsible for problems resulting from any deviation from the recommended application instructions and the following precautions:*

### (A) Roof Substrate:

*These Owens Corning shingles have been tested and rated as Class A by Underwriters Laboratories when these shingles are applied over recommended substrates. If other substrates are used, the resulting construction may not qualify as Class A.*

Regardless of substrate type used, the roofing installer must:

1. Install the material in strict compliance with the manufacturer's instructions.
2. Reasonable steps should be taken to keep the substrate from getting wet before installation. Shingles should not be installed over a wet substrate.
3. Ensure the roof space ventilation is adequate for the space volume and meets local building code requirements.

*Note: All roof structures, especially Mansard style construction, must have complete through ventilation from bottom to top to prevent entrapment of moisture-laden air (winter) and hot air (summer). Both conditions may cause premature shingle failure.*

**(B) Handling:** Use extra care in handling shingles when the temperature is below 4 degrees. *Do not* drop bundles. Shingles can be broken easily in cold weather or their edges damaged in hot weather. *Do not* attempt to separate shingles by "breaking" them over another object such as a ridge.

**(C) Fastening:** Owens Corning recommends nails or staples as preferred fastenings. Care should be taken in the use of pneumatic guns. An improperly adjusted gun can result in raised fasteners causing sealing failure, raised tabs, leaks or blow-off.

*Guidelines on fastener size, number and location must be followed. Failure to follow these instructions seriously reduces wind resistance. Owens Corning will not be responsible for any wind damage that occurs with shingles which have not been applied in accordance with these instructions.*

**(D) Mansard or Steep Slopes:** For slopes exceeding 60 degrees, use six fasteners and four spots of bitumastic adhesive per shingle. All six fasteners must be spaced equally and placed in the fastening line. Place four spots of asphalt plastic cement, 25mm in diameter, under each shingle.

**(E) Storage:** Store in a covered, ventilated area at a maximum temperature of 40 degrees. Stack in a flat fashion (maximum of 16 packs high). Protect shingles from weather when stored at the job site. Do not store near steam pipes, radiators, etc.

**(F) Hip & Ridge Shingles:** These shingles should be cut from the back (smooth) side. In cool weather, shingles can be formed more easily to fit the ridge if they are stored in a warm indoor area, then taken out immediately before application.

## 9 Re-roofing

If old asphalt shingles are to remain in place, nail down or cut away any loose, curled or lifted shingles. Sweep the surface clean of all loose debris just prior to applying the new roofing. Ensure proper size and length of fasteners. Other roofing materials will generally need to be removed prior to new roof installation. Consult local building code authorities. The surface must be smooth before shingles are installed. Attention must be given to fascia and barge details and to an adequate ventilation system.