

Tiling and fixing guide



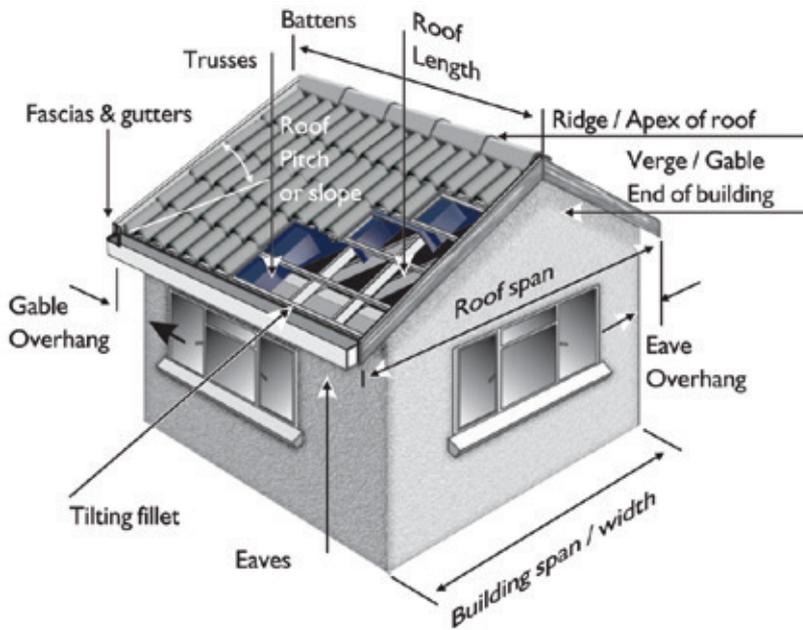
BMI

Coverland

Adhering to the use of good roofing practices

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Tiling guidelines



Roofing terminology

TILING

Ascertain the mechanical fixing requirements as per the laying and fixing specifications. Roofs to be tiled in accordance with SANS 062.

STARTING TILING

Tile to the lines from the right-hand side, working towards the left, and moving upwards. Simultaneously secure the tiles as required, and install eave fillers where necessary. All Coverland concrete tiles should be laid "straight-bond" except for the Elite which must be laid "broken-bond". Full tiles are marked to facilitate ease of laying to the lines.

MECHANICAL FIXING

Should be in accordance with the laying and fixing specifications. Where clips are used, they should be fixed to the battens. The clips should be at the tail of each tile - as close to the batten as the head of the tile beneath it permits. See fixing guidelines.

CUTTING TILES

Purpose-made cut tiles for use at hips and valleys are not manufactured because the position of the cut varies from tile to tile. Cutting of tiles is done on-site, either traditionally by hand or mechanically. Cut tiles are easily installed with Coverland kro clips that fix tiles to the valleys and hips.

HIPS

The tiles from the two adjacent slopes should be cut closely and secured on the hip rafter to provide adequate support for the bedding of ridge tiles. Hip anchors should be used at the bottom edge of each hip rafter on steep pitches. It is essential to fix all cut tiles carefully at hips and valleys to retain them in position. This can be achieved by using Coverland kro clip or by using an adhesive such as Coverfill.

CAUTION!

Sand, which is used as an aggregate in making concrete, contains silica which is released in dust when mechanical dry cutting of tiles is performed. Inhalation over a long period of time could cause silicosis. It is recommended that a dust mask to a protection level of FFP3 and eye protection be worn as a safety precaution. Alternatively, wet cutting of tiles is recommended to contain the release of dust.

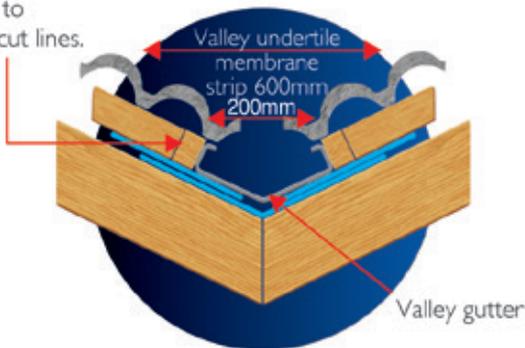
VALLEYS

Extra care should be taken with the valley construction because of its lower pitch in relation to the rest of the roof and the fact that it drains water away from the slopes. The small tile sections should be secured to the valley battens to keep the valley clear and unobstructed and prevent water from overflowing into the roof space.

Open valley

Once the valley battens have been positioned, a gutter is then formed in the valley using a suitable non-corrodible material. The fascia board is cut away so that no part of the valley gutter is raised above the fascia board when laid. The tiles on each side of the valley should be neatly cut to alignment and laid in such a way that they project over the side welt by at least 50mm. A gap of at least 50mm should be provided in the centre of the valley between the cut edges of the tiles.

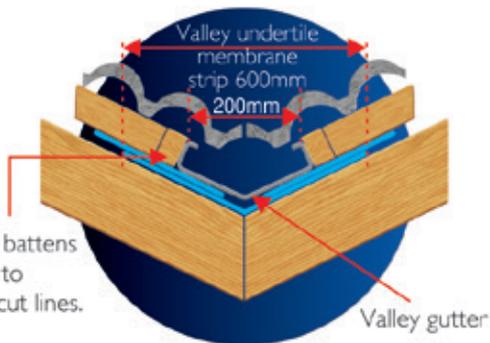
Counter battens essential to support cut lines.



Closed valley

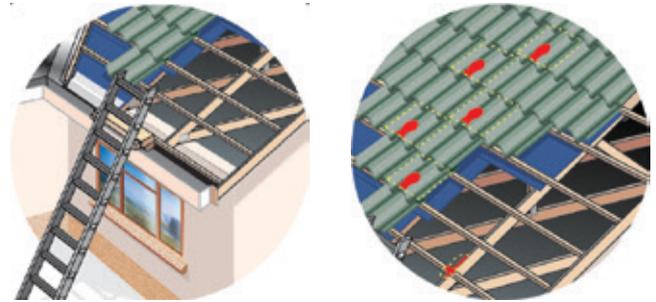
Proceed as indicated above, with the exception that the tile should be cut in order to form a neat butt joint in the centre of the valley. Best achieved by cutting one side completely, using a straight edge before starting the other side.

Counter battens essential to support cut lines.



USEFUL TIPS

1. Proceed as indicated above, with the exception that the tile should be cut in order to form a neat butt joint in the centre of the valley. Best achieved by cutting one side completely, using a straight edge before starting the other side.
2. Materials or tools required should be carried up and not drawn or dragged over the roof. Materials stacked on the roof should not overload the battens, undertile membrane or roof structure, and should preferably be placed on the rafter lines.
3. Care should be taken when walking on the roof. It is bad practice to walk up the valleys and hips. When walking on the tiles always step on the bottom middle of the tile.



Fixing guidelines

Coverland offers a range of storm clips and nails for fast and professional securing of concrete and clay tiles on every part of the roof. Our clips are quick and easy to install, match the respective tile profiles exactly and provide reliable and durable protection against wind upliftment and slipping. It also has an added security benefit of preventing intruders from entering the roof.

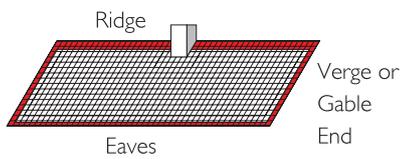
CATEGORY A – UNEXPOSED AREAS

All inland regions other than certain specified areas.

Mechanically fix two courses of tiles at the eaves, ridge and verges for the full overhang, whichever is greater. Cut tiles at hips, valleys and abutments to be secured with kro clips or coverfill. It is recommended that closed soffits be fitted on all verge and eave overhangs.

Roof pitches

- 17° to < 26° – undertile membrane mandatory
- 26° to < 45° – undertile membrane recommended
- 45° to < 55° – undertile membrane recommended, each tile to be nailed
- 55° to vertical – undertile membrane mandatory, each tile to be nailed and clipped



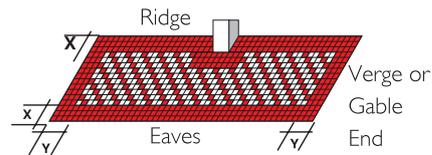
CATEGORY B – SEMI-EXPOSED AREAS

Coastal regions and certain inland areas.

Generally the area within 30km from the coastline, the top of the escarpment or the watershed of the first mountain inland. Whilst cognizance should be taken of local practices, the application of good roofing practice should not be compromised for expediency. Mechanically fix a band of tiles (x) equal to a fifth of the number of courses on the rafter lengths at the eaves and ridges, and also at chimneys and abutments. Mechanically fix a band of tiles equal to (x) along (y), as calculated above, at each verge (or the full overhang, whichever is the greater.) Tiles at hips, valleys and abutments to be secured with kro clips to every third tile on the roof. Closed soffits must be fitted to all verge and eave overhangs.

Roof pitches

- 17° to < 26° – undertile membrane mandatory
- 26° to < 45° – undertile membrane recommended (mandatory at the coast)
- 45° to vertical – undertile membrane mandatory, each tile to be nailed and clipped





CATEGORY C – EXPOSED AREAS

Critical coastal areas and certain inland areas.

The classification of exposure categories assumes the use of a suitable underlay, properly fixed over the total area of the roof including the gable end and eave overhangs. When possible, local knowledge and local wind speed data should be used in the assessment of the exposure category. (Refer to SANS 10160-1:2011 for Regional Basic Design Wind Speed determination.)

Roof pitches

17° to < 26° – undertile membrane mandatory, each tile to be clipped

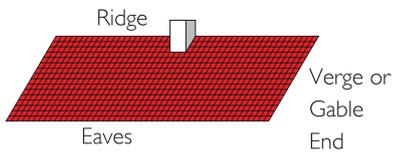
26° to < 45° – undertile membrane mandatory, each tile to be nailed or clipped

45° to vertical – undertile membrane mandatory, each tile to be nailed and clipped

Closed soffits to be fitted at all verge and eave overhangs.

EXPOSURE CATEGORY ASSESSMENT TABLE

Height to Ridge not exceeding (m)	Regional Basic Design Wind Speed ms ⁻¹	Exposure Category	
5	41 to 40	and below	A
	41 to 49	inclusive	B
	41 to 50	and above	C
10	44 to 43	and below	A
	44 to 49	inclusive	B
	44 to 50	and above	C
15	43 to 42	and below	A
	43 to 47	inclusive	B
	43 to 48	and above	C



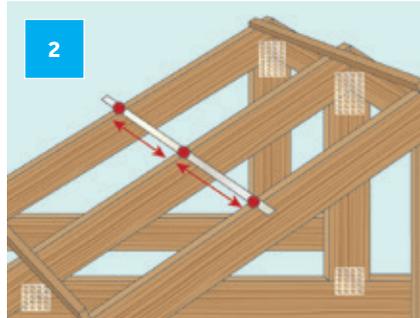
10 EASY STEPS TO TILING A ROOF

All specifications detailed are for a single storey domestic building – consult your nearest outlet for other applications.



Tools Required

1. Saw
2. Chalk line
3. Tape measure
4. Pointing trowel
5. Hammer
6. Brush
7. Nail bag



Truss Centres

Max 760mm – 38 x 38mm Batten
 Max 900mm – 38 x 50mm Batten
 (on edge)

Elite 950mm – 38 x 50mm Batten
 (on edge)

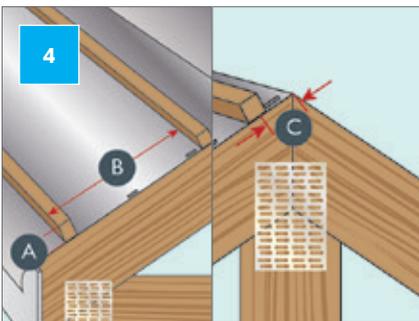
Always consult your timber merchant for truss design and timber sizes.

- Truss centres must be equal and correct distances apart
- Apex – Truss heights must be level



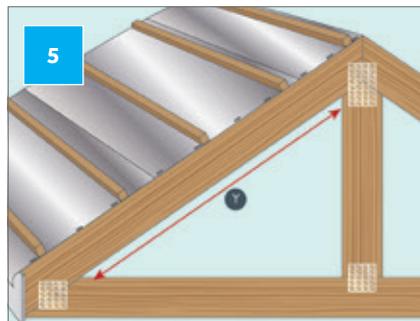
Undertile Membrane

- a. Coastal areas – mandatory at all pitches
- b. Other areas – 17°-25° mandatory; 26°-45° optional (recommended)
- c. Lay undertile membrane on top of trusses & under battens
- d. Elite profile – undertile membrane mandatory at all pitches



Eaves & Apex

- The tilting fillet must always be ± 12 mm thicker than the tile battens.
- From the outside of the tilting fillet/fascia to the top of the first batten 350mm.
- The top of the apex batten must be 25mm from the top of the truss.



Batten Centres

Roof Pitches

17°-25° – 320mm maximum

26°-45° – 345mm maximum

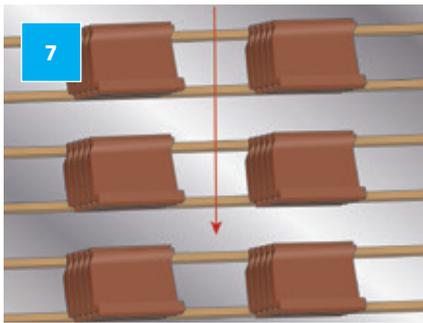
Centres should never be below 300mm.

- Obtain measurement Y and divide either by 320mm or 345mm dependent on pitch.
- The figure obtained is rounded e.g. measurement Y = 4.325m \div 320mm = 13.51 (rounded = 14).
- The rounded figure (14) is then divided into Y, this will then give exact batten centre e.g. 4.325m \div 14 = 309mm centres.
- Now batten roof at 309mm centres. Always join battens on alternating trusses i.e. not all joints must be on the same truss.



Marking Your Roof Out

- a. Always mark your roof out.
 - Gable overhang not to exceed more than one tile.
 - Lay a course out at the eaves, shuffle this to get desired overhang (each tile has 1.5mm shuffle).
 - Ensure tiles are seated properly, corner break can occur if this is not done.
 - Run one row of tiles up right hand gable, keeping square to bottom row.
 - Run a course of tiles along apex of roof. Tiles must be laid loose and not tight against each other to allow for thermal movement.
 - Mark outside edge of underlock of every fourth tile and shoot chalk line to corresponding tiles top and bottom.



Loading of Roof

The roof can now be loaded. Commence by stacking in bundles of seven tiles working from apex of roof down towards eaves. The bundles of seven tiles must be stacked on top of the rafters on alternate battens. Both sides of the roof to be equally loaded.



Laying of tiles

- Proceed to lay tiles from right to left keeping to chalk lines, lay three rows at a time.
- When walking on tiles always step on the bottom middle of the tile.



Fixing exposed areas

Coastal – aluminium alloy or non-corrodible serrated clouthead nails of the correct length to suit the profile.

Inland – electroplated serrated clouthead nails.

- Coastal regions – all tiles to be mechanically fixed. Eaves to be closed.
- Unexposed areas – all exposed eaves to be nailed/clipped, all tiles in ridge course to be nailed/clipped, thereafter every third tile in every row to be nailed/clipped.
- Always ensure at least one row in from exposed areas is nailed/clipped.

Contact your nearest outlet for details, regarding mechanically fixing requirements.



Finishing of ridges/hips

- Roll out and align Compact Roll onto the ridge or hip batten (butyl strip down).
- Staple the middle along the hip batten following the white line.
- Pull off the adhesive strips, one side at a time, to expose the CH bond special butyl glue (for example, starting with the left side then the right side).
- Stick butyl onto all high points of the tiles before moulding into the tile recesses.
- Repeat steps c & d for the other side.
- In the same way as on the hip-line, Compact Roll can also be applied on the ridge-line (just roll and stick).
- Where ridges and hips intersect, lay Compact Roll onto the hip/ridge end ensuring sufficient overlap.
- Complete the ridge and / or hip with BMI Coverland ridge tile fittings.
- Clip on the hip and/or ridge fittings with BMI Coverland ridge clips.





Coverland

BRANCHES

Bloemfontein	051 492 0210
Brits	010 492 8800
Cape Town	021 492 2230
Durban	031 565 3260
East London	043 492 0041
Germiston	010 492 8780
Nelspruit	013 492 1930
Pietermaritzburg	031 489 9880
Polokwane	015 495 0070
Port Elizabeth	041 492 0130
Richards Bay	035 797 2160

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As of April 2017, Coverland forms part of the BMI Group. The BMI Group, a Standard Industries company, is the largest manufacturer of flat and pitched roofing and waterproofing solutions throughout Europe. With 128 production facilities and operations in Europe, parts of Asia and South Africa, the company brings more than 165 years of experience. For more information visit www.bmigroup.com

Our expertise and innovations are bringing advantages in sustainability, performance and architectural design to residential, commercial, and public sector projects. Our product offering integrates functionality, energy efficiency and aesthetics for the homeowner. As the largest concrete roof tile manufacturer in Southern Africa, our reach expands across 8 production facilities and 4 depots nationally.

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