

# **BRITMET**

LIGHTWEIGHT ROOFING

## Product Data Sheet - Shingle

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**RAISING THE STANDARDS IN LIGHTWEIGHT ROOFING**

## Technical Specification

**Minimum pitch:** 15°

**Maximum pitch:** 90°

**Overall width:** 1326mm

**Cover width:** 1231mm

**Side lap:** 95mm

**Step:** 15mm

**Batten gauge:** 258mm

**Roof cover per plate:** 0.308m<sup>2</sup>

**Tiles per sqm:** 3.2

**Steel base:** 0.45mm

**Weight as laid per m<sup>2</sup>:** 12kg

**Basecoat:** Acrylic resin

**Topcoat:** Stone granules with clear acrylic overglaze

**Chemical resistance:** Non-toxic fungicide incorporated

**Biological resistance:** Unaffected by normal air pollution

**Fixings:** The contractor shall utilise the roofing manufacturers recommended fixings and sealant

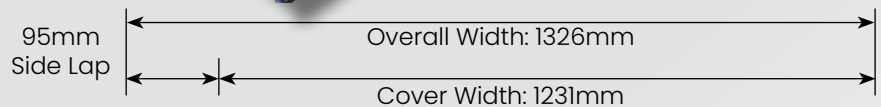
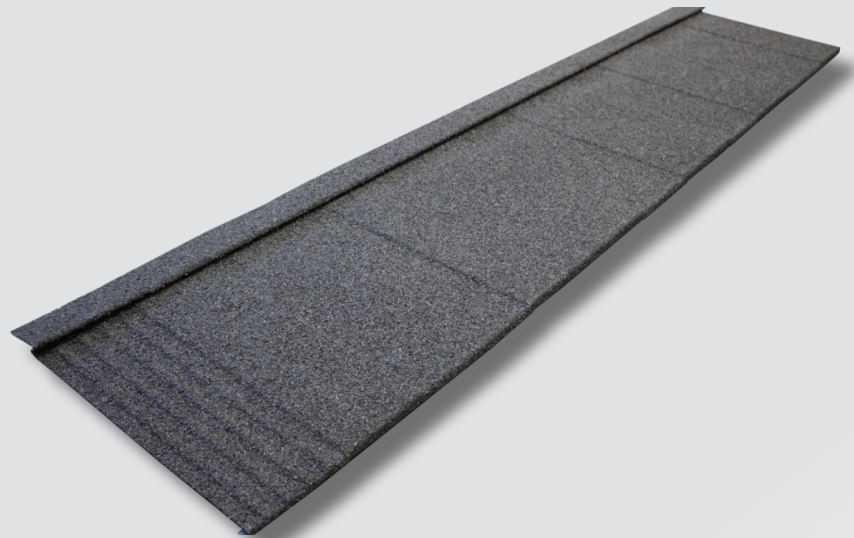
**Ventilation:** Roof ventilation should meet. The recommendations of Building Regulations 1991 (amended 1992 and 1994). Approved document F2 1995 'Condensation in roofs', BS5250: 2021 'control of condensation'.

## Design

Shingle is designed for roof pitches from 15° to 90°. Britmet Shingle is 1231mm(width) x 250mm(height). This lightweight roofing panel is designed to emulate natural slates and must be fixed with a broken bond finish, in a right to left fashion.

## Materials

Shingle is manufactured using the highest grade Aluzinc steel, coated with a stone granule finish and a clear, acrylic overglaze.



## Approvals

- Manufactured using ISO 9001 approved materials
- ISO 14001
- Fire resistance: AA classification equal to traditional roof tiles and slates

## Complies with:

### The Building Regulations 2000 (as amended) England and Wales.

- Requirement B3(4) Internal fire spread (structure)
- Requirement B4(2) External fire spread
- Requirement C2(b) Resistance to moisture
- Regulation 7 moisture and workmanship

### The Building (Scotland) Regulations 2004

- Regulation 8 Durability, workmanship and fitness of materials
- Regulation 8(1) Durability, workmanship and fitness of materials
- Regulation 9 Building standards – construction
- Standard 2.1 Compartmentation
- Standard 2.2 Separation
- Standard 2.8 Spread from neighbouring buildings
- Standard 3.10 Precipitation
- Regulation 12 Building standards – conversions

### The Building Regulations (Northern Ireland) 2000

- Regulation B2 Fitness of materials and workmanship
- Regulation C4 Resistance to ground moisture and weather
- Regulation E4 Internal fire spread – structure
- Regulation E5 External fire spread
- Ventilation systems comply with Building Regulations 1990(F2) & BS5250 (2021)

### Recommended timber batten sizes

(roofing & vertical applications)

Rafter or truss spacing (mm)	Minimum nailing requirements	Batten width (mm)	Batten width (mm)
450	1no 75mm x 3.35mm	38	38
600	1no 75mm x 3.35mm	50	38
900*	1no 75mm x 4.00mm	50	50
1200*	1no 100mm x 4.00mm	50	50
1500*	1no 125mm x 12g screw	50	75

\*underlay supports between rafters/truss to be used, (wire support or nylon type)

### Recommended laps for underlay

Pitch	Minimum headlap		Minimum sidelap
	Not fully supported	Fully supported	
12°	300mm	200mm	100 - 150mm
12.5°-14°	225mm	150mm	100 - 150mm
15°-34°	150mm	100mm	100 - 150mm
35°+	100mm	75mm	100 - 150mm

\*Any penetrations to the underlay should be suitably sealed to prevent water ingress. Roofing underlay laps to valleys should comply with recommendations of BS5534 Part 1: 2014 section 4.2.1.6

### Recommended roofing underlay

**Roofing underlay is required and should comply with recommendations of BS5534: Part 1: 2014 & BS8000**

Unsupported (roofing underlay draped over rafters or counter-battens)	Roofing underlay with BS5534:2014 slating and tiling code of practice and BS5250:2021 Code of practice for condensation
Fully supported (roofing underlay laid directly to boarding or sarking)	Roofing underlay with BS5534:2014 slating and tiling code of practice and BS5250:2021 Code of practice for condensation

### Estimation Chart (guide for 0.45 gauge only)

Overall roof length (m)	No. of tile panels	Rafter length to suit full course of tile incl. fascia	No. of tile panels
1.250	1	0.294	1
2.500	2	0.663	2
3.750	3	1.032	3
5.000	4	1.401	4
6.250	5	1.770	5
7.500	6	2.139	6
8.750	7	2.508	7
10.000	8	2.877	8
11.250	9	3.246	9
12.500	10	3.615	10
13.750	11	3.984	11
15.000	12	4.353	12
16.250	13	4.722	13
17.500	14	5.091	14

\*for wastage on hips and valleys, allow an additional 1.32 slate per 1m.

### Compatible Flashings





## General Specification:

Shingle is designed for roof pitches from 15° to 90°. Britmet Shingle is 1231mm (width) x 250mm (height). This lightweight roofing slate panel is designed to emulate natural slates and must be fixed with a broken bond finish, fixed in a right to left fashion.

### Fascia Boards:

Fix timber or UPVC fascia boards with the top edge to be approximately a batten thickness above rafters (if the fascia is used as eaves batten).

### Battens:

Fix the tiling battens to rafter at 250mm centres (front of batten) up from the eaves which will be 250mm less overhang of the tile into the gutter, usually 40mm.

**Please note:** It is the responsibility of the installer to ensure correct batten usage.

### Underlay / Breather Membrane:

Approved roofing underlay is to be laid over rafters, lapped and secured to the rafters with galvanised clout nails and carried well into the gutters. All to comply with current regulations.

### Two-Part Barge Soaker:

Fix the timber or UPVC barge boards with their top approximately 25mm above the top of tiling battens to allow for the side of the watercourse to be supported. Fix the soaker section of the two-part barge soaker on the top of the battens at the gable ends and against the inside of the barge boards. Grip the nails over to hold and fix them into the battens. Then, screw fix on sides into barge board if necessary. Overlap sections by around 25mm. Fix the outer section of the two-part barge soaker by nailing into the top and sides of the barge board at evenly spaced intervals. Overlap sections by approximately 25mm. Bend the inner flange resting on top of tiles as required. Cut and bend to dress the end of the bottom section as required. One part covers 5 courses of tiles.

### Tiling on Felt and Battens:

Starting at the bottom right-hand side of the roof, fix the first shingle using 4 nails or screws evenly. Then, working from right to left, continue laying each shingle in the same way making sure that the side and end laps interlock correctly. At the eaves, nail each tile at its lowest possible point into the eaves batten/fascia. At this point, you can use the touch-up kit to paint over the heads of the nails. Always try to use cut-offs from the previous course to start the next course or use a half tile to 'break the bond'. Again, working from right to left, fix the next subsequent shingle ensuring side/end/nose laps interlock correctly. Use half tiles or cut-offs to start the next course. Hook the nose of your upper tile into the lip of the tile below ensuring a tight fit (the heel of your hand or a block of wood can be used to gently knock the tiles together) Continue with each successive course.

### Tiling on Board:

For a warm boarded roof is critical that you have a 25mm air gap between the boarding and the underside of the tiles/felt. Securely fix through the boarding and into the rafters below, a 50mmx25mm counter rafter running from eaves to the ridge at approx. 900mm centres. Fix your battens to the top of these counter rafters at 250mm centres, apart from the first batten from the eaves which will be 250mm less the overhang of the tile into the gutter, which is usually around 40mm.

### Angle ridge flashing:

At the ridge course of the tiles, trim to suit if required using the apex line of the roof as the cut line. Attach a timber batten on top of the shingle of the ridge using a ridge cap as a guide. Secure the ridge caps to battens using four nails per side. Take ridge cap to the full length of ridge and notch to overlap onto the two-part barge soaker.

### Ridge End Cap:

Fix the Ridge End Cap by sliding into the ridge as shown in the image above. You may need to notch the sides of the End Cap to allow it to slide in freely.

### Angle hip flashing:

A 38mm x 38mm batten should be nailed to the slate battens on each side of the hip using galvanised nails. Shingle panels can be cut and bent up against the battens, using a guillotine and bender (available to hire from Britmet). The hip caps should be fitted over the battens and nailed through the downturn into the face of the battens, using 5 nails on each side.

### Eaves:

The bottom course of shingle panels is to be secured with 4 coloured galvanised 2.6mm x 50mm nails driven vertically through the high point of the slate panel profile, into the fascia board, or through the eaves batten. The Eaves batten is to be placed approximately 20mm behind the fascia board if the Britmet eaves ventilation system is used. The nail heads need to be sealed using Britmet touch-up kit. The top of the fascia board or eaves vent is used, to be in line with the top of the battens. Fit lay board, or tilting fillet, at the eaves, if appropriate, to ensure any moisture on the underlay drains into the gutter.

### Valley:

Valley can be formed from a metal sheet (lead) or moulded glass fibre or similar approved lining, supported on valley boarding. Adjacent Shingle panels should be measured and cut, allowing a sufficient downturn, as detailed in the manufacturer's instructions. Battens to project over the valley to provide fixing for slate panels.

### Sidewall flashing:

Britmet sidewall flashing must be secured with fixing nails, one driven vertically into each batten (these nails need to be covered, using Britmet touch-up kit). Britmet cover flashing should be dressed over the edge of side flashing abutting the wall and let into the brickwork.