BRITMET
LIGHTWEIGHT ROOFING

Product Data Sheet - Villatile

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Technical Specification

Minimum pitch: 10 °

Maximum pitch: 90°

Overall width: 1295mm

Cover width: 1200mm

Side lap: 100mm

Step: 24mm

Batten gauge: 365mm

Batten gauge (0.9mm): 363mm

Roof cover per plate: 0.44m2

Tiles per sqm: 2.25

Steel base: 0.45mm & 0.9mm

Weight as laid per m2: 7kg & 11kg

Basecoat: Acrylic resin

Topcoat: Stone granules with clear acrylic overglaze

Chemical resistance: Non-toxic fungicide incorporated

Biological resistance: Unaffected by normal air pollution

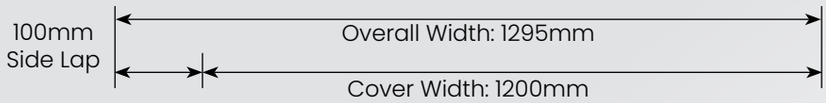
Fixings: The contractor shall utilise the roofing manufacturers recommended fixings and sealant
Ventilation: Roof ventilation should meet. The recommendations of Building Regulations 1991 (amended 1992 and 1994). Approved document F2 1995 'Condensation in roofs', BS5250: 2021 'control of condensation'.

Design

Villatile is designed for roof pitches from 10° to 90°. Britmet Villatile is 1200mm(width) x 365mm(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

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



Approvals

- British Board of Agrément 89/2272
- 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	25
600	1no 75mm x 3.35mm	50	50
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) Please note: When using tek screws with the 0.9mm gauge panels, a minimum 50x25mm batten must be used. For 0.9mm gauge panels, if truss spacing is 450mm or less, 38x25mm batten can be used with predrilled holes and nails but not tek screws.*

Recommended laps for underlay

Pitch	Minimum headlap		Minimum sidelap
	Not fully supported	Fully supported	
10° to 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 recommenndations of BS5534 Part 1: 2014 section 4.2.1.6*

Recommended roofing underlay

Roofing underlay is required & should comply with recommendations of BS5534: Part 1: 2014 & BS8000	
Unsupported (roofing underlay draped over rafters or counter-batten)	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)	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 (m)	No. of tile panels
1.200	1	325mm	1
2.400	2	690mm	2
3.600	3	1055mm	3
4.800	4	1420mm	4
6.000	5	1785mm	5
7.200	6	2150mm	6
8.400	7	2515mm	7
9.600	8	2800mm	8
10.800	9	3245mm	9
12.000	10	3610mm	10
13.200	11	3975mm	11
14.400	12	4370mm	12
15.600	13	4705mm	13
16.800	14	5070mm	14

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

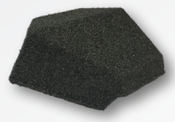
Compatible Flashings


Angle Ridge

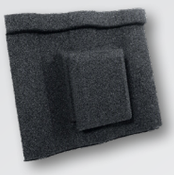

Barge/Verge


Eave Vent Strip


Barrel Ridge End Cap


Hip End Cap 90°


Hip End Cap 135°


Tile Vent


Left Hand Sidewall


Right Hand Sidewall


Barrel Ridge


5-Way Top Cap

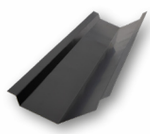

3-Way Top Cap


Ridge End Cap


1 Metre Membrane


Cover Flashing


Ridge Closer


Smooth Black Valley


Eave Felt Carrier

General Specification:

Villatile panels roof pitches from 10° to 90°. Villatile lightweight roofing tiles, to be supplied by Britmet. Each tile must be secured using 4 coloured 2.6mm x 50mm galvanised fixing nails, driven through the downturned nose of the tile into the face of the battens, (for 0.9mm Villatile, a coloured Tek screw can be used - part no: ASF2-OOE55)

Battens:
Treated tiling battens of approved quality of suitable section laid at 365mm centres (for 0.45mm thick) or 363mm centres (for 0.9mm thick) except the eaves batten (see eaves section) and secured to the rafters using galvanised nails. Joints in the battens should be staggered and meet halfway across the top of the rafters, as standard code of practice.
Please note: *It is the responsibility of the installer to ensure correct batten usage*

Underlay:
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.

Vented Top Row:
Two tile battens should be fitted side by side on both sides of the ridge, using galvanised nails. If necessary, the top course of tiles to be cut and bent using a guillotine and bender (available from Britmet). The rear edge of the tile is to be turned up to form a 25mm upstand against the top tile batten. Each tile must be secured using 4 nails driven through the downturn as previously described. The vented top row flashing is to be fitted over each side, and fastened to the tile battens, nailed through the downturn of the vented top row, into the tile upstand, and face of the batten, using 5 nails per side.

Barrel Ridge:
The ridge caps are to be laid across the ridge of the vented top row flashing and fastened down through the top of the ridge flange, into the ridge of vented top row flashings. The end caps to be fitted at ridge/hip ends and exposed cut edges should be treated with a touch-up kit supplied.

Angle hip flashing:
A 38mm x 38mm hip batten should be nailed to the tile battens on each side of the hip rafter, using galvanised nails. Tiles are to be cut and bent to form a 25mm - 35mm upstand against the hip battens, using a guillotine and bender (available from Britmet). The barrel hip (half round) ridge flashing is to be fitted over the battens and nailed through the downturn, into the face of the battens using four nails on each side.

Eaves:
The bottom course of tiles should be secured using four coloured 50mm Tek screws, driven vertically through the tile. Ideally, the fixing should be near the highest point of the tile profile as possible and driven into the fascia board, or through the eaves, with batten placed approximately 20mm behind the fascia board if the Villatile eaves ventilation system is used. The nail heads are to be sealed using the Villatile touch-up kit. The top of the fascia board or eaves vent, if used, must be in line with the top of the battens. Then, fit Lay Board or Tilting Fillet at the eaves if appropriate, to ensure any moisture on the underlay drains into the gutter.

Roof pitch above 15 degrees:
The top of the fascia board should be fixed 23mm below the top face of the eaves batten allowing for the Villatile 10mm eaves vent system.

Roof pitch below 15 degrees:
The top of the fascia board should be fixed 25mm below the top face of the eaves batten allowing for the Villatile, 25mm eaves vent system.
Note: *Where the insulation follows the roof slope, the Villatile ventilation tray should be installed between the rafters.*

Valley:
The valley should be formed from lead, moulded glass fibre or similar approved lining and supported on valley boards. Tile battens should project over the valley to provide fixing for the tiles.
Villatile panels should be measured, cut and bent, using the guillotine and bender (available to hire from Britmet) allowing sufficient downturn into the valley.

Barge board cover:
The timber barge board should project 25mm above the top of the tile battens. A 50mm x 50mm timber batten is to run parallel to the fascia board. Villatile panels should be cut and bent up against the timber barge batten.
The Villatile scribed barge board cover must be secured using 5 fixing nails driven through the downturned edge and into the barge board. Then five nails are to be driven vertically into the barge batten (the heads of the vertically fixed nails to be sealed, using the Villatile touch-up kit.)

Sidewall flashing:
Villatile sidewall flashing is to be secured using fixing nails, one driven vertically into each batten (these nail heads to be covered, using the Villatile touch-up kit) Villatile cover flashing should be dressed over the vertical section of the sidewall flashing and be dressed into the brickwork.

Villatile inline and soil vent:
To provide additional ventilation, the Villatile inline tile vents are available providing an airflow of 7,500mm2.
The tile underlay must be cut to allow the spigot of the tile vent to pass through. The Villatile panel vent is installed to provide full weather security. The tile vent is secured by overlapping a Villatile panel on either side and nailing through the nose of the tile, as previously described. Nails must not penetrate the vent tile.