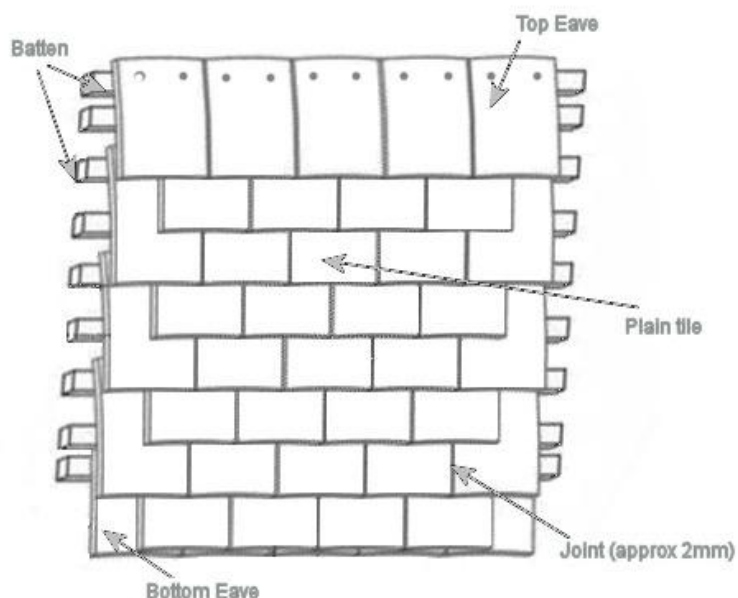


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Sahtas, Genuine Handmade Clay Roof Tiles Installation Guide

Laying Of Tiles

The bottom eave tile course plus first course, together with the top course plus final eave (top) course must be mechanically secured using nails.



Plain tiles are laid on the battens in a 'brick bond' pattern, i.e. with the joints between them aligned with the centre of the tile above and below, and with about 3mm between the sides. This layout gives a double lap covering, (i.e. the top part of each tile is covered by two tiles, the centre of the tile of the next row and the lower part of the tile above that).

All perimeter tiles should be twice nailed. Ridge and hip tiles to be secured using mortar. Each tile is laid to a gauge to give a minimum head lap of 65mm.

On a roof where the pitch falls below 60 degrees then at least each tile in every fifth course is to be twice nailed with 3.35 aluminium alloy clout nails.

Roof pitches of 60 degrees or more, tiles are to be twice nailed. Caution should be used when fixing, not too nail the tiles too tight as this will have the effect of lifting the bottom edge of the tiles. Tiles should be a loose fit against adjacent tiles, as this will allow for tile expansion and movement.

It is a requirement that tiles are mixed from three whole packs to ensure good colour consistency

Underlay

Roofing underlay which complies with British Standards is to be fixed following the manufacturer's installation guidelines. Owing to Sahtas Genuine Handmade tiles large

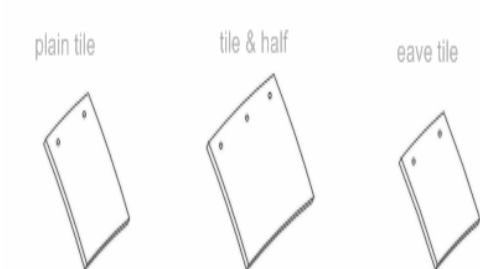
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degree of double camber, the underlay must be able to drain any moisture into the gutter, and must be fixed with 150mm overlaps so that no depressions are formed in which water can be trapped.

Battens

Class 1 treated softwood batten should be used with a minimum length of 1200mm and minimum size 38mm x 25mm for rafters set at 450mm or 600mm centres. These battens to be positioned to give a minimum head lap of 65mm for roof tiling and secured with 65mm aluminium nails. With Sahtas plain tiles, we recommend a maximum batten gauge of 100mm, and 95mm with Sahtas peg tiles. For vertical tiling counter battens are required and be fixed at maximum 600mm centres.

Tiles



All eaves tiles (bottom and top) should be securely fixed with two nails in each tile. At the top of each roof, every tile in the top two courses is to be nailed twice. In vertical tiling eaves tiles (with or without a lead flashing) are used under a window sill or soffit. Any eaves ventilation system should be installed using the manufacturer's guidelines.

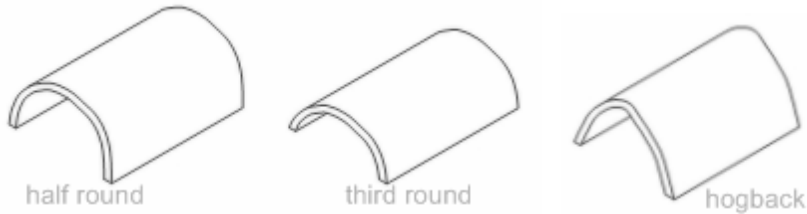
Verges

All verges are to be laid broken-bonded with one full tile and one gable tile in alternate courses.

Where tiles are used to form the verge, they should be laid with the 165mm edge showing, face side downwards and projecting approximately 35mm to 50mm over the gable walls or bargeboard. Bedding mortar completes the verge edge.

Ridge

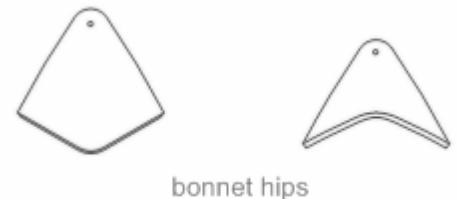
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The Ridge is to be covered with either Half Round, Hogsback or mono ridge. The ridge tiles are to be edge bedded with a solid bed at butt joints. Solid bed end ridge tiles and filled with dentil slips.

Hips

Universal bonnet or Kent style hips can be used dependant on design. Hips tiles to be nailed to the hip rafters with 65mm x 2.65mm alloy nails. Mortar bedding is to be used under each hip tile, struck back approximately 13mm from the over/edge of the hip tile. Solid bed the bottom bonnet hip tile and fill with tile slips to reduce visible impact of the mortar bedding.



Valleys

Valleys to be formed with universal valley tiles to suit roof pitch. The adjacent tiles to be neatly cut to form a smooth intersection. Sahtas's universal valley tile is used between 40 and 50 degree pitch. A pitch outside these values would be better suited to an alternative valley system.



Abutment

Tiled intersections with abutments to have tile and tile and half tiles in alternate courses to maintain broken bond and twice nailed every course

Mortar and Bedding

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Mortar is used in slating and tiling for two reasons: - Primarily to provide tensile resistance in holding in place bedded items, which in themselves or in combination, do not have sufficient self-weight to resist disturbance or wind uplift etc. Secondly, as gap filler and to spread compressive loads applied to the roofing component.

Mortar bedding of clay ridge and hip tiles, on clay tiles, generally provides sufficient tensile bond strength to resist wind uplift, provided that it is not affected by differential movement of the roof structure. This applies to low-rise domestic buildings only.

The nominal thickness of both horizontal and vertical mortar joints is dictated by the co-ordinating size of the roof tiling units and is normally taken as 10mm, exclusive of any key in the jointing surface of the units. Larger units of mortar may result where deeply profiled roof tiles are used, but the mass of mortar should be reduced using slips as packing. Roofing mortar should be 1:3 cement: sand with plasticiser. The mix should be based on sharp sand with soft sand added to achieve good workability. The sand content should not exceed two parts soft sand to one part sharp sand.

Roof Ventilation

Ventilation of and from the roof space is to be in accordance with requirements of building regulations.

Safety

Sahtas Handmade Roof clay tiles are inert, and do not present any risks to health when used as supplied. All clay products, when cut (by hand or mechanically) produce a certain amount of dust and chippings. Persons carrying out these operations must wear suitable eye and breathing protection. Pallets of tiles should be stored on clean level ground, no more than two high. All tiles are supplied on wooden pallets which are suitable to be handled with forks only.