

Slating & Tiling

TIPS 19

What is a roofing slate?

In the roofing industry we all refer to slates and tiles and know which is which. But do other sections of the construction industry define the terms roofing slate and roof tile in the same way and who is right?

If we look at roofing products that are called slates it is hard to decide if they are a roofing slate, or a roof tile that looks like a slate. If being flat and laid to a double lapped pattern defines a roofing product as a roofing slate, then shingles and shakes should be wooden roofing slates. If slates have no nibs and tiles do, then Kent peg tiles would be clay roofing slates.

Natural slate

In its purest form roofing slates are dark coloured pieces of metamorphic rock. The origin of the rock is clay, silt, shale or volcanic ash that has been heated and compressed over millions of

years to form what we know as slate. The rock is smooth and strong and can be split into sheets 4-15mm thick, before being cut into a rectangular shape. Premier roofing slates come from the West Coast of the UK from Cornwall, through North Wales, Cumbria and into Scotland. Whilst some imported slate is metamorphic rock, the rest is sedimentary rock and may not have the same qualities as metamorphic rock. Each piece of rock laps over the piece of rock below in a pattern called double lapping. On a sloping roof, water draining down the roof is not prevented from draining into the vertical joints, but any water that does will be guided out again.

Stone slate

Stone slates are formed of sedimentary rock, such as limestone or sandstone, which is naturally found, or dressed, into slabs of a

thickness of between 19-35mm. The slabs vary in surface texture, being rougher and lighter in colour than natural slate.

Being rectangular they are laid double lapped like natural slates, with the exception that they are not center nailed; being very heavy they only require head nailing.



Copies

All other roofing materials that are called roofing slates are copies of the natural or stone slate, either in true size and texture or in the laid finished appearance.

Double lap slates

Fibre cement: the ability to manufacture fibre cement into sheets 4mm thick provides a material that can be cut into rectangular pieces very close in appearance to natural slate. However, the rigidity of the material is lower and therefore requires the tail of the slates to be held down with a copper rivet. In all other respects it can be used as a direct replacement for natural slate, but at a lower cost and shorter life expectancy.

Concrete: some concrete roofing slates are designed to look like thick natural or stone slates. They are produced in various colours and sizes both with and without nibs but tend to weather differently due to the cement content.

Resin slate: resin slates developed from the need to manage the vast quantities of slate waste by grinding and mixing it with resin before moulding back into an exact replica of a natural slate. The material contains a high proportion of slate and has the colour, texture and strength of natural slate, making it the closest copy of a natural slate that you can get.

Rubber: rubber slates developed from the need to manage the vast quantities of rubber waste from old car tyres. The resulting slates look very similar to natural slates. However they are not as rigid as natural slate and therefore vulnerable to slapping up and down in high winds unless the leading edge is restrained.

Single lap slates: these can be clay, concrete, polymer-concrete or resin slate. They developed from single lap clay Roman roof tiles, the top surface of which has been flattened and the interlock formed within the thickness of the slate. Whilst some single lap roofing slates can be laid straight

bond, they look best when laid broken bond to mimic double lap natural slates. Single lap slates are in all respects a tile with a flat upper surface. Logic would therefore suggest that single lap resin slates should be called slate tiles. Clay, concrete and polymer concrete single lap slates may look like slates once installed, but are roofing slates in name only.

Bitumen: these are strips of roofing felt finished with a surface of slate granules. The strips of felt have slits cut into the leading edge to make them look like a row of slates. To fix them they are nailed and glued to a flat-boarded roof surface. Apart from the slate chippings and the flat appearance they are in all other respects a bituminous flat roofing product laid on a pitched roof.

Metal: these slates are strips of sheet metal pressed into the shape of a row of thick roofing slates and coated with a form of paint or chippings. Metal slates may look like slates from a great distance, but in all other respects they are metal profiled sheeting.

Conclusion

For a roofing product to be called a slate it should be flat on the upper surface and laid to a double lapped pattern. It should be made of stone or a mineral-derived product, such as resin slate, concrete or clay. It should be slate or stone coloured and have a leading edge thickness of between 4mm and 35mm. Anything that does not fit this description may be called a roofing slate or be designed to look like a roofing slate when laid on a roof, but is not a roofing slate. To confuse matters some products that do fit this description are still called roof tiles.

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