



The causes & effects of 'lime blows' in clay roofing tiles

The small pits which are occasionally visible on the surface of clay tiles are created when spots of lime immediately below the surface expand, causing the clay above the lime to be pushed out or 'blown'.

Lime occurs naturally in most clays and manufacturers deal with the problem by passing all the raw material through one or more sets of rollers designed to crush any lime particles. In Sandtoft's case all the raw clay is crushed down to less than 1mm. The particles that are left are too small to cause any damage to the tiles, but nevertheless some batches of clay will produce small pits on the surface of the tiles.

The expansion action of the lime only occurs immediately after the tiles are subjected to moisture in the atmosphere. The process stops once the tiles have absorbed moisture and it cannot re-occur. Therefore there is no risk of further 'pitting' to the tile surface at a future date.

It is a common misconception that clay products can be attacked by frost action due to irregularities in the surface finish. There is no possibility whatsoever that the small pits, or 'lime blows', will affect the future durability of the tiles.

Damage caused by the long term action of freezing and thawing of water can sometimes occur to clay products which have been under-fired during manufacture. Modern, computer controlled kilns now ensure that this is extremely unlikely, and the use of such kilns, together with Sandtoft's long experience in the manufacture of clay products ensures that tiles are fired at exactly the correct temperatures to avoid freeze/thaw problems. In addition, all tiles leaving Sandtoft factories must pass the European Standard test for frost resistance, BS EN 539-2: 1998.

Under the terms of the European Standard for clay roofing tiles, BS EN 1304: 1998, small pits or chips 7 mm or less in size in the surface of the tiles are not regarded as faults at all. If they exceed 7mm they are described as "superficial faults", but tiles displaying such faults still comply with the Standard provided they pass all the tests. All clay tiles and fittings manufactured and supplied by Sandtoft Roof Tiles are fully guaranteed to remain durable for a period of not less than 60 years.

For more information please contact Sandtoft Technical Support on 0870 145 2021.

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