

Concrete roofing tiles and fittings for roof covering and wall cladding — Test methods

The European Standard EN 491:2004 has the status of a
British Standard

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National foreword

This British Standard is the official English language version of EN 491:2004, including Corrigendum March 2005. It supersedes BS EN 491:1994 which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee B/542, Roofing and cladding products for discontinuous laying, to Subcommittee B/542/2, Concrete roofing tiles and fittings, which has the responsibility to:

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- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 21 and a back cover.

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English version

Concrete roofing tiles and fittings for roof covering and wall cladding - Test methods

Tuiles et accessoires en béton pour couverture et bardage
- Méthodes d'essais

Dach- und Formsteine aus Beton für Dächer und
Wandbekleidungen - Prüfverfahren

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Foreword

This document (EN 491:2004) has been prepared by Technical Committee CEN/TC 128 “Roof covering products for discontinuous laying and products for wall cladding”, the secretariat of which is held by IBN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2005, and conflicting national standards shall be withdrawn at the latest by September 2006.

This document supersedes EN 491:1994.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This document specifies test methods for concrete roofing tiles and fittings conforming to EN 490, for assembly into pitched roof covering or external wall cladding or internal wall lining cladding.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 490:2004, *Concrete roofing tiles and fittings for roof covering and wall cladding — Product specifications*.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 490:2004 apply.

4 Symbols and abbreviations

l_1	hanging length of a tile as defined in Figure 1a) and 1c), in millimetres;
l_2, l_3	hanging edge lengths of a tile as defined in Figure 1.b), in millimetres;
c_w	nominal cover width of one tile, in millimetres;
c_{wc}	cover width closed up value of 10 tiles, in millimetres;
c_{wd}	cover width drawn out value of 10 tiles, in millimetres;
d	profile depth of a tile, in millimetres;
x	angle at which test tiles are hung as defined in Figure 1a), in degrees.

5 Test methods

5.1 General

Where other test methods are used for factory production control (FPC) a satisfactory statistical correlation with the test methods specified in this document shall be demonstrated.

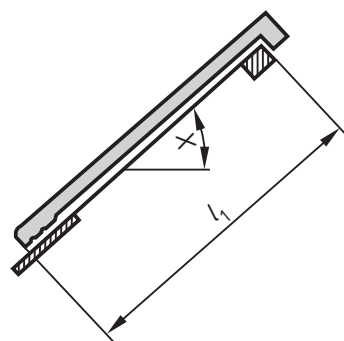
5.2 Hanging length and squareness of regular front edge tiles

5.2.1 Principle

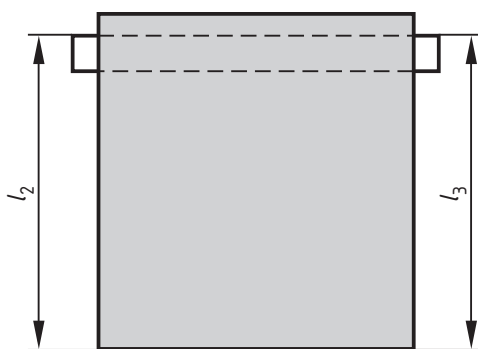
Tiles are hung from steel battens and measured to establish hanging length and also the squareness of regular front edge tiles.

5.2.2 Apparatus

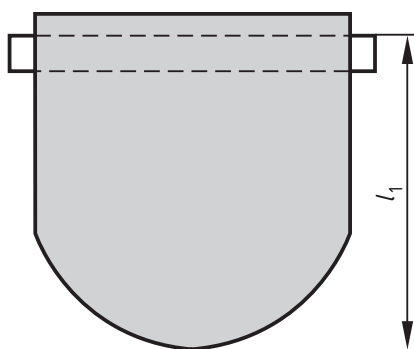
Steel battens to support the tile (see Figure 1).



a) $x = 20^\circ$ to 70°



b) Tiles with nominally constant hanging length $l_1 = (l_2 + l_3)/2$



c) Tiles with regularly varying hanging length l_1 = Hanging length measured at lowest point

Figure 1 — Test method for hanging length

5.2.3 Procedure

5.2.3.1 Tiles with nominally constant hanging length

Hang the tile at an angle of 20° to 70° on a steel batten (see Figure 1a)). After physically removing any burrs and/or other irregularities, measure from the top face of the batten to the lower front edge of the tile at the sides (see Figure 1b)), excluding the interlocking sections in the case of tiles with sidelocks.