

ICS 91.060.20; 91.100.30

English Version

**Determination of the uplift resistance of installed clay and
concrete interlocking tiles for roofing - Test method for
mechanical fasteners**

Détermination de la résistance au soulèvement des tuiles à
emboîtement en terre cuite ou en béton mises en oeuvre
sur la toiture - Méthode d'essai des fixations mécaniques

Bestimmung des Abhebewiderstandes von verlegten
Dachziegeln oder Betondachsteinen - Prüfverfahren für
mechanische Verbindungselemente

This Technical Specification (CEN/TS) was approved by CEN on 1 March 2005 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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Foreword

This Technical Specification (CEN/TS 15087:2005) 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 document is applicable where the National application standards, and/or, regulations, specify a requirement for the uplift resistance of installed clay or concrete tiles for roofing.

No existing European Standard is superseded.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this CEN Technical Specification: 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 Technical Specification specifies a test method for determining the strength and uplift resistance of fasteners for clay and concrete interlocking tiles for roofing.

NOTE 1 The results of this test may be used to determine the uplift force which can be withstood by the fastener; e.g. to withstand wind force.

NOTE 2 When the results of the test method for mechanical fasteners have a correlation to the results of the roof system test method [EN 14437] they can be used to establish the uplift resistance of installed clay and concrete tiles for roofing.

The test method is applicable to mechanical fasteners such as clips, hooks, screws and nails. It is not applicable to fasteners which hold down more than one tile.

2 Normative references

Not applicable.

3 Terms and definitions

For the purposes of this Technical Specification, the following terms and definitions apply.

3.1

characteristic value

value of a material property having a prescribed probability of not being attained in a hypothetical unlimited test series; this value generally corresponds to a specific fractile of the assumed statistical distribution of the particular property of the material

3.2

gauge

length of the exposed part of the fixed tile, measured longitudinally; this is the same as the batten gauge

3.3

mechanical fasteners

screws, clips, nails and hooks

4 Symbols and abbreviations

d_{\max}	maximum displacement of tile D (mm);
F	test load, (N);
F_c	force acting on the mechanical fastener;
F_0	test load without a fastener fitted (N);
$F_{i, \max}$	maximum test load at failure (N);
k_n	a factor depending on the number of tests n;
L_h	hanging length (mm);
L_F	distance between the pivot line and the applied uplift force (mm);