SLOVENSKI STANDARD
SIST EN 1304:1998

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Opeļ ni streġniki - Definicije in specifikacije izdelkov

Clay roofing tiles for discontinuous laying - Products definitions and specifications

Tondachziegel für überlappende Verlegung - Definitionen und Spezifikationen der Produkte

Tuiles de terre cuite pour pose en discontinu - Définitions et spécifications des produits

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Descriptors: buildings, roofing, tile roofing, roofing tiles, terra cotta, definitions, specifications, appearance, geometric characteristics, dimensional tolerances, physical properties, mechanical properties, freeze-thaw resistance, marking, quality control, conformity tests, sampling

English version

Clay roofing tiles for discontinuous laying - Products definitions and specifications

Tuiles de terre cuite pour pose en discontinu - Définitions et spécifications des produits

Tondachziegel für überlappende Verlegung - Definitionen und Spezifikationen der Produkte

This European Standard was approved by CEN on 1 July 1998.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard 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of an identical text or by endorsement, at the latest by January 1999, and conflicting national standards shall be withdrawn at the latest by January 1999.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

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

This standard is part of a package of standards on clay roofing tiles.

This standard includes:

- a normative annex : Annex A : Type test and quality control

- an informative annex : Annex B : Appearance and structure

1 Scope

This European standard defines clay roofing tiles and determines the general specifications to which they are bound as well as the rules for classification, marking and quality control of products.

It applies to all tiles and fittings as defined in 4.1.

Clay roofing tiles and clay fittings which conform to this standard are suitable for use as vertical cladding.

The geometric and flexural strength criteria are not applicable to clay fittings or special tiles.

This standard defines the specifications which, if satisfactory at the time of delivery, ensure that the product is able to withstand the modifications that occur at materials in normal conditions of use whilst continuing to fulfil its proper functions.

Consequently, if the tests are carried out on tiles taken from a site after delivery, only the test results for the geometric and impermeability criteria can be used without further analysis.

Any other criteria can only be applied whilst taking into account the stresses to which the tiles have been subjected to as from their initial state, at which time they were held to satisfy the requirements of the standard.

NOTE : When tiles are used as vertical cladding, it is recommended that a suitable method of fixing be provided.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

EN 538	Clay roofing tiles for discontinuous laying - Flexural strength test
EN 539-1	Clay roofing tiles for discontinuous laying - Determination of physical characteristics - Part 1 : Impermeability test
EN 539-2	Clay roofing tiles for discontinuous laying - Determination of physical characteristics - Part 2 : Tests for frost resistance
EN 1024	Clay roofing tiles for discontinuous laying - Determination of geometric characteristics

3 Symbols and abbreviations

For the purpose of this standard, the following symbols and abbreviations apply :

- AQL : Acceptable Quality Level ;
- 1/Pa : Once per annum.

4 Definitions

For the purposes of this standard, the following definitions apply :

4.1 clay roofing tiles

Clay roofing tiles are roofing products for discontinuous laying on pitched roofs and are manufactured by shaping (extrusion and/or pressing), drying and firing of the prepared clay, with or without additives.

All or part of their surface can be covered with an engobe or glaze.

Besides the different types of tiles described below, there are also special tiles (for example handmade tiles) which have essentially an aesthetic function.

The principal types of tile are :

4.1.1 tiles with sidelock and headlock

Tiles with one or more longitudinal and transverse interlocking devices.

NOTE : They can be profiled or flat tiles.

4.1.2 tiles with sidelock only

Tiles with a longitudinal interlocking device, but no transverse one.

NOTE : They can be used to obtain variable headlaps.

4.1.3 plain tiles

Tiles usually with a flat surface that can be slightly cross cambered and/or longitudinally cambered and have no interlocking system.

NOTE : These tiles are generally rectangular, but can have a specially shaped tail (e.g. fish-scale tiles with a rounded or sharp front edge).

4.1.4 overlapping tiles

Tiles which are profiled in an "S" shape and have no side or headlock.

4.1.5 over and under tiles

Tiles with the shape of a gutter whose design makes it possible to obtain variable headlaps. They are made with their edges either parallel or forming a cone.

4.1.6 clay roofing fittings

Clay roofing units used either to complement the tiles on the main body of the roof (e.g. half tiles), or to join different roof faces (e.g. ridge tiles), or used at specific individual points on the roof (e.g. ventilation tiles).

In all cases, the clay roofing fittings covered by this standard are those whose design and dimensions are compatible with the characteristics of the tiles used in the main body of the roof.

4.2 Specific definitions to tiles with sidelock and headlock and tiles with sidelock only

4.2.1 interlock

Device designed for the assembly of two adjoining tiles and including or not one or more raised parts called "ribs" and one or more concave parts called "grooves".

4.2.1.1 longitudinal interlocking (see note in 4.2.1.2)

Device allowing two tiles in the same horizontal course to be fitted together.

4.2.1.2 transverse interlocking (see note)

Device allowing two tiles from successive horizontal courses to be fitted together.

NOTE : Three examples of interlock are shown in figure 1. The arrangement of ribs and grooves limits the extent of movement between the tiles and improves the resistance to the ingress of water.

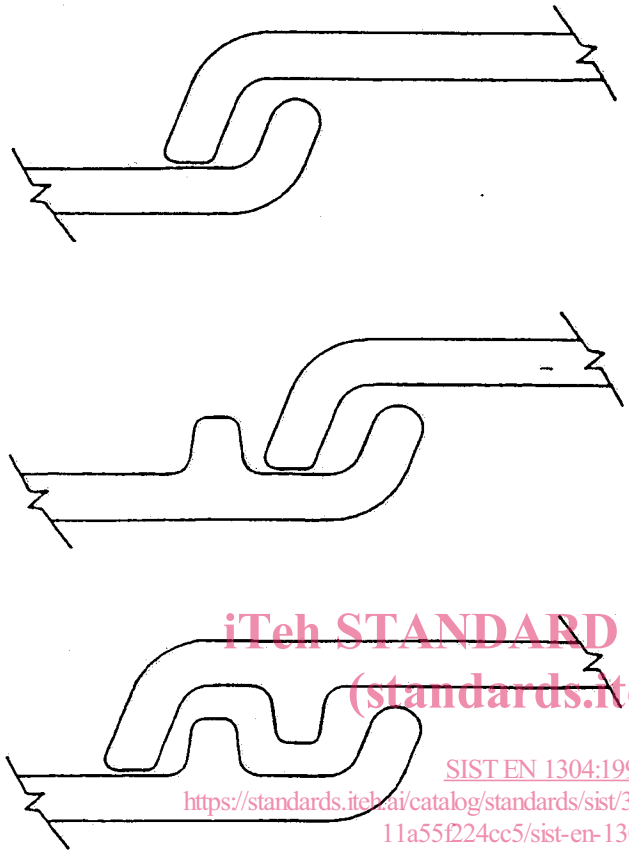

Figure 1 : Examples of interlock

4.2.2 straight bond tiles

Tiles designed to be laid so that the longitudinal joints of successive course are aligned.

4.2.3 broken bond tiles

Tiles designed to be laid so that the longitudinal joints are shifted half a tile between successive courses.

NOTE : Certain types of tiles are designed to be laid either straight bonded or broken bonded.

4.2.4 flat interlocking tiles

Interlocking tiles whose visible surface has no rib separating the areas of water flow from the longitudinal interlocks and where the longitudinal interlocks lie below the areas of water flow (see figure 2).

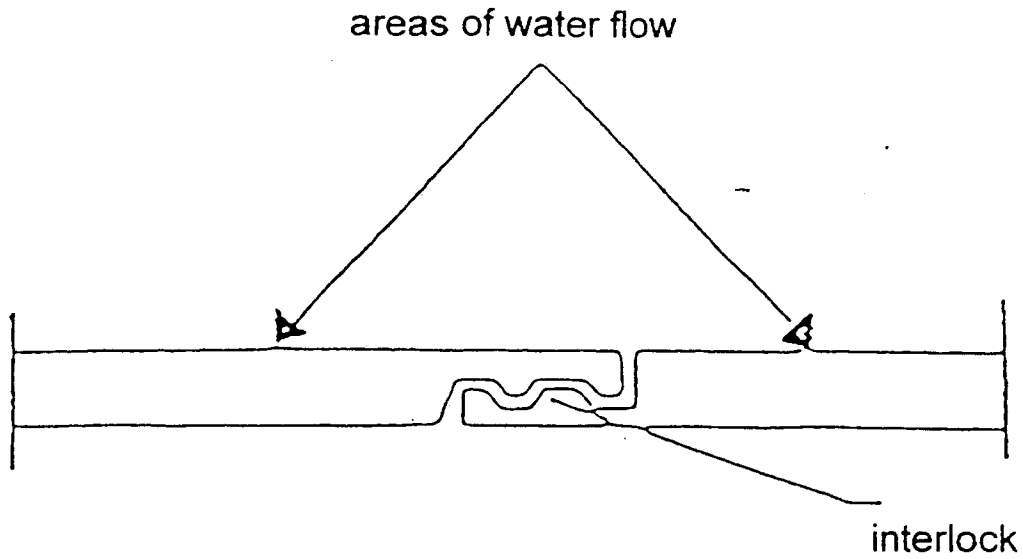

Figure 2 : Cross section and diagram of principle

4.3 Specific definitions to over and under tiles

4.3.1 under tiles

Tiles designed to be laid with their concave side facing upward and resting on the roofing support.

Under tiles can have no nib or one or more nibs for laying on battens.

4.3.2 over tiles

Tiles designed to be laid with their concave side facing downward and straddling two under tiles.

> NOTE : In general, the same units are used as under tiles when laid with their concave side facing upward and over tiles when they are laid with their concave side facing downward. However, the profile of under tiles can differ from that of over tiles and have, for example, a flat base or a shape allowing for the seating of the product on its support. In the latter case, under tiles are equipped with two lateral upright sides.

4.4 Further definitions

4.4.1 additive

Material added in small quantities to the clay mix so as to facilitate the manufacture of the tile or to improve its characteristics.

4.4.2 efflorescences

Cristalline deposit of soluble salts found on the surface of tiles due to water migrating from within the tiles and evaporating on the surface.