



**SLOVENSKI STANDARD**  
**SIST EN 12058:2004**  
**01-december-2004**

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Natural stone products - Slabs for floors and stairs - Requirements

Natursteinprodukte - Bodenplatten und Stufenbeläge - Anforderungen

Produits en pierre naturelle - Dalles de revêtement de sols et d'escaliers - Exigences

**iTeh STANDARD PREVIEW**

**Ta slovenski standard je istoveten z: EN 12058:2004**

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[SIST EN 12058:2004](https://standards.iteh.ai/catalog/standards/sist/6e341740-454c-48eb-8e49-bbdef32b92b8/sist-en-12058-2004)

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**ICS:**

91.100.15

**SIST EN 12058:2004**

**en**

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ICS 91.100.15

English version

## Natural stone products - Slabs for floors and stairs - Requirements

Produits en pierre naturelle - Dalles de revêtement de sols  
et d'escaliers - Exigences

Natursteinprodukte - Bodenplatten und Stufenbeläge -  
Anforderungen

This European Standard was approved by CEN on 9 July 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of 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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 12058:2004) has been prepared by Technical Committee CEN/TC 246 "Natural stones", the secretariat of which is held by UNI.

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 April 2005, and conflicting national standards shall be withdrawn at the latest by July 2006.

This document 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).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This document is one of a series of standards for specifications of natural stone products which includes the following:

EN 1467, *Natural stone - Rough blocks - Requirements*

EN 1468, *Natural stone - Rough slabs - Requirements*

prEN 1469, *Natural stone products - Slabs for cladding - Requirements*

EN 12057, *Natural stone products - Modular tiles - Requirements*

EN 12058, *Natural stone products - Slabs for floors and stairs - Requirements*

prEN 12059, *Natural stone products - Dimensional stone work - Requirements*

Other standards on natural stone are produced by:

CEN/TC 178 Paving units and kerbs

EN 1341, *Slabs of natural stone for external paving - Requirements and test methods*.

EN 1342, *Setts of natural stone for external paving - Requirements and test methods*.

EN 1343, *Kerbs of natural stone for external paving - Requirements and test methods*.

CEN/TC 128 Roof covering products for discontinuous laying and products for wall cladding

EN 12326-2, *Slate and stone products for discontinuous roofing and cladding - Part 2: Methods of test*.

EN 12326-1, *Slate and stone products for discontinuous roofing and cladding - Part 1: Product specification*.

CEN/TC 125 Masonry

EN 771-6, *Specification for masonry units - Part 6: Natural stone masonry units*.

Other standards are relevant to aggregates for concrete, roads, railways and armourstone (under study within CEN/TC 154).

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 requirements for flat natural stone slabs fabricated for use as floor and stair coverings. It does not cover mineral aggregates and artificial agglomerated stone material and does not cover installation.

## 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 1925, *Natural stone test methods - Determination of water absorption coefficient by capillarity.*

EN 1936, *Natural stone test methods - Determination of real density and apparent density and of total and open porosity.*

EN 12371, *Natural stone test methods - Determination of frost resistance.*

EN 12372, *Natural stone test methods - Determination of flexural strength under concentrated load.*

EN 12407, *Natural stone test methods - Petrographic examination.*

EN 12440, *Natural stone - Denomination criteria.*

EN 12524, *Building materials and products - Hygrothermal properties - Tabulated design values.*

EN 12670:2001, *Natural stone - Terminology.*

EN 13161, *Natural stone test methods - Determination of flexural strength under constant moment.*

EN 13373, *Natural stone test methods - Determination of geometric characteristics on units.*

EN 13501-1, *Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests.*

EN 13755, *Natural stone test methods - Determination of water absorption at atmospheric pressure.*

EN 14157, *Natural stone test methods - Determination of the abrasion resistance.*

EN 14066, *Natural stone test methods - Determination of resistance to ageing by thermal shock.*

EN 14231, *Natural stone test methods - Determination of the slip resistance by means of the pendulum tester.*

EN ISO 12572, *Hygrothermal performance of building materials and products - Determination of water vapour transmission properties (ISO 12572:2001).*

NOTE Besides the documents for test methods mentioned in this Clause, there exist further documents which can be used for scientific examinations, but which are not relevant for the application in practice according to this document.

### 3 Terms and definitions

For the purpose of this document, the terms and definitions given in EN 12670:2001 and the following apply.

#### 3.1 slab for floors

flat piece of natural stone obtained by cutting or splitting at a nominal thickness >12 mm. It is laid on to a structure by means of mortar, adhesives or other supporting elements

NOTE Mortar as defined in EN 998-1. Adhesives as defined in EN 12004.

#### 3.1.1 skirting

flat piece of natural stone obtained by cutting or splitting at a nominal thickness > 12 mm. It is laid on each wall surrounding a flooring and in contact with it

#### 3.2 slab for stairs

flat piece of natural stone obtained by cutting or splitting at a nominal thickness >12 mm (except risers) to form the horizontal part of a stair step (tread) or the vertical part of a stair step (riser)

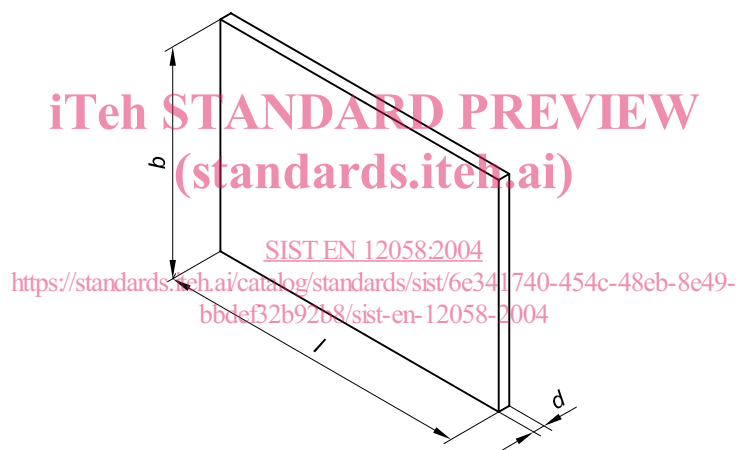


Figure 1 – Dimensions of slabs for floors

#### 3.3 dimensions of slabs for floors and stairs

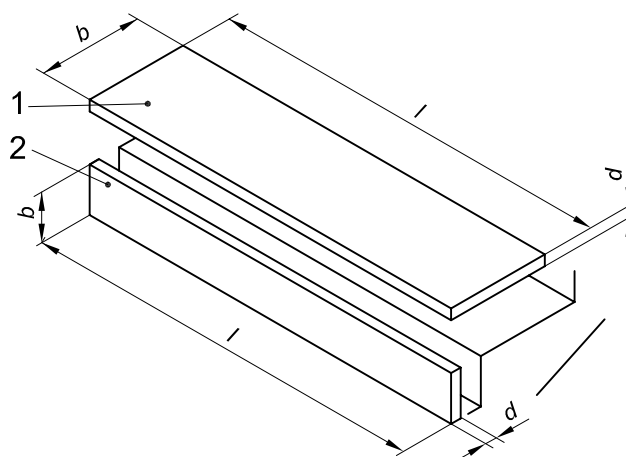
##### 3.3.1

length  $l$ , width  $b$  and thickness  $d$  are the dimensions of a slab for floors. The dimensions are given in the stated sequence in millimetres (see Figure 1)

##### 3.3.2

length  $l$ , width  $b$  and thickness  $d$  are the dimensions of a slab for stairs, separated for treads and risers. The dimensions are given in the stated sequence in millimetres (see Figure 2)



**Key**

- 1 Tread
- 2 Riser

**Figure 2 – Dimensions of slabs for stairs****4 Requirements**

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**4.1 Requirements for geometric characteristics**

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**4.1.1 General**

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All measurements shall be carried out in accordance with EN 13373 and all measured values of individual units shall fall within the required tolerances.

**4.1.2 Requirements for thickness**

The thickness shall not deviate from the nominal thickness by more than given in Table 1.

**Table 1 – Tolerances on the nominal thickness**

Nominal thickness in mm	Tolerance
More than 12 Up to and including 15	± 1,5 mm
More than 15 Up to and including 30	± 10 %
More than 30 Up to and including 80	± 3 mm
More than 80	± 5 mm

Stricter tolerances may be declared by the manufacturer.

NOTE If the slab is to be fixed by adhesives or a thin mortar bed, stricter tolerances may be needed.

The required thickness of slabs for floors and stairs shall result from a structural analysis or similar procedure which takes into account the technical and physical properties of the stone and the intended application.

Visible edges shall be gauged.

For natural cleft/riven faces, Table 1 does not apply and the tolerances shall be declared by manufacturer.

**4.1.3 Requirements for flatness**

The deviation from flatness of the surface (except for natural cleft faces) shall not exceed 0,2 % of the slab length, and shall not exceed 3 mm. For natural cleft faces, the tolerance on flatness shall be declared by the manufacturer.

**4.1.4 Requirements for length and width**

The length or width shall not deviate from the nominal size by more than given in Table 2.

**Table 2 – Tolerances on length and width**

Nominal length or width in mm	< 600	≥ 600
Sawn edges thickness ≤ 50 mm	± 1 mm	± 1,5 mm
Sawn edges thickness > 50 mm	± 2 mm	± 3 mm

Stricter tolerances may be declared by the manufacturer.

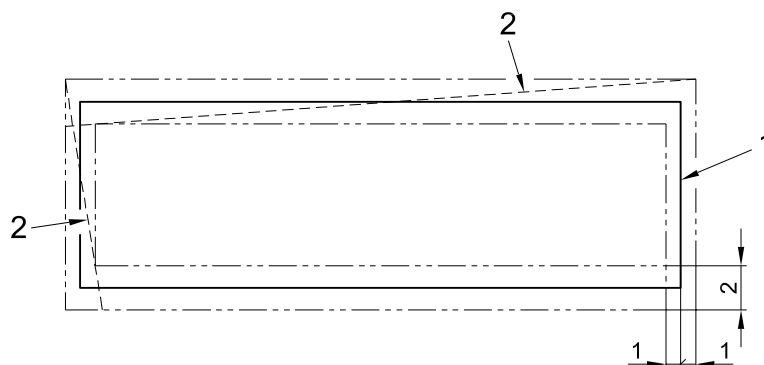
**4.1.5 Requirements for angles and special shapes**

The permissible tolerance at any point shall be as stated in Table 2 (see Figure 3).

Each slab angle shall be in accordance with the agreed geometry. Pieces of special or irregular shape shall be checked for compliance with the required shape by use of a suitable template, the permissible tolerance at any point shall be as stated in Table 2 (see Figure 3).

Stricter tolerances may be declared by the manufacturer.

Dimensions are in millimetres

**Key**

- 1 Nominal size
- 2 The slab sides shall fall within the two dotted lines indicating the tolerances of length and width according to Table 2

**Figure 3 – Example of tolerances on angles****4.1.6 Commercial sizes of slabs for floors and stairs**

Commercial sizes shall be based on the area of the smallest possible circumscribed rectangle measured in square metres accurate to two decimal places. (standards.itech.ai)

**4.1.7 Requirements for surface finish**

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**4.1.7.1 General**

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Surface finishes shall be carried out uniformly to the edges of the slabs for floors and stairs.

The surface finishing of some types of stones may typically involve the use of patching, fillers or adhesives for natural holes, faults or cracks; this is to be considered as part of the normal processing. In such cases the type of treatment as well as the type and nature of additional materials shall be declared.

**4.1.7.2 Requirements for surfaces after surface finishing**

Surfaces shall have a regular appearance as a function of the finishing process and shall be worked to meet the specified finish on all exposed surfaces (e.g. making reference to samples, see 4.2.3), agreed in accordance with samples submitted and agreed beforehand between the purchaser and supplier.

NOTE 1 Surfaces obtained by grinding are, for example:

- rough ground surfaces obtained, e.g. by means of a grinding disk of grain size F 60;
- medium ground surfaces obtained, e.g. by means of a grinding disk of grain size F 120;
- fine ground surfaces obtained, e.g. by means of a grinding disk of grain size F 220;
- matt finished surfaces obtained, e.g. by means of a grinding disk with grain size F 400;
- highly polished surfaces obtained, e.g. by means of a polishing disk or felt.

NOTE 2 Surfaces obtained by means of percussion tools are, for example:

- bush hammered surfaces (see EN 12670:2001, 2.3.8)\*;

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- trimmed surfaces: finish obtained by using a pointed chisel and mallet or a grooving machine;
- striated surfaces: finish obtained by using a claw chisel (percussion tool for roughening a surface, with the cutting edge consisting of several teeth of various size) or a ruling machine.

NOTE 3 Surfaces obtained by other finishing operations are, for example:

- flamed finish (see EN 12670:2001, 2.3.22)\*\*;
- sand blasted finish (see EN 12670:2001, 2.3.46)\*\*\*;
- water jet streamed finish: a matt textured surface finish, accomplished by exposing the surface to a jet of water under pressure;
- machine tooled finish (see EN 12670:2001, 2.3.54)\*\*\*\*;
- riven cut finish: rugged surface produced by splitting stone with a guillotine or chisel.

\* finish obtained by using a bush hammer (percussion tool for roughening a surface, with a square head and with few pyramidal percussion teeth or points) or a bush hammering machine (machine consisting of feed rolls and a overhanging beam, supporting a pneumatic bush hammer).

\*\* surface texture obtained by thermal treatment of the stone using a high temperature flame.

\*\*\* a matt finishing resulting from the impact of the sand or other abrasive grains expelled by a sand jet.

\*\*\*\* this term has two different meanings:

1) finish resulting from a mechanical surface treatment with tools,

2) dressed finish clearly showing tool marks.

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## 4.2 Requirements of natural stone for floors and stairs

### 4.2.1 General

Due to the natural variations of the stone materials, deviations from the declared values may occur. Whenever stone processing is likely to change the characteristics of the initial material (e.g. as a consequence of the type of processing or because the use of patching, fillers or other similar products for natural holes, faults, cracks and similar), then this has to be considered when determining the characteristics requested by this document.

The following characteristics shall be declared where requested by this document or with reference to the intended use conditions.

### 4.2.2 Denomination

The denomination shall always be declared in accordance with EN 12440 (meaning traditional name, petrological family, typical colour and place of origin).

The petrographic name shall be declared in accordance with EN 12407.

### 4.2.3 Visual appearance

#### 4.2.3.1 General

This characteristic shall always be declared.

The colour, veining, texture, etc. of the stone shall be identified visually, typically by a reference sample of the same stone suitable for providing a general description of visual appearance.