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T Specification for masonry units - Part 6: Natural stone masonry units



## **FESTI STANDARDI FESSÕNA**

## **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 771-6:2011 sisaldab Euroopa standardi EN 771-6:2011 ingliskeelset teksti.

This Estonian standard EVS-EN 771-6:2011 consists of the English text of the European standard EN 771-6:2011.

Standard on kinnitatud Eesti Standardikeskuse 31.05.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.05.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 04.05.2011.

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ICS 91.100.15

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# EUROPEAN STANDARD NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

**EN 771-6** 

May 2011

ICS 91.100.15

Supersedes EN 771-6:2005

#### **English Version**

# Specification for masonry units - Part 6: Natural stone masonry units

Spécifications pour éléments de maçonnerie - Partie 6 : Eléments de maçonnerie en pierre naturelle Festlegungen für Mauersteine - Teil 6: Natursteine

This European Standard was approved by CEN on 3 March 2011.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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## **Foreword**

This document (EN 771-6:2011) has been prepared by Technical Committee CEN/TC 125 "Masonry", the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by November 2011, and conflicting national standards shall be withdrawn at the latest by November 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 771-6:2005.

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 Construction Products Directive (89/106/EEC).

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

This European Standard also takes into account the general rules for unreinforced and reinforced masonry in EN 1996-1-1.

EN 771, Specification for masonry units consists of:

- Part 1: Clay masonry units
- Part 2: Calcium silicate masonry units
- Part 3: Aggregate concrete masonry units (Dense and light weight aggregates)
- Part 4: Autoclaved aerated concrete masonry units
- Part 5: Manufactured stone masonry units
- Part 6: Natural stone masonry units

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

## 1 Scope

This European Standard specifies the characteristics and performance requirements of masonry units manufactured from natural stone the width of which is equal to or greater than 80 mm, for which the main intended uses are common, facing or exposed masonry units in loadbearing or non-loadbearing building and civil engineering applications These units are suitable for all forms of coursed or random masonry walling, including single leaf, cavity, partition, retaining and the external masonry to chimneys. They can provide fire protection, thermal insulation, sound insulation and sound absorption.

This European Standard includes natural stone masonry units of an overall non-rectangular parallelepiped shape, specially shaped and accessory units for internal and external application.

It defines the performance related to e.g. strength, petrographic description, density, porosity, dimensional accuracy, thermal conductivity, water absorption, and frost resistance and provides for the evaluation of conformity of the product to this European Standard. The marking requirements for products covered by this European Standard are also included.

This European Standard does not cover storey height panels, natural stone for paving, chimney flue linings nor units intended for use as damp proof course.

## 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 772-1:2011, Methods of test for masonry units — Part 1: Determination of compressive strength

EN 772-11, Methods of test for masonry units — Part 11: Determination of water absorption of aggregate concrete, autoclaved aerated concrete, manufactured stone and natural stone masonry units due to capillary action and the initial rate of water absorption of clay masonry units

EN 772-16:2011, Methods of test for masonry units — Part 16: Determination of dimensions

EN 772-20, Methods of test for masonry units — Part 20: Determination of flatness of faces of aggregate concrete, manufactured stone and natural stone masonry units

EN 998-2:2010, Specification for mortar for masonry — Part 2: Masonry mortar

EN 1052-2, Methods of test for masonry — Part 2: Determination of flexural strength

EN 1052-3, Methods of test for masonry — Part 3: Determination of initial shear strength

EN 1745, Masonry and masonry products — Methods for determining thermal properties

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 ISO 10456, Building materials and products - Hygrothermal properties -Tabulated design values and procedures for determining declared and design thermal values (ISO 10456:2007)

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 data from reaction to fire tests

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

## 3 Terms and definitions

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

#### 3.1

## apparent density

ratio between the mass of the dry specimen and its apparent volume

#### 3.2

## masonry unit

preformed component intended for use in masonry construction

#### 3.3

#### face

exposed surface of natural stone masonry units

#### 3.4

## natural stone masonry unit

masonry unit manufactured from natural stone

## 3.5

## dimensions and surfaces

defined by reference to figure 1 relates to the name of the dimensions and surfaces for dimensioned stone and squared rubble stone

## 3.6

## co-ordinating size

size of the co-ordinating space allocated to a masonry unit including allowances for joints and tolerances

#### 3.7

## work size

size of a masonry unit specified for its manufacture, to which the actual size conforms within permissible deviations

## 3.8

#### actual size

size of a masonry unit as measured

### 3.9

#### rubble stone

masonry unit squared or not of any shape with variable dimensions, whose face is rough or worked

#### 3.10

## squared rubble stone

rubble stone which is squared and worked to dimensions declared by the manufacturer