SLOVENSKI STANDARD
SIST EN 771-4:2000

01-september-2000

Specifikacije za zidake - 4. del: Zidaki iz avtoklaviranega celiļ astega betona

Specification for masonry units - Part 4: Autoclaved aerated concrete masonry units

Festlegungen für Mauersteine - Teil 4: Porenbetonsteine

Spécifications pour éléments de maçonnerie - Partie 4: Eléments de maçonnerie en béton cellulaire autoclavé

Ta slovenski standard je istoveten z: **EN 771-4:2000**

ICS:

91.100.30	Beton in betonski izdelki	Concrete and concrete products

SIST EN 771-4:2000 **en**

EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 771-4

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English version

Specification for masonry units - Part 4: Autoclaved aerated concrete masonry units

Spécifications pour éléments de maçonnerie - Partie 4: Eléments de maçonnerie en béton cellulaire autoclavé

Festlegungen für Mauersteine - Teil 4: Porenbetonsteine

This European Standard was approved by CEN on 17 February 2000.

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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

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 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of an identical text or by endorsement, at the latest by September 2000, and conflicting national standards shall be withdrawn at the latest by September 2000.

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.

The annexes A and B of this European Standard are normative.

1 Scope

This European Standard specifies the characteristics and performance requirements of autoclaved aerated concrete (AAC) masonry units for which the main intended uses are different types of loadbearing and non-loadbearing applications in all forms of walling including single leaf, cavity, partitions, retaining, basement and general use below ground level, including walling for fire protection, thermal insulation, sound insulation and chimneys.

It defines the performance related to strength, density, dimensional accuracy, thermal conductivity, moisture movement and it also gives guidance on freeze/thaw resistance according to the corresponding test methods contained in separate European Standards.

It provides for the evaluation of conformity of the product to this European Standard.

The marking requirement for products covered by this European standard is included.

This European standard does not cover the requirements for storey height panels, flue linings and masonry units with an incorporated thermal insulating material bonded to the faces of the unit. It does not specify standard sizes for autoclaved aerated concrete units nor standard work dimensions and angles of specially shaped and accessory units. It does not give permissible deviations for specially shaped and accessory units. It does not cover products intended for use as a dpc.

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 680	Determination of the drying shrinkage of autoclaved aerated concrete.
prEN 772-1:1999	Methods of test for masonry units - Part 1: Determination of compressive strength.
EN 772-10	Methods of test for masonry units - Part 10: Determination of moisture content of calcium silicate and autoclaved aerated concrete units.
prEN 772-13	Methods of test for masonry units - Part 13: Determination of net and gross dry density of masonry units (except for natural stone).
prEN 772-16	Methods of test for masonry units - Part 16: Determination of dimensions.
prEN 998-2	Specification for mortar for masonry - Part 2: Masonry mortar
prEN 1745	Masonry and masonry products - Methods for determining declared and design thermal values.

3 Definitions and Symbols

For the purpose of this European standard, the following definitions apply.

3.1 Unit related definition

3.1.1 masonry unit: A preformed component intended for use in masonry construction.

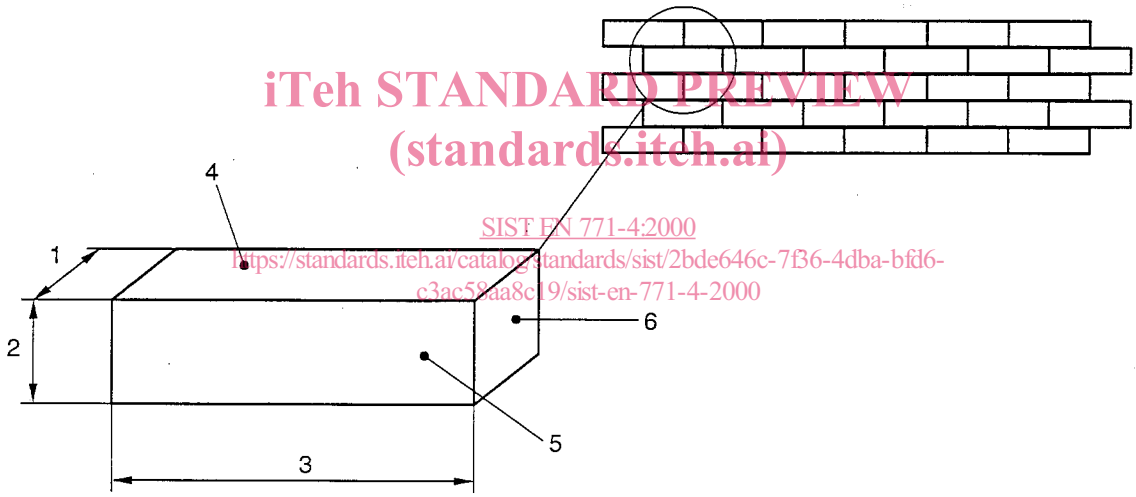
3.2 Material related definitions

3.2.1 AAC masonry unit: Masonry unit manufactured from hydraulic binders such as cement and/or lime, combined with siliceous based fine material, cell generating material and water.

NOTE AAC masonry units may be provided with recesses, tongued and grooved jointing systems and other interlocking features.

3.3 Size related definitions

3.3.1 dimensions: The dimensions of an AAC masonry unit are defined by reference to figure 1.



Key

1 Width
2 Height
3 Length
4 Bed
5 Face
6 Header

NOTE This relates to the normal use of the masonry in the wall.

Figure 1 - Dimensions and surfaces

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

3.3.3 work size: The size of masonry unit specified for its manufacture, to which the actual size conforms within permissible deviations.

3.3.4 actual size: The size of a masonry unit as measured.

3.4 Shape related definitions

3.4.1 regular shaped masonry unit: A masonry unit with an overall rectangular parallelepiped shape.

3.4.2 specially shaped masonry unit: A masonry unit which is not a rectangular parallelepiped.

3.4.3 accessory unit: A masonry unit which is shaped to provide a particular function.

3.4.4 interlocking features: Shaped matched projections and indentations on masonry units, e.g.. tongue and groove systems.

3.4.5 hole: A formed void which may or may not pass completely through a masonry unit.

3.4.6 vertical perforation: A formed void which passes completely through a masonry unit perpendicular to the bed face.

3.4.7 horizontal perforation: A formed void which passes completely through a masonry unit parallel to the bed faces.

3.4.8 cell: A formed void which does not pass through a masonry unit.

3.4.9 recess: Depression or indentation in one or more surfaces of a masonry unit (e.g. mortar pocket, rendering keyway, groove to provide a discontinuity in the mortar joint, grip hole).

3.5 Other definitions

declared value: a declared value is that value that a manufacturer is confident of achieving, bearing in mind the precision of test and variability of the manufacturing process.

3.6 Symbols

f_b = normalised compressive strength (N/mm²)

4 Materials and manufacture

4.1 General

AAC masonry units shall be manufactured using hydraulic binders such as cement and/or lime combined with fine siliceous based material , cell-generating material and water.

NOTE The raw materials are mixed together and cast into moulds where the mix is allowed to rise and set into cakes. After this part of the process, the cake is cut into the required sizes of masonry units and cured with high pressure steam in autoclaves.

4.2 Materials of manufacture

The following materials of manufacture combined with additives and agents where appropriate, may be used in the manufacturing process:

- Siliceous based material;
- Cement;
- Lime;
- Water;
- Cell-generating material.

Other materials may also be included in the manufacturing process.

5 Requirements for AAC masonry units

5.1 General

The requirements and properties specified in this standard shall be defined in terms of test methods and other procedures referred to in this European Standard.

It should be noted that the test methods are not always applicable to specially shaped and accessory units (see 3.4.2 and 3.4.3).

The conformity criteria given in the following sub-clauses relate to initial type tests (see 8.2) and to consignment testing (See Annex A). For production evaluation the manufacturer shall define the conformity criteria in the factory production control documentation (see 8.3).

5.2 Dimensions and Tolerances

5.2.1 Dimensions

The dimensions of an AAC masonry unit shall be declared in mm for length, width and height, in that order. They shall be given in terms of work size and in addition the co-ordinating size may be given. AAC masonry units shall be sampled in accordance with Annex A and tested in accordance with prEN 772-16.

The deviation of the measured dimensions from the declared dimensions shall not exceed the value given in Table 2. The declared dimensions shall not exceed the value given in Table 1.

Table 1 - Maximum dimensions for AAC masonry units

	Dimensions in mm
Length	1500
Width	500
Height	1000

5.2.2 Tolerances

5.2.2.1 Permissible deviations for regular shaped units

The permissible deviations for individual masonry units shall be as given in Table 2 for mortar specified in accordance with prEN 998-2.