

General principles of design of fibrous (gypsum) plaster works

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 15319:2007 sisaldab Euroopa standardi EN 15319:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 14.09.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 15319:2007 consists of the English text of the European standard EN 15319:2007.</p> <p>This document is endorsed on 14.09.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This European Standard defines the principles for the design of works carried out using fibrous (gypsum) plaster products as defined in EN 13815. Fibrous (gypsum) plaster casts from the three categories of production below (see Clause 4 of EN 13815:2006) should be involved: a) "cpp" allowing regulatory marking CE; b) "cppv" allowing regulatory marking CE; c) "ipp" either when CE marking is required; or without CE marking (see Annex D – Note 2 of EN 13815:2006).</p>	<p>Scope:</p> <p>This European Standard defines the principles for the design of works carried out using fibrous (gypsum) plaster products as defined in EN 13815. Fibrous (gypsum) plaster casts from the three categories of production below (see Clause 4 of EN 13815:2006) should be involved: a) "cpp" allowing regulatory marking CE; b) "cppv" allowing regulatory marking CE; c) "ipp" either when CE marking is required; or without CE marking (see Annex D – Note 2 of EN 13815:2006).</p>
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Võtmesõnad:

English Version

General principles of design of fibrous (gypsum) plaster works

Principes généraux de conception des ouvrages en staff

Allgemeine Grundsätze der Planung von Arbeiten aus
Formteilen aus faserverstärktem Gips

This European Standard was approved by CEN on 7 June 2007.

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Foreword

This document (EN 15319:2007) has been prepared by Technical Committee CEN/TC 241 "Gypsum and gypsum based products", the secretariat of which is held by AFNOR.

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 2008, and conflicting national standards shall be withdrawn at the latest by January 2008.

This European Standard is one of a series of European standardization documents including:

- construction products standards, concerning gypsum and gypsum based products;
- works design standards, providing general principles for the design of works to realise with these products;
- technical reports, providing rules and recommendations for installation of works on site realised with these same products.

NOTE 1 The fibrous plaster products are the subject of EN 13815.

NOTE 2 The rules and recommendations for installation of fibrous (gypsum) plaster works on site are the subject of the European Technical Report "Installation rules of fibrous (gypsum) plaster works".

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, 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 United Kingdom.

Introduction

This European Standard applies to works carried out using fibrous (gypsum) plaster products made by the moulding of thin reinforced gypsum.

The fibrous plaster work is installed by positioning these products and fastening them to the appropriate part of the built construction. Then they are sealed or screwed and jointed with plaster to form continuous surfaces without apparent joints.

Fibrous plaster is used to enhance the architectural effects and the decorative effects to the interior of buildings, and to provide technical solutions.

Examples of types of buildings where fibrous plastering works are often installed include: public buildings, banks, department stores, shopping malls, hotels, buildings for cultural and leisure activities, and churches.

NOTE The figures used to illustrate this European Standard are intended to make the text easier to understand. Therefore, they should be taken as indicative and non-restrictive examples of the work described in the text.

1 Scope

This European Standard defines the principles for the design of works carried out using fibrous (gypsum) plaster products as defined in EN 13815.

Fibrous (gypsum) plaster casts from the three categories of production below (see Clause 4 of EN 13815:2006) should be involved:

- a) "cpp" allowing regulatory marking CE;
- b) "cppv" allowing regulatory marking CE;
- c) "ipp" either when CE marking is required;

or without CE marking (see Annex D – Note 2 of EN 13815:2006).

This European Standard applies to both new constructions and to the refurbishment, restructuring or conversion of existing buildings.

The common fields of application of fibrous plaster are as set out in Table 1 below.

Table 1 — Common fields of application of fibrous plaster

Fields of application	Examples
Architectural effects	<ul style="list-style-type: none"> — decorating: cornices, pilasters, columns (see exception below); — on the ceiling: flat or shaped ceilings (included suspended ceilings), coffered ceilings, vaults, domes; — in a vertical position : flat or shaped surfaces (partitions, linings); — encasements, casings; — embellishments for direct or concealed lighting; — structures to improve acoustical performance (insulation, absorption, diffusion).
Technical functions	<ul style="list-style-type: none"> — shafts and ducts for ventilation, air conditioning, smoke extraction; — ceiling voids and chambers for pressurization; — structures to enhance fire safety.
<p>NOTE 1 This classification is not exclusive, as the same fibrous plaster work can have several functions.</p> <p>NOTE 2 Table 1 does not mention the use of fibrous plaster externally; as it can only be used under certain conditions (see 4.3.1.2).</p>	

Fibrous plastering work should be capable of having the usual finishes applied directly to them (e.g. paint, wallpaper) subject to the normal preparatory work applicable for the type of finish.

This European Standard should not apply to:

- works formed from fibre reinforced gypsum sheet products, that are the subject of prEN 15283;
- suspended ceilings formed from gypsum units and/or tills, installed dry in a framework, that are the subject of EN 14246;
- works formed of solid casts;
- run moulded plaster works formed in situ;
- works formed from plaster based stucco casts, carton-pierre decors, resin decors;
- fibrous plaster works which, by their nature, do not form an integral part of the structure by the use of permanent fixing (e.g. exhibition stands);
- fibrous plaster works consisting of casts and embellishments, when they are to be applied directly to either new or existing wall or ceiling surfaces, for purely decorative applications (see Figures 3 and 4). Works of these types should be carried out in accordance with standard practice.

This European Standard does not contain the regulatory requirements with which fibrous plaster works e.g. ceilings need to comply in certain buildings.

NOTE In the field of safety, the main regulations relate to certain types of buildings, for example:

- public buildings (PB);
- high rise buildings (HRB);
- buildings for educational purposes;
- buildings for sanitary purposes.

This European Standard does not deal with the ability of fibrous plastering works to comply with particular technical requirements (e.g. acoustical) needed in order for the works to comply with the requirements of the particular building contract.

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 13279-1, *Gypsum binders and gypsum plasters - Part 1: Definitions and requirements*

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

EN 13501-2, *Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services*

EN 13815:2006, *Fibrous gypsum plaster casts - Definitions, requirements and test methods*

EN 20140-9, *Acoustics - Measurement of sound insulation in buildings and of building elements - Part 9: Laboratory measurements of room-to-room airborne sound insulation of a suspended ceiling with a plenum above it (ISO 140-9:1985)*

EN ISO 140-3, *Acoustics - Measurements of sound insulation in buildings and of building elements - Part 3: Laboratory measurements of airborne sound insulation of building elements (ISO 140-3:1995)*

EN ISO 354, *Acoustics - Measurement of sound absorption in a reverberation room (ISO 354:2003)*

EN ISO 717-1, *Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation (ISO 717-1:1996)*

EN ISO 6946, *Building components and building elements - Thermal resistance and thermal transmittance - Calculation method (ISO 6946:1996)*

EN ISO 10456, *Building materials and products - Procedures for determining declared and design thermal values (ISO 10456:1999)*

3 Terms, definitions, symbols and abbreviations

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

3.1 General definitions

3.1.1

fibrous (gypsum) plaster work

completed work formed from the installation of fibrous plaster casts

3.1.2

fibrous (gypsum) plaster surface

whole surface formed from fibrous plaster casts (e.g. ceiling, wall lining)

3.1.3

fibrous (gypsum) plaster cast

product made by casting specified gypsum plaster mixed with water and reinforced with fibres, cloth, grilles, lathwork, lath or profiles. It may contain admixtures, fillers or aggregates as long as they will not contribute in any stage of the fire and they are not classified as dangerous substances in European regulations

3.1.4

fibrous (gypsum) interior architectural cast

cast of any shape and configuration, intended for interior architecture works similar to those in Table 1

3.1.5

fibrous (gypsum) plaster technical function cast

cast of any shape and configuration, intended for technical function similar to those in Table 1

3.1.6

fibrous (gypsum) plaster unit; slab

flat rectangular cast

3.1.7

suspended ceiling

ceiling hung at a distance below the floor or roof above (see Figures 1 a), 1 b), 1 c))

3.1.8

partition

self-supporting dividing wall, non load-bearing

3.1.9

wall lining

dry covering to any internal building surface (see Figure 1 d))