



SLOVENSKI STANDARD
kSIST FprEN 15303-1:2010
01-julij-2010

Projektiranje in uporaba mavčnih plošč na okvirjih - 1. del: Splošna načela za projektiranje

Design and application of plasterboard systems on frames - Part 1: General principles of design

Planung und Ausführung von Gipsplattenkonstruktionen auf Unterkonstruktion - Teil 1: General

Conception et mise en œuvre d'ouvrages en plaques de plâtre sur ossatures - Partie 1: Principes généraux de conception

Ta slovenski standard je istoveten z: FprEN 15303-1

ICS:

91.100.10 Cement. Mavec. Apno. Malta Cement. Gypsum. Lime.
Mortar

kSIST FprEN 15303-1:2010

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

FINAL DRAFT
FprEN 15303-1

May 2010

ICS 91.100.10

English Version

Design and application of plasterboard systems on frames - Part 1: General principles of design

Conception et mise en œuvre d'ouvrages en plaques de
plâtre sur ossatures - Partie 1: Principes généraux de
conception

Planung und Ausführung von Gipsplattenkonstruktionen
auf Unterkonstruktion - Teil 1: General

This draft European Standard is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 241.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	5
Terms and	5
3 definitions	5
4 Design	6
4.1 General.....	6
4.2 Functions.....	6
4.3 Design considerations	9
4.3.1 Fire protection.....	9
4.3.2 Protection against noise	9
4.3.3 Thermal insulation	10
4.3.4 Mechanical resistance and stability.....	11
4.3.5 Durability	12
4.3.6 Moisture and humidity	12
4.3.7 Water Vapour Control.....	12
4.3.8 Maintenance and reparability	13
4.3.9 Protection against damage in use	13
4.3.10 Safety against personal injuries by contact	13
4.3.11 Hygiene, health and environment	13
4.3.12 Finishes	13
4.3.13 Services	15
4.3.14 Compatibility with adjoining elements	15
4.3.15 System thickness.....	16
4.3.16 Tolerances	16
5 Site works	17
5.1 Building programme and planning	17
5.2 Safety in use.....	17
5.3 Storage of materials	17
5.4 Scaffolding	18
5.5 Protection of the work.....	18
6 Acceptance of works	18
6.1 General.....	18
6.2 Lighting – General recommendations	18
6.3 Light falling generally perpendicular to the surface	18
6.4 Glancing light conditions.....	18
6.5 Viewing condition	19
Bibliography	20

Foreword

This document (FprEN 15303-1:2010) has been prepared by Technical Committee CEN/TC 241 "Gypsum and gypsum based products", the secretariat of which is held by AFNOR.

This document is currently submitted to the Unique Acceptance Procedure.

No existing European Standard is superseded.

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 89/106/EEC.

This standard is one of a series of documents for construction products based on gypsum and their intended uses:

- EN 15303-1, *Design and application of plasterboard systems on frames — Part 1: General principles of design*
- CEN/TR 15303-2, *Design and application of plasterboard systems on frames — Part 2: Nonload bearing metal frame partitions*
- CEN/TR 15303-3, *Design and application of plasterboard systems on frames — Part 3: Nonload bearing timber frame partitions*
- CEN/TR 15303-4, *Design and application of plasterboard systems on frames — Part 4: Loadbearing metal frame partitions*
- CEN/TR 15303-5, *Design and application of plasterboard systems on frames — Part 5: Loadbearing timber frame partitions*
- CEN/TR 15303-6, *Design and application of plasterboard systems on frames — Part 6: Metal frame wall linings*
- CEN/TR 15303-7, *Design and application of plasterboard systems on frames — Part 7: Timber frame wall linings*
- CEN/TR 15303-8, *Design and application of plasterboard systems on frames — Part 8: Non loadbearing metal frame ceilings*
- CEN/TR 15303-9, *Design and application of plasterboard systems on frames — Part 9: Non loadbearing timber frame ceilings*
- CEN/TR 15303-10, *Design and application of plasterboard systems on frames — Part 10: Non loadbearing shaftwall systems*

It has been assumed in the drafting of this standard that the application of its provisions is entrusted to appropriately qualified and experienced people, for whose guidance it has been prepared.

Introduction

The properties of gypsum plasterboards make them particularly suitable for use in situations where fire protection, sound and thermal insulation are required. To obtain full advantage of these properties in plasterboard constructions, their design and installation have to be correct.

Following the recommendations for the design and installation given in this European Standard will enable expected performances to be achieved for plasterboard constructions.

1 Scope

This European Standard provides recommendations for the design of gypsum plasterboard constructions as well as requirements for the application of the plasterboard, to meet the performance requirements of the completed works. The products described are covered by harmonised technical specifications.

Recommendations on the installation of plasterboard as wall lining partitions and ceilings are given in parts 2 to 10.

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 amendments) applies.

EN 12664, *Thermal performance of building materials and products — Determination of thermal resistance by means of guarded hot plate and heat flow meter methods — Dry and moist products of medium and low thermal resistance*

EN 14195, *Metal framing components for gypsum plasterboard systems — Definitions, requirements and test methods*

3 Terms and definitions

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

3.1

lining

dry covering to any internal building surface

3.2

plasterboard dry lining

lining constructed of gypsum plasterboard

3.3

plasterboard seamless finish

plasterboard construction that incorporates plasterboard seamless joints

3.4

plasterboard cornice

preformed paper covered gypsum section with profiled face supported by shoulders

3.5

vapour control gypsum plasterboard according to EN 14190

gypsum plasterboard composite that incorporates a film of low water vapour permeability

3.6

plasterboard systems

part of the work made up of components (stud, plasterboard, jointing, screws, etc.) and assembled on site

FprEN 15303-1:2010 (E)

4 Design

4.1 General

Prior to the commencement of the contract there shall be an exchange of pertinent information between all parties concerned. The designer shall include working drawings and specifications, prepared in sufficient detail to afford proper guidance in the preparation of estimates and the execution of the work.

When selecting and designing dry lining systems the designer shall take into account the following points:

- a) the nature and condition of the building elements to which the system will be attached, including any necessary pre-treatment;
- b) the functional requirements;
- c) the type of finish/appearance;
- d) the dimensions required including:
 - 1) the finished widths, heights and thicknesses of the systems;
 - 2) details of the nature of junctions with other building elements and construction details (e.g. doors, windows, ceiling junctions, etc.);
 - 3) the positioning of installations and fittings;
 - 4) any other situations that will affect the choice and design of dry lining systems;
- e) the preparation of other building elements to provide adequate fixing points for dry lining systems as necessary;
- f) the work of other trades, particularly concerning services (e.g. pipes, wires, etc.) that are intended to connect with or run within the dry lining system;
- g) manufacturing and building tolerances that may affect the design of the dry lining system or the elements to which it is joined.

The designer shall consider the systems selected for use and the effect this may have on the co-ordination of all trades and the overall building programme. National regulations state certain requirements of dry linings that have to be met. The performance of a dry lining system is determined by calculation or testing in accordance with the relevant European Standards.

4.2 Functions

The following are examples of factors that can influence the choice of a dry lining system and shall be considered:

- a) type of building, occupancy and use;
- b) dimensions (height, width, thickness) of the system;
- c) tolerances of background;
- d) provision for services;
- e) decoration;
- f) loadings, to be carried by the system and imposed by the system on the structure;