TÖÖSTUSLIKULT VALMISTATUD KIPSPLAADIST PANEELID KÄRGKARTONGIST SÜDAMIKUGA. MÄÄRATLUSED, NÕUDED JA KATSEMEETODID

Prefabricated gypsum plasterboard panels with a cellular paperboard core - Definitions, requirements and test methods



#### EESTI STANDARDI EESSÕNA

#### NATIONAL FOREWORD

	This Estonian standard EVS-EN 13915:2017 consists of the English text of the European standard EN 13915:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 05.07.2017.	Date of Availability of the European standard is 05.07.2017.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile <u>standardiosakond@evs.ee</u>.

#### ICS 91.100.10

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega: Koduleht <a href="www.evs.ee">www.evs.ee</a>; telefon 605 5050; e-post <a href="mailto:info@evs.ee">info@evs.ee</a>

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

## EUROPEAN STANDARD

### NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

July 2017

EN 13915

ICS 91.100.10

Supersedes EN 13915:2007

#### **English Version**

# Prefabricated gypsum plasterboard panels with a cellular paperboard core - Definitions, requirements and test methods

Panneaux de cloison préfabriqués en plaques de plâtre à âme cellulaire en carton - Définitions, exigences et méthodes d'essai Gipsplatten-Wandbaufertigtafeln mit einem Kartonwabenkern - Begriffe, Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 29 July 2016.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Cont	ents	Page
Europ	ean foreword	4
1	Scope	5
2	Normative references	5
3	Terms and definitions	6
4	Requirements	6
4.1	Fire behaviour	
4.1.1	Reaction to fire	
4.1.2	Fire resistance	
4.2	Impact resistance	
4.3	Water vapour permeability (expressed as water vapour resistance fac	
4.4	Flexural strength (expressed as deflection under a defined load)	
4.5	Direct airborne sound insulation	
4.6	Acoustic absorption	
4.7	Thermal resistance (expressed as thermal conductivity)	
4.8	Dimensions and tolerances	
4.9	Alignment	
4.10	Core adhesion	
4.11	Release of dangerous substance	
4.12	Flatness of panels	
	Test methods	
5	Test methods	9
5.1	Sampling	
5.2	Dimensional measurements	
5.2.1	Width	
5.2.2	Length	
5.2.3	Thickness	
5.3	Determination of alignment	
5.3.1	Principle	
5.3.2	Apparatus	
5.3.3	Procedure	
5.3.4	Expression of results	
5.4	Determination of deflection	
5.4.1	Principle	
5.4.2	Apparatus	12
5.4.3	Procedure	
5.4.4	Expression of results	
5.5	Determination of the core adhesion	
5.5.1	Principle	
5.5.2	Apparatus	
5.5.3	Procedure	
5.5.4	Expression of results	
5.6	Determination of surface hardness of the panel	
5.6.1	Principle	
5.6.2	Apparatus	
5.6.3	Procedure	
5.6.4	Expression of results	
5.7	Determination of the panel's flatness	17

Principle	17
Apparatus and specimens	17
Procedure	17
Expression of results	17
Assessment and verification of constancy of performance – AVCP	17
Determination of the product type	
Further type testing	
Factory production control (FPC)	18
General	
Personnel	19
Equipment	19
Raw materials and components	
Other test methods	19
Designation of the prefabricated gypsum plasterboard panels	19
Marking, labelling and packaging	
General	21
Sampling procedure	21
x B (normative) Mounting and fixing in the test according to EN 13823 (SBI test)	
General	22
x ZA (informative) Relationship of this European Standard with Regulation (EU)  No.305/2011	24
Scope and relevant characteristics	24
System of Assessment and Verification of Constancy of Performance (AVCP)	25
Assignment of AVCP tasks	25
ography	27
	Procedure

#### **European foreword**

This document (EN 13915:2017) 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 2018, and conflicting national standards shall be withdrawn at the latest by April 2019.

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

This document supersedes EN 13915:2007.

The main changes that have been made in this new edition of EN 13915 are the following:

- a) deletion of the Introduction;
- b) normative references have been updated;
- c) Clause 6 and Annex ZA have been revised to be in line with the Construction Products Regulation (CPR);
- d) document has been editorially revised.

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 Regulation (EU) No. 305/2011.

For relationship with Regulation (EU) No. 305/2011, see informative Annex ZA, which is an integral part of this document.

This European standard includes:

- informative Annex A concerning sampling procedure for testing;
- normative Annex B concerning SBI mounting and fixing for prefabricated panels made of plasterboard facings and a cellular paperboard core.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

#### 1 Scope

This European Standard specifies the characteristics and performance of prefabricated panels made of gypsum plasterboard facings complying with EN 520 and a cellular paperboard core intended to be used as a lightweight partition, lining and encasement for general use in buildings.

This standard covers the following characteristics: reaction to fire, water vapour permeability, flexural strength (breaking load) and thermal resistance to be measured according to the corresponding European test methods.

This Standard covers only prefabricated panels installed so that the core is not exposed.

The following performance characteristics are linked to systems assembled with prefabricated panels made of gypsum plasterboard facings and a cellular paperboard core: shear strength, fire resistance, direct airborne sound insulation, acoustic absorption and air permeability to be measured according to the corresponding European test methods. If required, tests should be done on assembled systems simulating the end use conditions.

This document covers also additional technical characteristics that are of importance for the use and acceptance of the product by the Building Industry.

It provides the assessment and verification of constancy of performance of the products.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 520:2004+A1:2009, Gypsum plasterboards — Definitions, requirements and test methods

EN 12664:2001, 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 13501-1:2007+A1:2009, Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests

EN 13501-2:2016, Fire classification of construction products and building elements — Part 2: Classification using data from fire resistance tests, excluding ventilation services

EN 13823:2010+A1:2014, Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item

EN 13963:2014, Jointing materials for gypsum boards — Definitions, requirements and test methods

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

EN ISO 717-1:2013, Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation (ISO 717-1:2013)

EN ISO 10140-2:2010, Acoustics — Laboratory measurement of sound insulation of building elements — Part 2: Measurement of airborne sound insulation (ISO 10140-2:2010)

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

EN ISO 11925-2:2010, Reaction to fire tests — Ignitability of products subjected to direct impingement of flame — Part 2: Single-flame source test (ISO 11925-2:2010)

EN ISO 12572:2016, Hygrothermal performance of building materials and products — Determination of water vapour transmission properties — Cup method (ISO 12572:2016)

ISO 7892:1986, Vertical building elements — Impact resistance tests — Impact bodies and general test procedures

#### 3 Terms and definitions

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

#### 3.1

#### prefabricated gypsum plasterboard panel

panel that is made up of two gypsum plasterboards according to EN 520, possibly up to 15 mm thick, bonded to both sides of a cellular paperboard core

Note 1 to entry: It is commonly named "panel" in this standard.

#### 3.2

#### panel facing

exposed surface of plasterboard to receive either coating or finishing

#### 3.3

#### length

dimension of the panel parallel to the paper covered edges, measured on the panel facing

#### 3.4

#### width

dimension of the panel perpendicular to the paper covered edges, measured on the panel facing

#### 3.5

#### thickness

distance between the panel facings

#### 4 Requirements

#### 4.1 Fire behaviour

#### 4.1.1 Reaction to fire

When subject to regulatory requirements, prefabricated gypsum plasterboard panels shall be tested and classified in accordance with EN 13501-1.

Prefabricated gypsum plasterboard panels tested according to EN 13823 (SBI test) shall be mounted and fixed in accordance with Annex B or when the producer wishes to claim performance for a specific intended use, the mounting and fixing shall be representative of that intended use.

Prefabricated gypsum plasterboard panels tested according to EN ISO 11925-2 (Ignitability) shall be tested with surface attack only due to the fact that edge attack cannot occur in end use conditions.

#### 4.1.2 Fire resistance

NOTE Resistance to fire is a characteristic dependent on an assembled system and not of the product in isolation.