BRITISH STANDARD

BS EN
13915:2007

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

The European Standard EN 13915:2007 has the status of a British Standard

ICS 91.100.10

BSI
British Standards

National foreword

This British Standard is the UK implementation of EN 13915:2007.

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A list of organizations represented on this committee can be obtained on request to its secretary.

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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, prescriptions et méthodes d'essai

Gipsplatten-Wandbaufertigtafeln mit einem Kartonwabenkern - Begriffe, Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 9 August 2007.

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Foreword

This document (EN 13915:2007) 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of an identical text or by endorsement, at the latest by March 2008, and conflicting national standards shall be withdrawn at the latest by June 2009.

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.

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.

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Introduction

Figure 1 and Figure 2 show the relationship between this standard and the package of standards prepared to support the families of gypsum and ancillary products.

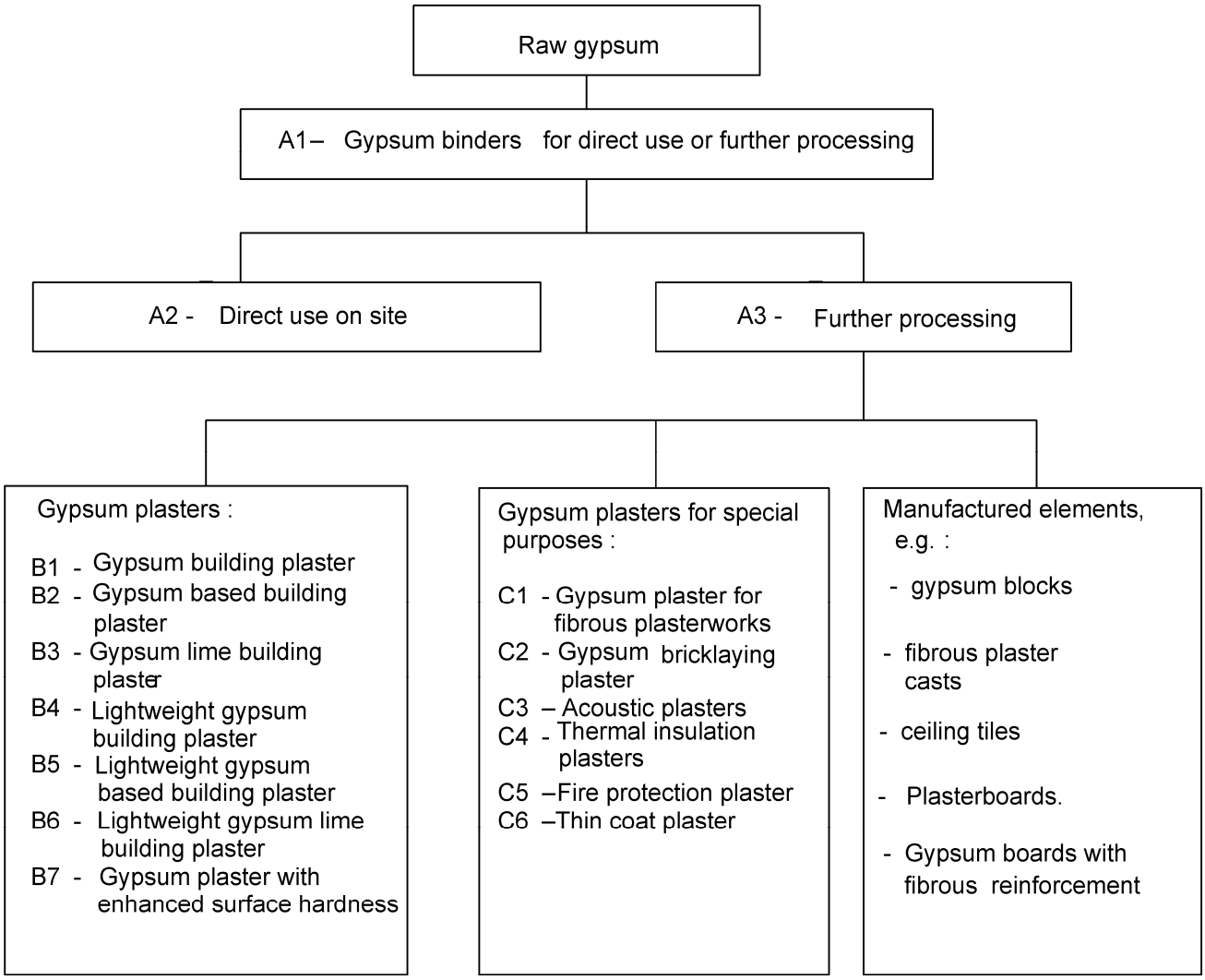


Figure 1 — Family of gypsum products

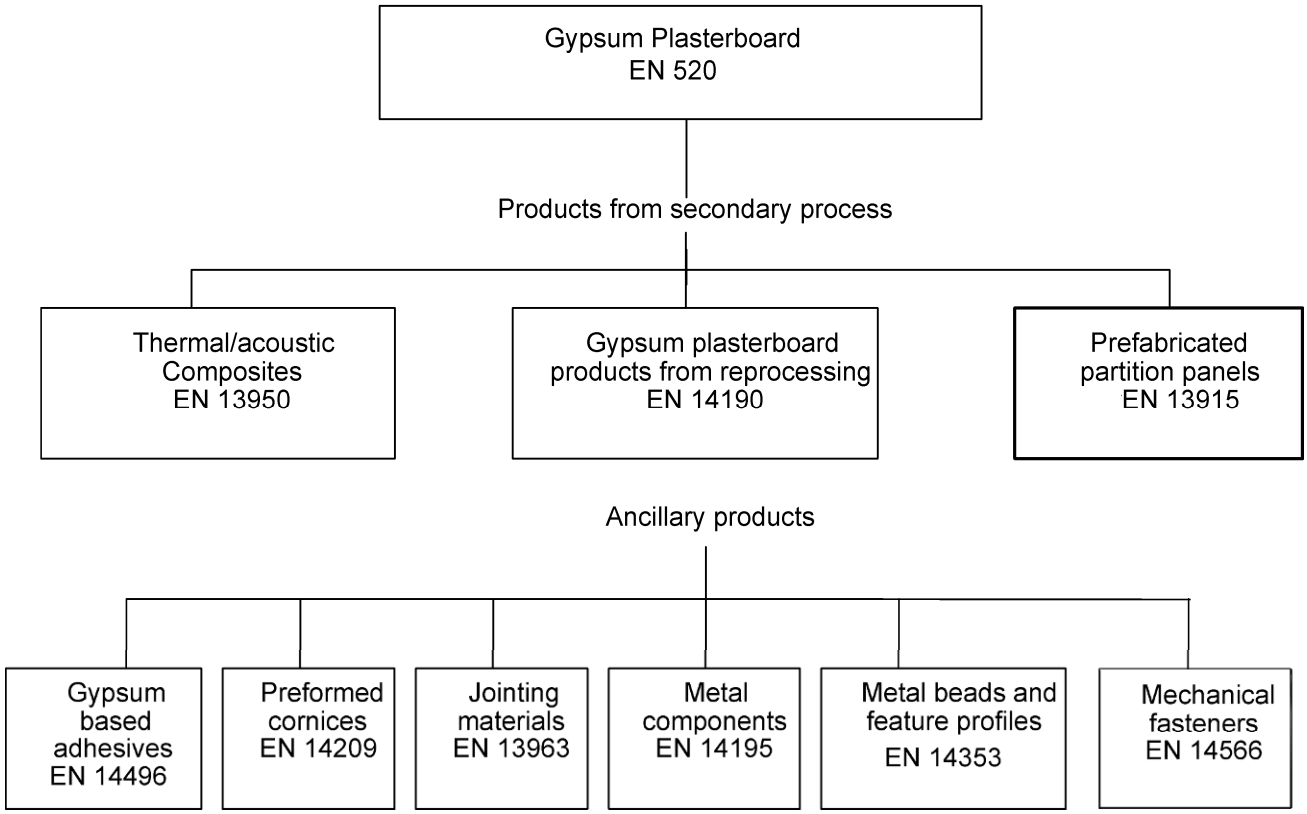


Figure 2 — Family of ancillary products

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 for the evaluation of conformity of the products to this document.

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 520, *Gypsum plasterboards — Definitions, requirements and test methods*

EN 12524, *Building materials and products — Hygrothermal properties — Tabulated design values*

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 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using 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 13823, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*

EN 13963, *Jointing materials for gypsum plasterboards — Definitions, requirements and test methods*

EN ISO 140-3, *Acoustics — Measurement 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 9001:2000, *Quality management systems — Requirements (ISO 9001:2000)*

EN ISO 11925-2, *Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Part 2: Single-flame source test (ISO 11925-2:2002)*

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

ISO 7892, *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 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.

When required, the fire resistance of a system including prefabricated gypsum plasterboard panels shall be classified according to EN 13501-2.

4.2 Impact resistance

NOTE Impact resistance is a characteristic dependent on an assembled system and not of the product in isolation.

When the manufacturer wishes to declare the impact resistance performance of a system that includes prefabricated gypsum plasterboard panels, the performance of the system shall be determined in accordance with ISO 7892.

4.3 Water vapour permeability (expressed as water vapour resistance factor)

Water vapour permeability is not a characteristic of heterogeneous products like panels therefore water vapour resistance is used instead.

When the manufacturer wishes to declare a performance for moisture diffusion control, tabulated design values of water vapour resistance for gypsum plasterboards given in EN 12524 may be used for calculation.

Alternatively, the water vapour resistance factor shall be determined in accordance with EN ISO 12572.

4.4 Flexural strength (expressed as deflection under a defined load)

When determined in accordance with the test method described in 5.4, the deflection shall not exceed the values given in Table 1.

Table 1 — Deflection values

Panel thickness mm	**Deflection (max)** mm
$50 < e < 60$	37,5
$60 \leq e < 70$	30
$70 \leq e \leq 80$	15

4.5 Direct airborne sound insulation

NOTE Direct airborne sound insulation is a characteristic dependent on the assembled system and not of the product in isolation.

When the manufacturer wishes to declare the performance for the direct airborne sound insulation of an installed system including prefabricated gypsum plasterboard panels, the performance of the system shall be determined according to EN ISO 140-3 or EN ISO 717-1 as appropriate.

4.6 Acoustic absorption

NOTE Acoustic absorption is a characteristic dependent on an assembled system and not of the product in isolation.

When the manufacturer wishes to declare the performance of prefabricated gypsum plasterboard panels to be used for acoustic conditioning, the performance of acoustic absorption shall be determined according to EN ISO 354.

4.7 Thermal resistance (expressed as thermal conductivity)

When the manufacturer wishes to claim the intended use of panels is to contribute to thermal resistance in building construction works (walls, partitions, etc.), he/she shall use for calculation, the design values of thermal resistance for gypsum plasterboards given in EN 12524 or the thermal conductivity shall be determined according to EN 12664.

4.8 Dimensions and tolerances

The usual dimensions of panels are:

— **widths:** 1 200 mm, 900 mm and 600 mm:

When determined by the method described in clause 5.2.1 the tolerance on each panel shall be: $\begin{cases} 0 \\ -5\,\text{mm} \end{cases}$.

— **lengths:** Up to 3 600 mm:

When determined by the method described in clause 5.2.2 the tolerance on each panel shall be: $\begin{cases} 0 \\ -5\,\text{mm} \end{cases}$.

— **thicknesses**: panels are normally available in thicknesses of 46 mm to 80 mm:

NOTE Preferred thicknesses are 46 mm, 50 mm, 57 mm, 60 mm, 63 mm and 72 mm.

When determined by the method described in 5.2.3 the tolerance for specified thickness on each panel shall be: $\pm$ 1 mm.

4.9 Alignment

When determined by the method described in 5.3 the measured deviation from one gypsum plasterboard facing the other shall not exceed:

— 5 mm on the length;

— 3 mm across the width.

4.10 Core adhesion

When determined by the test method described in 5.5, the adhesion shall meet the following values:

— average value higher than 0,01 MPa;

— individual values higher than 6×10^{-3} MPa.

4.11 Release of dangerous substance

Materials used in products shall not release any dangerous substances in excess of the maximum permitted levels specified in a relevant European Standard for the material or permitted in the national regulations of the member state of destination.

5 Test methods

5.1 Sampling

Testing shall require three panels of each thickness. Whole panels are used for 5.2 and 5.3.. For testing flexural strength (5.4) specimens shall be cut out from three different panels, for testing core adhesion (5.5) three specimens shall be cut out from one single panel.

5.2 Dimensional measurements

5.2.1 Width

5.2.1.1 Principle

The distance between the extremities of the shorter linear dimension of the panel facing shall be measured.

5.2.1.2 Apparatus

A metal rule or a metal tape permitting readings to 1 mm.

5.2.1.3 Procedure

Take two measurements to the nearest 1 mm on each facing of each panel (see Figure 3 a)).

5.2.1.4 Expression of results

The width of each panel is determined by the average of the four measurements expressed in millimetres.

5.2.2 Length

5.2.2.1 Principle

The distance between the ends of the longer linear dimension of the panel facing shall be measured on each face.

5.2.2.2 Apparatus

A metal rule or a metal tape permitting readings to 1 mm.

5.2.2.3 Procedure

Take two measurements to the nearest 1 mm on each facing of each panel (see Figure 3 b)).

5.2.2.4 Expression of results

The length of each panel is determined by the average of the four measurements expressed in millimetres.

5.2.3 Thickness

5.2.3.1 Principle

The distance between the two faces of the panel shall be measured.

5.2.3.2 Apparatus

A calliper with an anvil diameter not less than 10 mm, permitting readings to 0,1 mm.

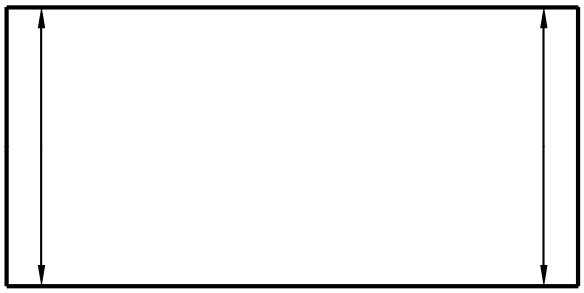
5.2.3.3 Procedure

Take six measurements to the nearest 0,1 mm across one end equally spaced across the width and not less than 25 mm from an end or 100 m from an edge (see Figure 3 c)) for each panel.

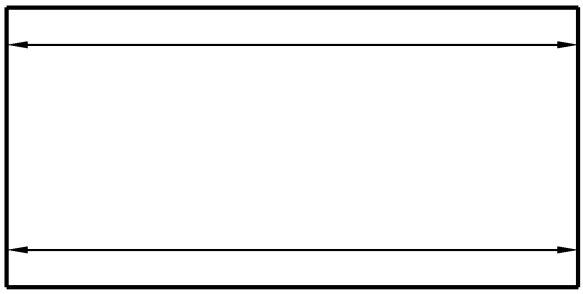
5.2.3.4 Expression of results

The thickness of each panel is determined by the average of the six measurements expressed in millimetres.

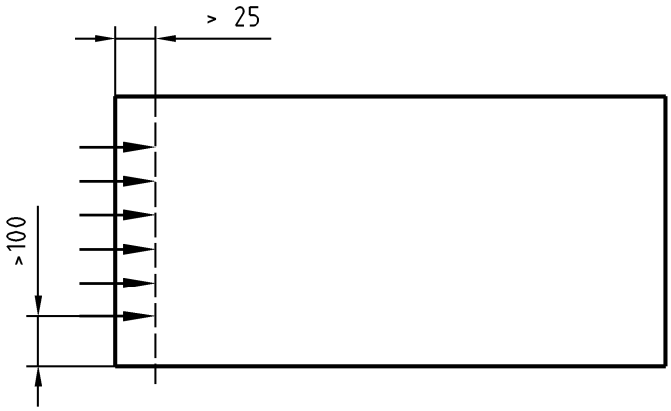
Dimensions in millimetres



a) Measurement of width



b) Measurement of length



c) Measurement of thickness

Figure 3 — Dimensional measurements

5.3 Determination of alignment

5.3.1 Principle

The distance between the edges of the gypsum plasterboards shall be measured.

5.3.2 Apparatus

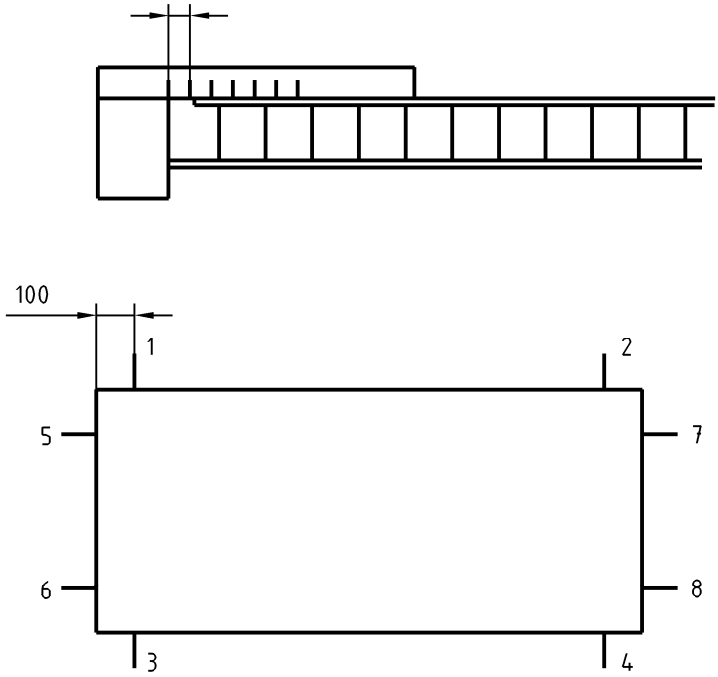
a) flat surface;

b) metal rule or a metal tape permitting readings to 1 mm.

5.3.3 Procedure

Lay the panel on a flat surface. Measure the distance between the edges of the gypsum plasterboards as shown in Figure 4. Turn over the panel when necessary (8 measurements in total).

Dimensions in millimetres



Key

1 through 8 Measurement positions each at 100 mm from the edge

Figure 4 — Determination of alignment

5.3.4 Expression of results

Take the largest measurement on the cut edges (length deviation) and the largest measurement on the paper covered edges (width deviation) as shown in Figure 4.

Compare each measurement (expressed in millimetres) to the dimensions given in 4.8.

5.4 Determination of deflection

5.4.1 Principle

The deflection of the specimen shall be measured under a flexural load (see Figure 5).

5.4.2 Apparatus

Testing device allowing the loads and loading rates described below to be achieved (see Figure 5).

5.4.3 Procedure

The 2 100 mm long specimen is cut out from the panel as shown in Figure 5.

The specimen is then installed on the horizontal supports spaced at 2 000 mm.

The following load is applied continuously at a rate of (170 $\pm$ 10) N/s:

a) 1 200 mm panels:

— thickness > 50 mm: applied load 2 500 N;

— thickness $\leq$ 50 mm: applied load 1 875 N;

b) 900 mm panels: applied load 1 875 N;

c) 600 mm panels: applied load 1 250 N;

d) for other widths, applied load 2 083 N/m width.

Read the deflection in the centre of the loaded panel when the required load is reached.

5.4.4 Expression of results

Calculate the average deflection of the three specimens and compare it with the value stated in Table1.

5.5 Determination of the core adhesion

5.5.1 Principle

The bonding strength between the core and the gypsum plasterboards shall be measured.

5.5.2 Apparatus

Testing device allowing a loading rates of 3 kN/min (see Figure 5).

5.5.3 Procedure

Cut out the 230 mm $\times$ 230 mm specimens from one panel (see Figure 5). In the case of discontinuous core panels, the specimen shall include a complete section of core.

Introduce the boards of the specimen in clamps. Reduce the testing surface to 200 mm $\times$ 200 mm by removing the core from the perimeter.

Apply the tensile load continuously at the rate of 3 kN/min until rupture. Record the maximum load.

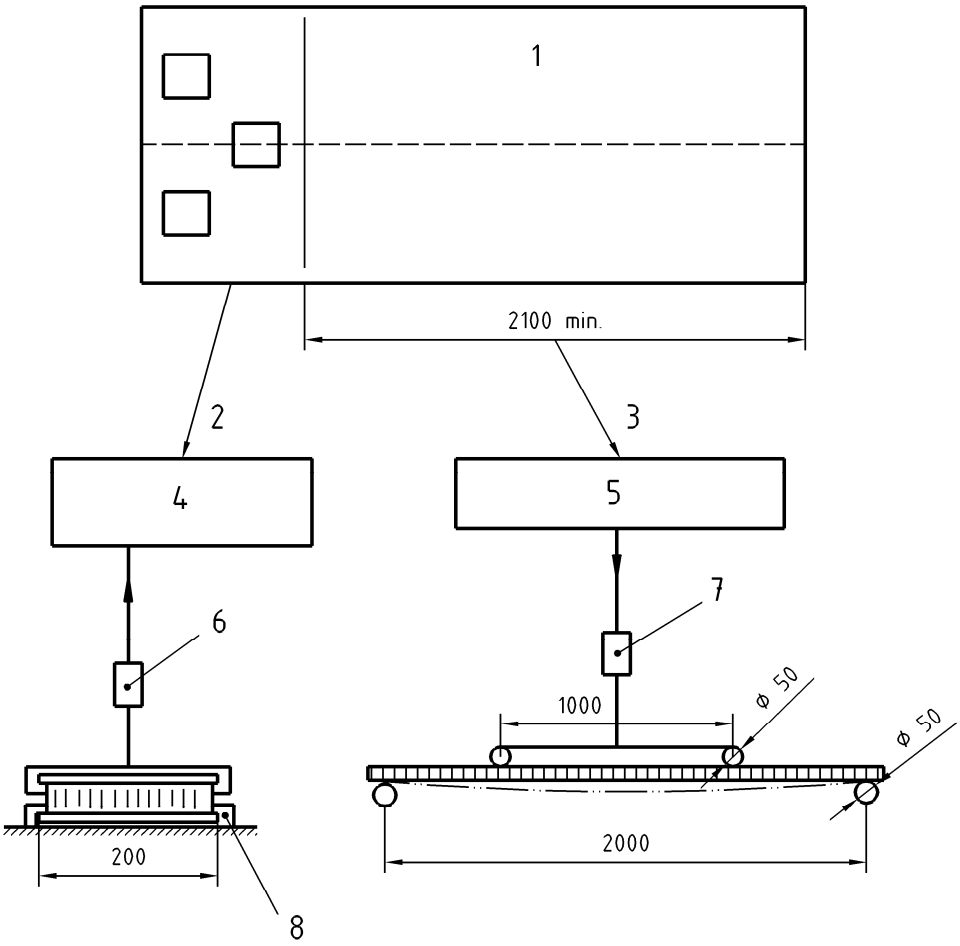
Repeat for the other two specimens.

5.5.4 Expression of results

Calculate the average adhesion of the three specimens and compare it to the values stated in 4.9.

Divide the maximum load in Newtons for each specimen by the testing surface (4×10^4 mm^2) to give the core adhesion in MPa.

Dimensions in millimetres



Key

1 One panel
2 3 specimens 230 mm × 230 mm
3 One specimen
4 Adhesion test specimen
5 Flexural strength test specimen
6 Dynamometer
7 Dynamometer
8 Fixed clamp

Figure 5 — Determination of flexural strength and core adhesion

5.6 Determination of surface hardness of the panel

5.6.1 Principle

The damage caused by the impact of a small steel sphere shall be measured.

5.6.2 Apparatus

a) 50 mm diameter steel sphere of 510 g ± 10 g mass;

b) rigid, flat and horizontal table to support the whole surface of the specimen with an inertia enough to withstand the impact (e.g. steel table 20 mm thick);

c) carbon paper;

d) graduated rule with 0,5 mm accuracy;

e) support for the steel sphere.

5.6.3 Procedure

5.6.3.1 Preparation of specimen

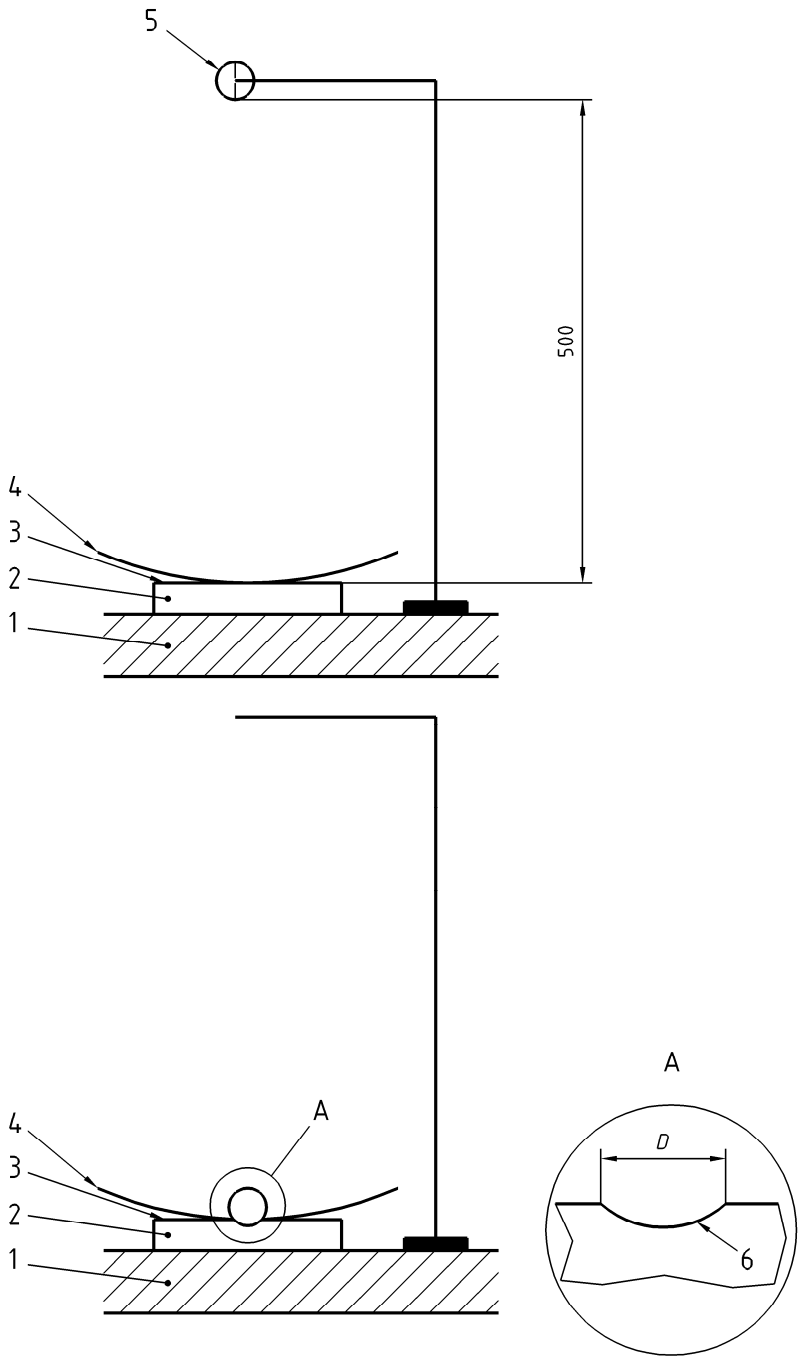
Cut one specimen measuring 300 mm × 400 mm from one board. Condition the specimen to constant mass[1)].

5.6.3.2 Testing

Place the specimen, face up, on the rigid table and cover it with the carbon paper (see Figure 6). Then place the sphere between the clamps of the support at 500 mm ± 5 mm high from the gypsum plasterboard (see Figure 6). Let the sphere fall down the specimen (see Figure 6). Then take off the carbon paper and measure to the nearest mm, the diameter of the coloured impact onto the gypsum plasterboard (see Figure 6).

1) Constant mass is defined as two successive weighings 24 h apart, differing by less than 0,1 %.

Dimensions in millimetres



Key

1 Rigid table
2 Specimen (board)
3 Face of the board
4 Carbon paper
5 Steel sphere
6 Coloured impact

Figure 6 — Surface hardness test procedure

Repeat this test three times on the same specimen.

5.6.4 Expression of results

Calculate the mean of the three measured values to the nearest mm.

The surface hardness of the panel is characterised by this mean value.

6 Evaluation of conformity

6.1 General

The compliance of prefabricated gypsum plasterboard panels with the requirements of this standard and with the stated values (including classes) shall be demonstrated by:

— initial Type Testing (ITT);

— factory Production Control by the producer (FPC).

For the purposes of testing, prefabricated gypsum plasterboard panels may be grouped into families, where it is considered that the selected property is common to all panels within that family.

The decision on those products or properties which fall within a family shall be made by the producer.

6.2 Type testing

6.2.1 General

Sampling and testing shall be in accordance with clause 5.

The results of all type tests shall be recorded and held by the producer for at least 5 years.

6.2.2 Initial type testing

Initial type testing shall be performed to show conformity with this standard.

Initial type testing shall be performed at the beginning of the production of a new prefabricated gypsum plasterboard panel type (unless it is a member of a family previously tested) or at the beginning of a new method of production (where this may significantly affect the stated properties).

Tests previously performed in accordance with the provisions of this standard (same product, same characteristic(s), test method, sampling procedure, system of attestation of conformity, etc.) may be taken into account.

All product characteristics in clause 4 applicable to the intended uses shall be subject to initial type testing, with the following exceptions:

— release of dangerous substances may be assessed indirectly by controlling the content of the substance concerned;

— when designed values are used.

6.2.3 Further type testing

Whenever a change occurs in the prefabricated gypsum plasterboard panel design, the raw material or supplier of the components, or the production process (subject to the definition of a family), which would change significantly one or more of the characteristics, the type tests shall be repeated for the appropriate characteristic(s).

Sampling and testing shall be in accordance with clause 5.

The results of all type tests shall be recorded and held by the producer for at least 5 years.

6.3 Factory production control (FPC)

6.3.1 General

The producer shall establish, document and maintain an FPC system to ensure that the products placed on the market conform to the stated performance characteristics. The FPC system shall consist of procedures, regular inspections and tests and/or assessments and the use of the results to control raw and other incoming materials or components, equipment, the production process and the product.

An FPC system conforming with the requirements of EN ISO 9001, and made specific to the requirements of this standard, shall be considered to satisfy the above requirements.

The results of inspections, tests or assessments requiring action shall be recorded, as shall any action taken. The action to be taken when control values or criteria are not met shall be recorded and retained for the period specified in the producer’s FPC procedures.

6.3.2 Personnel

The responsibility, authority and the relationship between personnel that manages, performs or verifies work affecting product conformity, shall be defined. This applies in particular to personnel who need to initiate actions preventing product non-conformities from occurring, actions in case of non-conformities and to identify and register product conformity problems. Personnel performing work affecting product conformity shall be competent on the basis of appropriate education, training, skills and experience for which records shall be maintained.

6.3.3 Equipment

a) Testing

All weighing, measuring and testing equipment shall be calibrated and regularly inspected according to documented procedures, frequencies and criteria.

b) Manufacturing

All equipment used in the manufacturing process shall be regularly inspected and maintained to ensure use, wear or failure does not cause inconsistency in the manufacturing process. Inspections and maintenance shall be carried out and recorded in accordance with the producer’s written procedures and the records retained for the period defined in the producer's FPC procedures.

6.3.4 Raw materials and components

The specifications of all incoming raw materials and components shall be documented, as shall the inspection scheme for ensuring their conformity.

6.3.5 Product testing and evaluation

The producer shall establish procedures to ensure that the stated values of all product characteristics are maintained. Compliance with EN ISO 9001:2000, 7.5.1 and 7.5.2 shall be deemed to satisfy the requirements of this clause.

6.3.6 Traceability and marking

Individual products, product batches or packages shall be identifiable and traceable with regard to their production origin. The producer shall have written procedures ensuring that processes related to affixing traceability codes and/or markings are inspected regularly. Compliance with EN ISO 9001:2000, 7.5.3 shall be deemed to satisfy the requirements of this clause.

6.3.7 Non-conforming products

The producer shall have written procedures which specify how non-conforming products shall be dealt with. Any such events shall be recorded as they occur and these records shall be kept for the period defined in the producer's written procedures.

6.3.8 Corrective action

The producer shall have documented procedures that instigate action to eliminate the cause of non-conformities in order to prevent recurrence. Compliance with EN ISO 9001:2000, 8.5.2 shall be deemed to satisfy the requirements of this clause.

6.3.9 Other test methods

For factory production control, test methods other than those specified for ITT may be used providing they provide sufficient confidence in the conformity of the product with this standard.

7 Designation of the prefabricated gypsum plasterboard panels

The designation of prefabricated gypsum plasterboard panels shall include in the following order:

— wording: "prefabricated gypsum plasterboard panel";

— reference to this European standard;

— nominal dimensions of the panel in millimetres in the order:

  — thickness;

  — length;

  — width;

completed with type and thickness of plasterboard used, according to EN 520.

EXAMPLES OF DESIGNATION:

prefabricated gypsum plasterboard panel EN 13915 - 72/2500/1200 - Type A-9,5;

prefabricated gypsum plasterboard panel EN 13915 – 50/2600/1200 - Type H2-12,5.

8 Marking, labelling and packaging

Prefabricated gypsum plasterboard panels complying with this European Standard shall be clearly marked on the panel or on the accompanying label or on the packaging or on the accompanying commercial document (e.g. delivery note) with the following items:

a) reference to this European Standard;

b) name, trademark or other means of identification of the producer of the plasterboard panel;

c) date of production (this may be in coded format);

d) means of identifying the panels and relating them to their designation as defined in clause 7.

NOTE For CE marking purposes, only the marking and labelling requirements of ZA.3 are applicable.

Annex A
(informative)

Sampling procedure for testing

A.1 General

The required number of panels to determine the compliance with specification should be sampled from a delivery consignment of panels.

The appropriate consignment size shall be agreed between representatives of any involved parties who should have the opportunity to be present at the time of sampling.

A.2 Sampling procedure

A.2.1 General

The choice of the method of sampling should be as defined in A.2.2 and A.2.3 as appropriate.

A.2.2 Random sampling[2)]

Whenever practically possible, the random sampling method should be used where every panel in the consignment has an equal chance of being selected for the sample.

Three panels of each type should be selected from positions throughout the consignment without any consideration given to the condition or quality of the selected cornices.

A.2.3 Representative sampling

A.2.3.1 General

When random sampling is impracticable or not convenient, e.g. when the panels form a large stack or stacks with ready access to only a limited number of panels, a representative sampling procedure should be used.

A.2.3.2 Sampling from a stack

The consignment should be divided into at least three real or imaginary sections, each of a similar size. One panel should be selected at random from within each section in order to give the required number of samples as indicated in 5.1.

NOTE It will be necessary to remove some sections of the stack or stacks in order to gain access to panels within the body of such stacks when taking samples.

2) In practice, random sampling is normally only convenient either when the panels forming the consignment are being moved in a loose (unpacked) form from one place to another or when they have been split into a large number of small stacks awaiting installation.

A.2.3.3 Sampling from a consignment formed of banded or wrapped packs

At least three packs should be selected at random from the consignment. The packaging around each of the selected packs should be removed and one panel should be sampled at random from within each pack in order to give the required number of samples without any consideration given to the condition or quality of the selected panels.

Annex B
(normative)

Mounting and fixing in the test according to EN 13823 (SBI test)

B.1 General

The prefabricated gypsum plasterboard panels shall be mounted and fixed using the following method. Results obtained for a given thickness of plasterboard shall apply for all panels made with thicker plasterboards.

The prefabricated gypsum plasterboard panels shall be free standing supported top and bottom by wooden battens. A vertical joint shall be formed using two horizontal wooden pegs to join panels together according to Figure B.1 below.

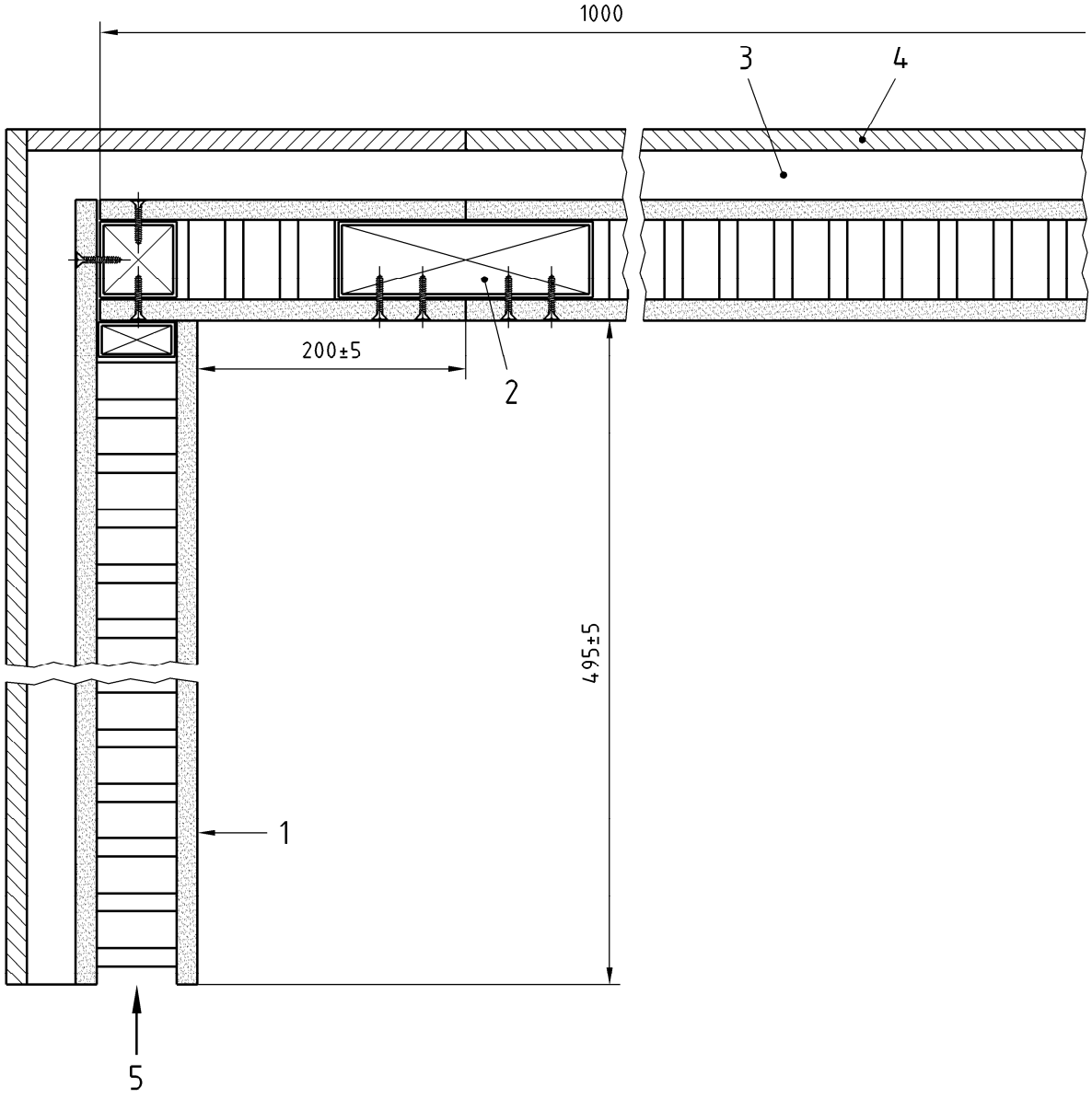
The mechanical fixings shall be screws, which shall be fixed through the thickness of the boards into the wooden pegs.

Vertical joints shall be included positioned as shown in Figure B.1 and shall be treated with jointing materials complying with EN 13963.

The corner shall be formed by inserting a full height batten into the long wing panel. Three pegs (one at the very top of the specimen) are then fixed by screws through the plasterboard onto the batten, and the short wing panel is then located onto the pegs.

The test specimen shall be positioned in the SBI test apparatus so that a 40 mm ± 5 mm air gap is left between the test specimen and the calcium silicate board.

Dimensions in millimetres



Key

1 Gypsum plasterboard
2 Timber batten
3 Air gap
4 Calcium silicate base
5 (to amend for prefabricated panels)

Figure B.1 — Example of mounting for prefabricated panels

Annex ZA
(informative)

Clauses of this European Standard addressing essential requirements or other provisions of EU Directives

ZA.1 Scope and relevant characteristics

This European Standard has been prepared under Mandate M/106 "Gypsum products" given to CEN by the European Commission and the European Free Trade Association.

The clauses of this European Standard, shown in the Table ZA.1 below, meet the requirements of the Mandate given under EU Construction Products Directive (89/106/EEC).

Compliance with these clauses confers a presumption of fitness of the construction products covered by this annex for their intended uses indicated herein; reference shall be made to the information accompanying the CE marking.

WARNING — Other requirements and other EU Directives, not affecting the fitness for intended use(s), may be applicable to the construction products falling within the scope of this European Standard.

NOTE 1 In addition to any specific clauses relating to dangerous substances contained in this standard, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the EU Construction Products Directive, these requirements need also to be complied with, when and where they apply.

NOTE 2 An informative database of European and national provisions on dangerous substances is available at the Construction web site on EUROPA (access through: http://ec.europa.eu/enterprise/construction/internal/dangsub/dangmain.htm)

This annex has the same scope as Clause 1 of this standard with regard to the products covered. It establishes the conditions for the CE marking of prefabricated gypsum plasterboard panels intended for the use indicated below and shows the relevant clauses applicable (see Table ZA.1).

Table ZA.1 — Scope and requirement clauses relevant for CE marking

Product: **Prefabricated gypsum plasterboard panels** **Intended use(s):** **General building construction (see Clause 1)**			
Essential characteristics from the Mandate	**Requirement Clause in this European standard**	**Mandated level and/or class**	**Notes**
Reaction to fire (for exposed situations)	4.1.1	A.1 to F	A.1 to F
Water vapour permeability (for moisture diffusion control)	4.3	-	dimensionless
Flexural strength	4.4	-	Expressed as deflection in mm Threshold value
* Impact resistance (in end use conditions)	4.2		KJ Performance declared is for the system of which the product is a part.
* Direct airborne sound insulation (in end use conditions)	4.5	-	DB Performance declared is for the system of which the product is a part.
* Acoustic absorption (in end use conditions)	4.6	-	Dimensionless Performance declared is for the system of which the product is a part.
Thermal resistance	4.7	-	Expressed as thermal conductivity in W/(m·K)
* These characteristics are system dependent and will be provided in producer's literature based upon intended use.			

The requirements on a certain characteristic does not apply in those Member States where there are no regulatory requirements on that characteristic for the intended use of the product. In this case, producers placing their products on the market of these Member States are not obliged to determine nor to declare the performance of their products with regard to this characteristic and the option "No Performance Determined" (NPD) in the information accompanying the CE marking (see ZA.3) may be used.

The NPD option may not be used, however, where the characteristic is subject to a threshold level.

ZA.2 Attestation and declaration of conformity of prefabricated gypsum plasterboard panels

The system(s) of attestation of conformity of prefabricated gypsum plasterboard panels in accordance with the Decision of the Commission 95/467/EC amended by the Decisions 01/596/EC and 02/592/EC and as given in - Annex III of the Mandate M/106 "Gypsum products" is shown in Tables ZA.2 for the intended uses and relevant level(s) or class(es).

Reaction to fire performance is not susceptible to change during the production process for a given panel type and therefore, only Attestation of Conformity systems 3 and 4 are applicable.

Table ZA.2 — Systems of attestation of conformity (AoC)

Product(s)	Intended use(s)	Level(s) or classe(s) (Reaction to fire of incorporated materials)	Attestation of conformity system(s)
Prefabricated gypsum plasterboard panels	In walls, partitions (or linings thereof) subject to reaction to fire requirements	A1 – A2 - B - C	3
		D - E – F	4
	For situations and uses not mentioned above		4
System 3: See Directive 89/106/EEC (CPD) Annex III.2.(ii), Second possibility. System 4: See Directive 89/106/EEC (CPD) Annex III.2.(ii), Third possibility.			

The assignation of tasks between the producer and the Approved Body is shown in Tables ZA.3 a) and ZA.3 b) for the indicated intended uses. Where more than one intended use applies for the product, the tables should be read in conjunction.

Table ZA.3 a) — Assignment of evaluation of conformity tasks for prefabricated gypsum plasterboard panels intended to be used where they are subject to reaction to fire requirements: systems 3 and 4

Tasks		Content of the task		Clauses of this standard to apply
Tasks under the responsibility of the producer	Factory production control (FPC)	Parameters related to all relevant characteristics of Table ZA.1	Reaction to fire is ensured by controlling: - the plasterboard used complies with its specification from EN 520.	6.3
			Water vapour permeability [a]	
			Flexural strength	
			Thermal resistance [a]	
	Initial type testing (ITT) by the producer	All other characteristics from Table ZA.1 not tested by the notified body"	Water vapour permeability [a]	6.2.2
			Flexural strength	
			Thermal resistance [a]	
	Initial type testing (ITT) [b] by the Notified Body	Euroclass characteristics for Reaction to fire		
[a] Testing may not be necessary if design value is used. [b] System 3 products only.				

Table ZA.3 b) — Assignment of evaluation of conformity tasks for prefabricated gypsum plasterboard panels intended to be used in situations not mentioned above: system 4

Tasks		Content of the task		Clauses of this standard to apply
Tasks under the responsibility of the producer	Factory production control (FPC)	As Table ZA.1	Water vapour permeability [a]	6.3
			Flexural strength	
			Thermal resistance [a]	
	Initial type testing (ITT) by the producer	As Table ZA.1	Water vapour permeability [a]	6.2.2
			Flexural strength	
			Thermal resistance [a]	
[a] Not necessary if design value is used.				

(In case of products under system 3): When compliance with the conditions of this annex is achieved, the producer or his authorised representative established in the EEA, shall prepare and retain a declaration of conformity (EC declaration of conformity) which entitles the producer to affix the CE marking. This declaration shall include:

— name and address of the producer, or his authorised representative established in the EEA;

— description of the product (type, identification, intended use, etc.) and a copy of the information accompanying the CE marking;

— provisions to which the product conforms (i.e. Annex ZA of this document);

— particular conditions applicable to the use of the product (e.g. provisions for use under certain conditions);

— name and address of the notified laboratory;

— name of, and position held by, the person empowered to sign the declaration on behalf of the producer or of his authorised representative.

(In case of products under system 4): When compliance with this annex is achieved, the producer or his agent established in the EEA shall prepare and retain a declaration of conformity (EC Declaration of conformity), which entitles the producer to affix the CE marking. This declaration shall include:

— name and address of the producer, or his authorised representative established in the EEA;

— description of the product (type, identification, intended use, etc.) and a copy of the information accompanying the CE marking;

— provisions to which the product conforms (i.e. Annex ZA of this document);

— particular conditions applicable to the use of the product (e.g. provisions for use under certain conditions);

— name of, and position held by, the person empowered to sign the declaration on behalf of the producer or of his authorised representative.

NOTE Duplication of information between the declaration and certificate should be avoided. To avoid duplication of information, cross-reference between documents may be made when one contains more information than the other.

The above mentioned declaration and certificate shall be presented in the official language or languages of the Member State of the EU in which the product is to be used.

ZA.3 CE marking and labelling

The producer or his authorised representative established within the EEA is responsible for the affixing of the CE marking. The CE marking symbol to affix shall be in accordance with Directive 93/68/EC and shall be shown on the accompanying label, the packaging or on the accompanying commercial documents (e.g. a delivery note). The following information shall accompany the CE marking symbol:

— name or identifying mark and registered address of the producer;

— last two digits of the year in which the marking is affixed;

— reference to this European Standard;

— description of the product: generic name, material, dimensions, and intended use;

— information on those relevant essential characteristics listed in Table ZA.1 which are to be declared presented as:

  — declared values and, where relevant, level or class (including "pass" for pass/fail requirements where necessary) to declare for each essential characteristic as indicated in "NOTES" in Table ZA.1;

  — "no performance determined" for characteristics where this is relevant;

  — as an alternative, a standard designation which shows some or all of the relevant characteristics (where the designation covers only some characteristics, it will need to be supplemented with declared values for other characteristic as above).

The "no performance determined" (NPD) option may not be used when the characteristic is subject to a threshold level. Otherwise, the NPD option may be used when and where the characteristic, for a given intended use, is not subject to regulatory requirements in the Member State of destination. The CE conformity marking shall consist of the initials "CE" taking the following form:

Figure ZA.1 — Example of CE marking

— if the CE marking is reduced or enlarged the proportions given in the above graduated drawing must be respected;

— various components of the CE marking must have substantially the same vertical dimension, which may not be less than 5 mm.

The entire marking shall be given on the accompanying label, or on the packaging or on the accompanying commercial documents. An example is given below:

CE	*CE conformity marking, consisting of the "CE"-symbol given in directive 93/68/EEC*
AnyCo Ltd **PO Box 21, B-1050**	*Name or identifying mark of the producer and its registered address*
07	*The last two digits of the year in which the CE marking was affixed*
EN 13915	*Number of this European Standard*
	Information on regulated characteristics
Reaction to fire: B-s1,d0 **Water vapour resistance factor: 10** **Thermal conductivity: 0,25 W/(m/K)** **Flexural strengh**	*For panels used in end use conditions not covered by Annex B the conditions under which the test was carried out must be stated.*
Airborne sound insulation: **Impact resistance:** **Acoustic absorption:**	See producer's literature

Figure ZA.2 — Example of CE marking information

In addition to any specific information relating to dangerous substances shown above, the product should also be accompanied, when and where required and in the appropriate form, by documentation listing any other legislation on dangerous substances for which compliance is claimed, together with any information required by that legislation.

NOTE European legislation without national derogations need not be mentioned.

When marking is carried out as described above, the full requirements for CE marking are complied with and no further documentation is necessary.

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