BRITISH STANDARD

BS EN
14496:2005

Gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards — Definitions, requirements and test methods

The European Standard EN 14496:2005 has the status of a British Standard

ICS 91.100.10; 91.120.10; 91.120.20

National foreword

This British Standard is the official English language version of EN 14496:2005.

The UK participation in its preparation was entrusted by Technical Committee B/544, Plastering, rendering, dry lining, to Subcommittee B/544/2, Gypsum based boards and ancillaries, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled "International Standards Correspondence Index", or by using the "Search" facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 24, an inside back cover and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 14 December 2005

Amendments issued since publication

Amd. No.	Date	Comments

ISBN 0 580 46924 7

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14496

November 2005

ICS 91.100.10; 91.120.10; 91.120.20

English Version

Gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards - Definitions, requirements and test methods

Adhésifs à base de plâtre pour complexes d'isolation thermique/acoustique en plaques de plâtre et isolant - Définitions, spécifications et méthodes d'essai

Kleber auf Gipsbasis für Verbundplatten zur Wärme- und Schalldämmung und Gipsplatten - Begriffe, Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 16 September 2004.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 14496:2005: E

Contents

page

Foreword 4

Introduction 5

1 Scope 7

2 Normative references 7

3 Requirements 7
3.1 Fire behaviour 7
3.1.1 Reaction to fire 7
3.1.2 Fire resistance 7
3.2 Bond strength 8
3.3 Dangerous substances 8
3.4 Calcium sulfate content 8
3.5 End of utilisation time 8

4 Test methods 8
4.1 General 8
4.2 Determination of the calcium sulfate content 8
4.3 Determination of the water/adhesive ratio 8
4.4 Preparation of the paste for the tests 8
4.5 Determination of the end of utilisation time 8
4.5.1 Principle 8
4.5.2 Apparatus 9
4.5.3 Procedure 9
4.5.4 Expression of results 9
4.6 Determination of the bond strength 9
4.6.1 Principle 9
4.6.2 Apparatus 10
4.6.3 Procedure 12
4.6.4 Expressions of results 13

5 Evaluation of conformity 13
5.1 General 13
5.2 Type testing 13
5.2.1 General 13
5.2.2 Initial type testing 13
5.2.3 Further type testing 14
5.3 Factory production control 14
5.3.1 General 14
5.3.2 Personnel 14
5.3.3 Equipment 14
5.3.4 Raw materials and components 14
5.3.5 Product testing and evaluation 15
5.3.6 Traceability and marking 15
5.3.7 Non-conforming products 15
5.3.8 Corrective action 15
5.3.9 Other test methods 15

6 Designation 15

7 Marking, labelling and packaging 15

Annex A (informative) Sampling procedure for testing 17
A.1 General 17
A.2 Sampling procedure 17

A.2.1 General 17
A.2.2 Random sampling 17
A.2.3 Representative sampling 17

Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU construction Products Directive 19
ZA.1 Scope and relevant characteristics 19
ZA.2 Attestation and declaration of conformity of products 20
ZA.3 CE marking and labelling 22

Bibliography 24

Foreword

This European Standard (EN 14496:2005) 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 May 2006, and conflicting national standards shall be withdrawn at the latest by August 2007.

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 EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

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

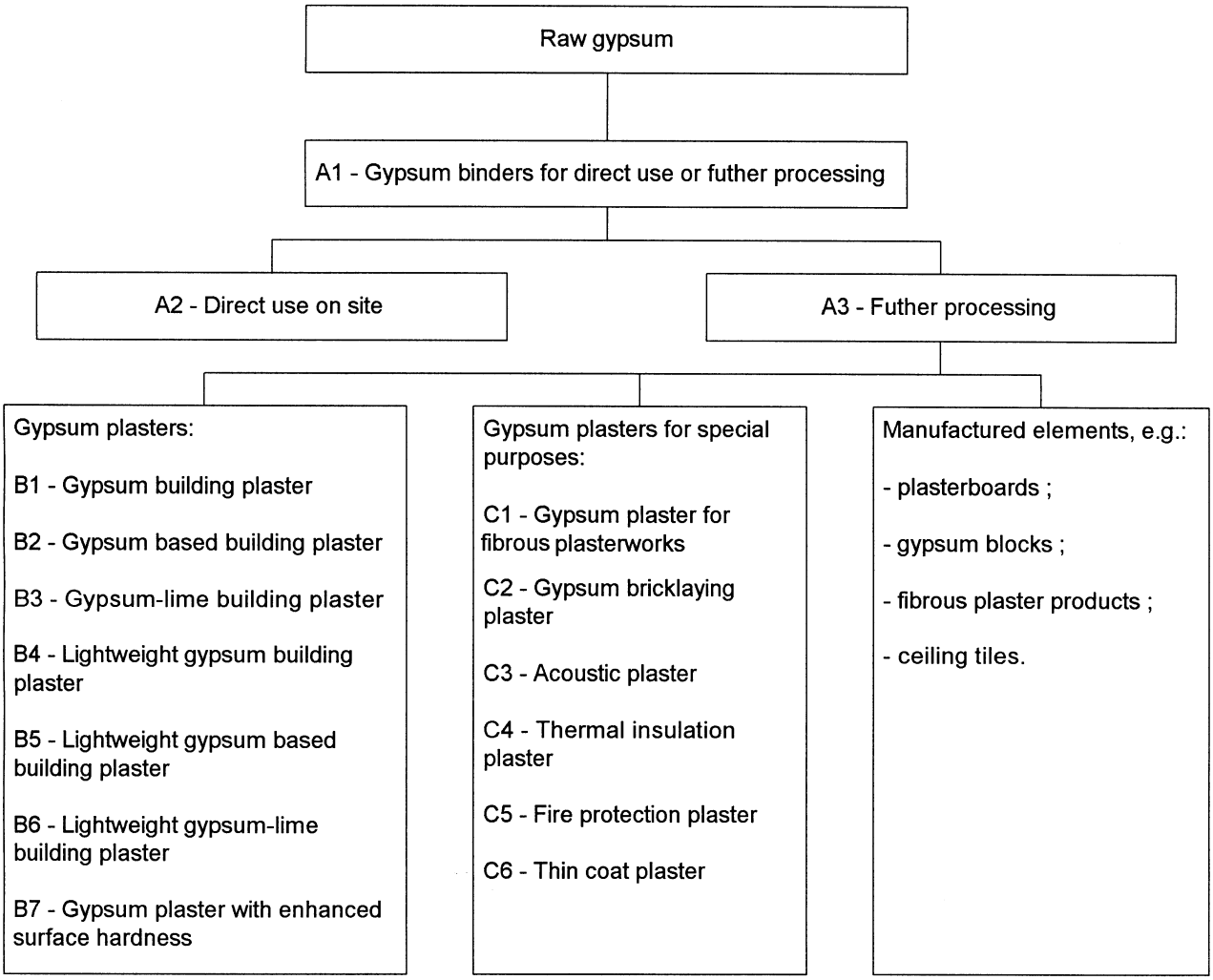


Diagram 1 — Family of gypsum products

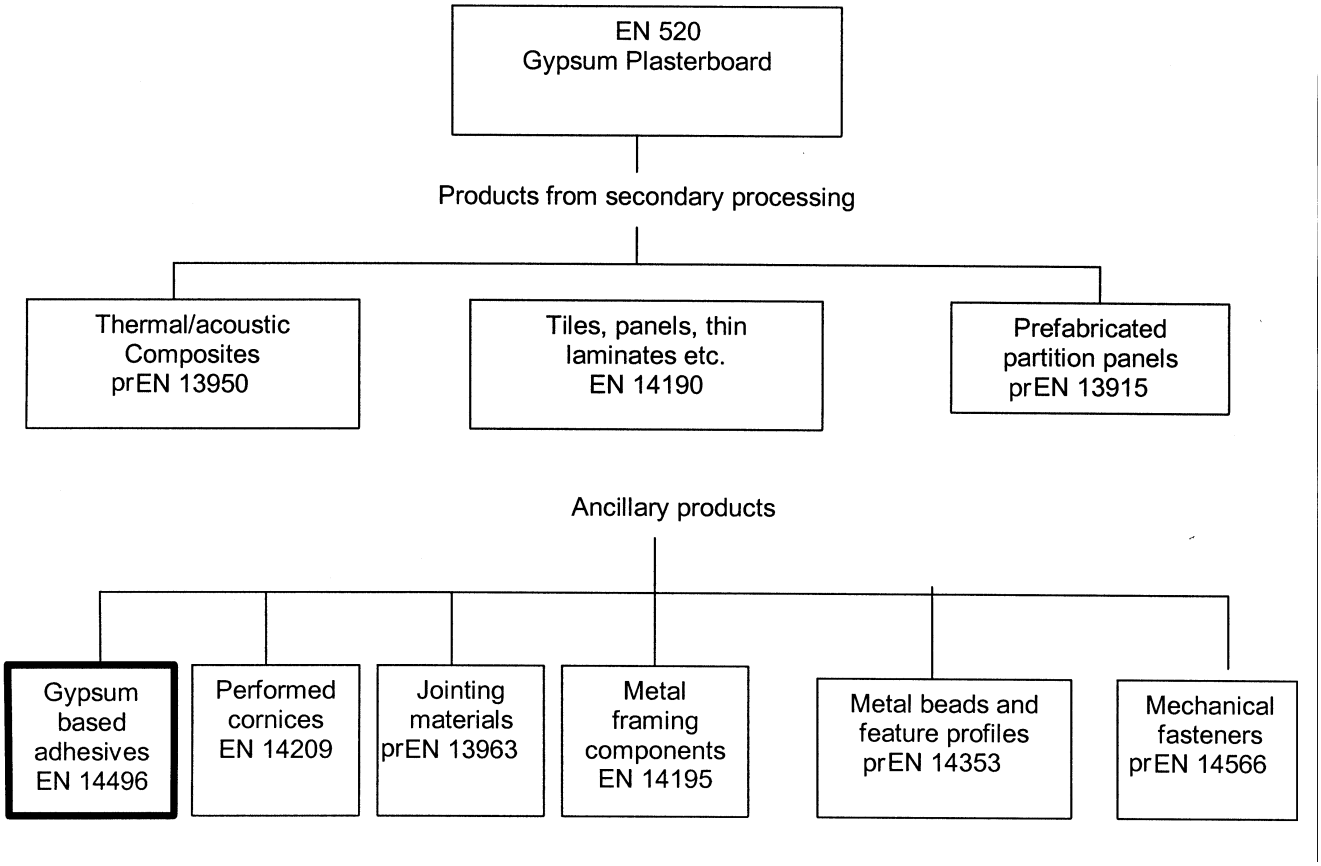


Diagram 2 — Family of ancillary products for use with gypsum products

1 Scope

This European standard specifies the characteristics and performances of gypsum based adhesives which are composed of gypsum plasters defined in EN 13279-1 and of additives. These adhesives are used for fixing to walls and partitions, gypsum plasterboard thermal/acoustic insulation composite panels according to EN 13950, gypsum plasterboard linings according to EN 520 and other suitable products as reprocessed boards according to EN 14190 and cornices according to EN 14209. They assist in the construction of systems which provide thermal and acoustic performance.

It covers the following performance characteristics: reaction to fire, fire resistance and bond strength to be measured according to the corresponding European test methods.

It provides for the evaluation of conformity of the product to this standard.

This standard covers also additional technical characteristics that are of importance for the use and acceptance of the product by the construction Industry and the reference tests for these characteristics.

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 196-1:1994, *Methods of testing cement — Determination of strength*

EN 13279-2:2004, *Gypsum and gypsum plasters — Part 2 : Test methods*

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 13823, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*

3 Requirements

3.1 Fire behaviour

3.1.1 Reaction to fire

Gypsum building plaster is the main component of gypsum based adhesives. Therefore, gypsum based adhesives are classified A.1 (no contribution to fire) without testing when they contain less than 1 % by weight or volume (whichever is the more onerous) of organic material (Commission Decision 96/603/EEC as amended).

If they contain 1 % or more by weight or volume of organic material, they shall be determined and classified in accordance with EN 13501-1.

When testing in EN 13823 is required, gypsum based adhesives shall be tested in their end use conditions.

3.1.2 Fire resistance

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

When required, the fire resistance of a system including gypsum based adhesives for thermal/acoustic insulation composite panels shall be determined and classified according to EN 13501-2.

3.2 Bond strength

The bond strength of the adhesive determined as described in 4.6 shall not be less than 0,06 MPa.

3.3 Dangerous substances

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.

3.4 Calcium sulfate content

The calcium sulfate content of the powder as a percentage by mass of the product shall not be less than 30 % when calculated from the result of the test carried out in accordance with 4.2 of EN 13279-2:2004.

3.5 End of utilisation time

The end of utilisation time is determined as described in 4.5 shall be greater than the time declared by the producer.

4 Test methods

4.1 General

This standard describes the specific test methods for gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards.

General conditions of tests as well as test method which are common to gypsum plaster and gypsum based adhesives are described in EN 13279-2.

Those test methods which enable the requirements of this European Standard to be evaluated are given below; test methods for other properties, for examples particle size, may be used by agreement.

4.2 Determination of the calcium sulfate content

Test method is described in 4.2 of EN 13279-2:2004.

4.3 Determination of the water/adhesive ratio

Test method is described in 4.3.2 of EN 13279-2:2004.

4.4 Preparation of the paste for the tests

The paste used for the tests and for the preparation of test pieces is prepared as described in 4.3.2 of EN 13279-2:2004.

4.5 Determination of the end of utilisation time

4.5.1 Principle

The depth of penetration of the conical penetrator (cone) into a gypsum based adhesive/water paste as the set progresses shall be measured.

4.5.2 Apparatus

a) Vicat apparatus: see EN 13279-2:2004, Figures 1 and 2;

b) conical penetrator (cone): see EN 13279-2:2004, Figure 3;

c) glass plate : about 150 mm long and 150 mm wide;

d) Vicat ring : see EN 13279-2:2004, item b) in 4.3.2.2;

e) straight edge :140 mm length;

f) chronometer;

g) mixer and paddle: see 4.4 of EN 196-1:1994 (description in Annex A).

4.5.3 Procedure

The Vicat ring shall be placed on the glass plate with the larger opening in contact with the glass plate. The gypsum based adhesive shall be mixed with the amount of water determined according to 4.3. The time at which the adhesive is first added to the water is noted t_0. An excess of adhesive shall be transferred to the ring. Using a sawing motion the vertically held straight edge is used to strike off the excess material. Lower the cone to the surface of the adhesive using the spring plate of the release mechanism.

The guide bar shall be opened for testing using the release mechanism. The time between successive cone penetration should be not greater than 1/20 of the utilisation time. The cone shall be cleaned and dried between each penetration and there should be at least 12 mm between each penetration mark. The time at which the depth of penetration achieved (35 ± 2) mm above the glass plate shall be noted t_1.

4.5.4 Expression of results

The end of utilisation time t is given by the following formula:

$$t = (t_1 - t_0) \times 0{,}8$$

where

t_1 is the time at which the depth of penetration (35 ± 2) mm above the glass plate is achieved, in minutes

t_0 is the time at which the adhesive is first added to the water, in minutes

4.6 Determination of the bond strength

4.6.1 Principle

The bond strength of an adhesive pad shall be measured by applying a force perpendicularly to the adhesion interface.

NOTE Polystyrene is used as background as a typical insulating product.

4.6.2 Apparatus

a) Two blocks (gauges) 20 mm thickness, 200 mm length, 20 mm width;

b) five supports (racks) (150 × 150 × 60) mm (see Figure 1);

c) a non absorbent plate (e.g. PVC…);

d) five pieces of expanded moulded polystyrene (100 × 100 × 40) mm without surface treatment or cut expanded polystyrene with similar surface (cohesion ≥ 0,14 MPa). Five pieces are required for each adhesive tested;

e) a taping knife (width ≥ 150 mm);

f) bowl, balance, stirrer, etc. for gauging;

g) a ventilated oven at (40 ± 2) °C;

h) five metal plates (100 × 100 × 10) mm;

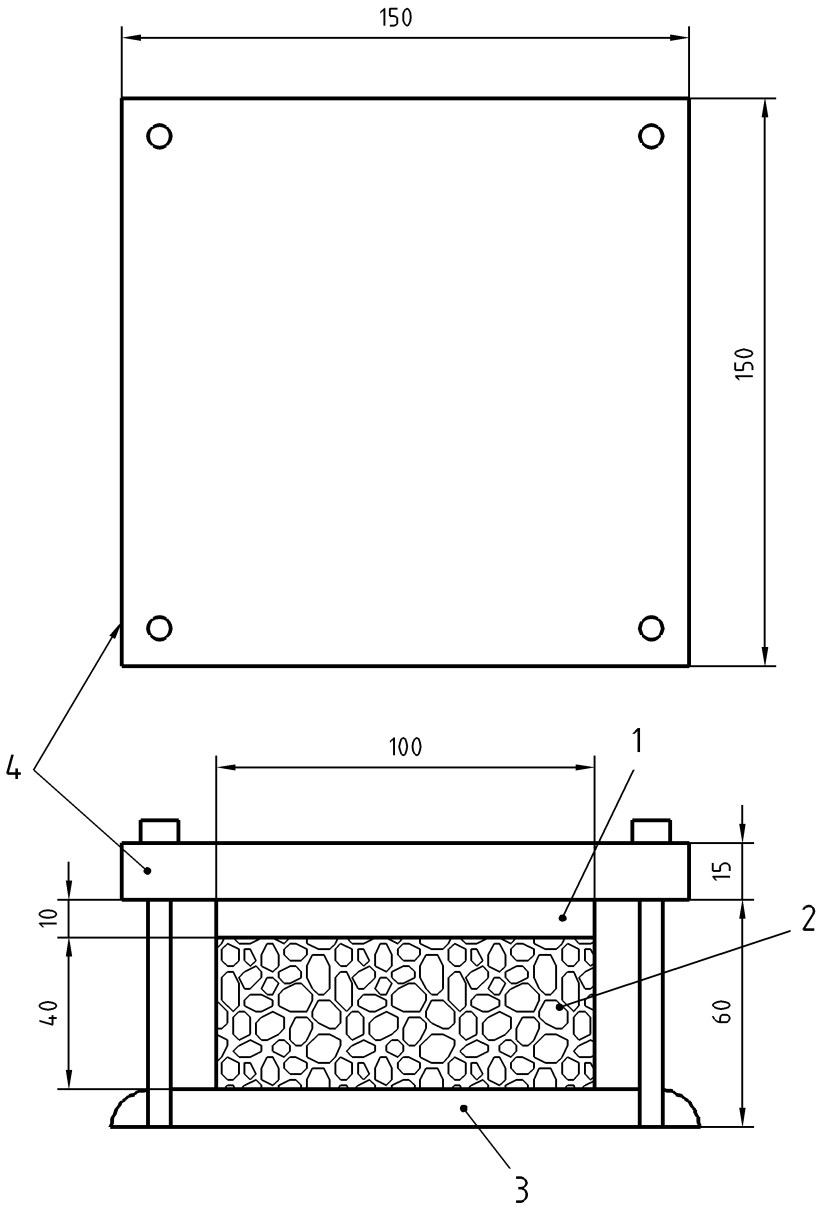
i) double face adhesive tape (adhesion ≥ 0,15 MPa);

j) hot-melt adhesive (adhesion ≥ 0,15 MPa);

k) a dynamometer or an appropriate device to apply a convenient tensile force permitting readings to 10 N and having a self-centring clamp (see Figure 2);

l) testing plate.

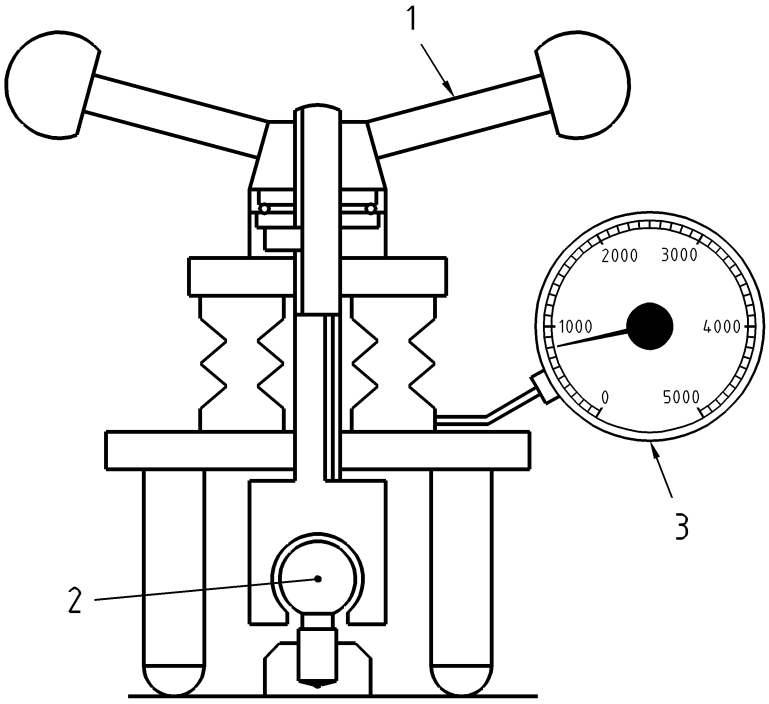
Dimensions in mm



Key

1 Metal plate
2 Polystyrene
3 Adhesive
4 Support (rack)

Figure 1 — Support (rack) for preparing specimens for adhesion strength test



Key

1 Operating device
2 Spherical head screw
3 Dynamometer

Figure 2 — Example of adhesion test apparatus

4.6.3 Procedure

NOTE Letters in brackets refer to 4.6.2.

Stick the metal plates (h) on the polystyrene pieces (d) with the adhesive tape (i). Gauge the appropriate quantity of gypsum based adhesive for 5 pads (about 2 kg), homogenise the paste (no lumps or air bubbles) as indicated in 4.5.

Leave the paste to rest for 20 min and mix again before use.

Place on the supporting plate (c) the two blocks (a) of 20 mm thickness parallel and 110 mm apart.

Fill uniformly with the paste avoiding the production of air bubbles then eliminate the excess of paste.

Take off the two blocks (a) and adjust the length of the specimen to 100 mm.

Place the polystyrene piece into the rack and turn the rack over. Then place onto the adhesive to contact the polystyrene. Press until the four feet of the rack are in contact with the supporting plate (c). Prepare five such specimens.

After setting, take off the rack (b) and cut off the excess of gypsum based adhesive.

Let the gypsum based adhesive hydrate, then remove the specimens from the supporting plate (c) and put them in the oven at 40 °C and dry to constant mass[1)].

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

Stick the gypsum based adhesive on the testing plate (l) with the hot melt adhesive (j).

Place the specimen into the measurement device and increase the applied force until failure occurs. Note the maximum force and the type of failure (in the polystyrene or between gypsum adhesive and polystyrene).

Repeat the measurement on the four remaining specimens.

4.6.4 Expressions of results

The average of the five measured adhesion forces shall be calculated. The bond strength is obtained by dividing the average force F by the test area S as follows:

(F/S) MPa

where

F is the force in N

S is the surface in mm^2

5 Evaluation of conformity

5.1 General

The compliance of gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards 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, gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards may be grouped into families, where it is considered that the selected property is common to all gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards within that family.

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

5.2 Type testing

5.2.1 General

Sampling and testing shall be in accordance with Clause 4.

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

5.2.2 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 gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards 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 3 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.

5.2.3 Further type testing

Whenever a change occurs in the gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards 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).

5.3 Factory production control

5.3.1 General

The producer shall establish, document and maintain an FPC system to ensure that the products placed on the market conform with 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 to 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.

5.3.2 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 that 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.

5.3.3 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.

5.3.4 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.

5.3.5 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.

5.3.6 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.

5.3.7 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.

5.3.8 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.

5.3.9 Other test methods

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

6 Designation

Gypsum based adhesive for thermal/acoustic insulation composite panels and plasterboards shall be designated as follows :

a) the wording "gypsum based adhesive for thermal/acoustic insulation composite panels and plasterboards" ;

b) reference to this European Standard, EN 14496.

EXAMPLE OF DESIGNATION

Gypsum based adhesive for thermal/acoustic insulation composite panels and plasterboards EN 14496.

7 Marking, labelling and packaging

Gypsum based adhesive for thermal/acoustic insulation composite panels and plasterboards complying with this European Standard shall be clearly marked on the packaging or delivery note or on the certificate supplied with the product with the following items :

a) the reference to this European Standard, EN 14496;

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

c) date of production and/or "use by" date;

d) the means of identifying the gypsum based adhesives and relating them to their designation as defined in Clause 6.

NOTE Where the CE marking also requires the above items, compliance with CE marking would be deemed to satisfy the requirement of this clause.

Annex A
(informative)

Sampling procedure for testing

A.1 General

The required number of bags to determine the compliance with specification should be sampled from a delivery consignment of gypsum based adhesive.

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, in which every smallest unit (e.g. bag or box) in the consignment has an equal chance of being selected for the sample.

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

A.2.3 Representative sampling

A.2.3.1 General

When random sampling is impracticable or not convenient, e.g. when the units form a large stack or stacks with ready access to only a limited number of units, 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 unit should be selected at random from within each section in order to give the required number of samples.

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

2) In practice, random sampling is normally only convenient either when the units 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 unit 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 units.

Annex ZA
(informative)

Clauses of this European Standard addressing the provisions of the EU construction Products Directive

ZA.1 Scope and relevant characteristics

This European Standard has been prepared under a 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 (accessed through http:/europa.eu.int/comm/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 gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards 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 :	**Gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards**		
Intended uses :	**General building construction (see Clause 1)**		
Essential Characteristics from the Mandate	**Requirements clause(s) in this European Standard**	**Mandated level(s) and/or class(es)**	**Notes**
Reaction to fire (for exposed situations)	3.1.1	A1 to F	
Bond strength	3.2	-	MPa Threshold value

The requirement 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 products

The system of attestation of conformity of gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards in accordance with the Decision of the Commission 95/467/EC as given in Annex III of the Mandate M/106 "Gypsum products", is shown in Table ZA.2.for the intended use(s) and relevant level(s) or class(es).

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

Product	Intended use	Characteristics	AoC system
Gypsum based adhesives for thermal/acoustic insulation composite panels and plasterboards	In all uses subjected to reaction to fire requirements	Reaction to fire	3 / 4[a]
		Bond strength	4
	For situations and uses not mentioned above	Bond strength	4
[a] For products complying with the Commission Decision 2003/43/EC as amended (see section 3.1.1) system 4 applies.			
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.3a and ZA.3b for the indicated intended uses. Where more than one intended use applies for the product the tables should be read in conjunction.

Table ZA.3a —Assignment of evaluation of conformity tasks for gypsum based adhesives 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 for the producer	Factory Production Control (FPC)	All relevant characteristics of table ZA.1	Reaction to fire is ensured by controlling the organic content of the material	5
			Bond strength	
	Initial Type Testing (ITT)	Those relevant characteristics of table ZA.1 not tested by the approved body	Reaction to fire is ensured by controlling the organic content of the material	
			Bond strength	
Tasks for the approved body [b]	Initial Type Testing (ITT)	Reaction to fire [a]		
[a] For products not complying with the Commission Decision 96/603/EC as amended. [b] System 3 products only.				

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

Tasks		Content of the task		Clauses of this standard to apply
Tasks for the producer	Factory Production Control (FPC)	As Table ZA.1	Bond strength	5
	Initial Type Testing (ITT)	As Table ZA.1	Bond strength	

(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 approved body;

— 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 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;

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

— reference to this European Standard, EN 14496;

— 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:

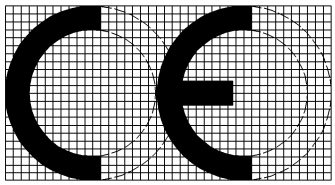
  — declared values and, where relevant, level or class (including "pass" for pass/fail requirements where necessary) to declare for each essential characteristic as indicated in "Notes" in Table ZA.1;

  — "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 characteristics 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:



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

— the 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 packaging or on the accompanying commercial documents. An example is given below :

	*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*
06	*The last two digits of the year in which the CE marking was affixed*
EN 14496	*Number of the European Standard*
Gypsum based adhesives for thermal/accoustic insulation composite panels and plasterboards **For general building construction**	
Reaction to fire : A1 **Bond strength……...x MPa** **Dangerous substances……..NPD or substance x less than y ppm**	*Information on regulated characteristics*

Figure ZA.1 – Example CE marking information

NOTE 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. European legislation without national derogation need not be mentioned.

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

Bibliography

[1] EN 520, *Gypsum plasterboards — Definitions, requirements and test methods*

[2] EN ISO 9001:2000, *Quality management systems - Requirements (ISO 9001:2000)*

[3] EN 13279-1, *Gypsum and gypsum based building plaster — Part 1 : Definitions and requirements*

[4] EN 13950, *Gypsum plasterboard thermal/acoustic insulation composite panels — Definitions, requirements and test methods*

[5] EN 14190, *Gypsum plasterboard products from reprocessing — Definitions, requirements and test methods*

[6] EN 14209, *Preformed plasterboard cornices — Definitions, requirements and test methods*

blank

BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover. Tel: +44 (0)20 8996 9000. Fax: +44 (0)20 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: +44 (0)20 8996 9001. Fax: +44 (0)20 8996 7001. Email: orders@bsi-global.com. Standards are also available from the BSI website at http://www.bsi-global.com.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre. Tel: +44 (0)20 8996 7111. Fax: +44 (0)20 8996 7048. Email: info@bsi-global.com.

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration. Tel: +44 (0)20 8996 7002. Fax: +44 (0)20 8996 7001. Email: membership@bsi-global.com.

Information regarding online access to British Standards via British Standards Online can be found at http://www.bsi-global.com/bsonline.

Further information about BSI is available on the BSI website at http://www.bsi-global.com.

Copyright

BSI
389 Chiswick High Road
London
W4 4AL