

Thermal insulating products — Evaluation of conformity

The European Standard EN 13172:2001, with the incorporation of amendment A1:2005, has the status of a British Standard

ICS 91.100.60

National foreword

This British Standard is the official English language version of EN 13172:2001, including amendment A1:2005.

The start and finish of text introduced or altered by CEN amendment is indicated in the text by tags **A1** **A1**. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by **A1** **A1**.

EN 13172 is a “harmonized” European Standard and fully takes into account the requirements of the European Commission mandate M/103, *Thermal insulating materials and products*, given under the EU Construction Products Directive (89/106/EEC), and intended to lead to CE marking. The date of applicability of EN 13172 as a “harmonized” European Standard, i.e. the date after which this standard may be used for CE marking purposes, is subject to an announcement in the *Official Journal of the European Communities*.

EN 13172 is the subject of transitional arrangements agreed under the European Commission mandate. The Member States have agreed a nominal transition period for the co-existence of EN 13172 and their corresponding national standard(s). It is intended that this period will comprise a nominal nine month period during which any required changes to national regulations are to be made, followed by a further nominal 12 month period for the implementation of CE marking. By the end of this co-existence period, any conflicting national standards will be withdrawn. In the UK, there are no corresponding national standards.

The UK participation in the preparation of EN 13172:2001 was entrusted by Technical Committee B/540, Energy performance of materials, components and buildings, to Subcommittee B/540/1, European Standards for thermal insulation, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the 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 Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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Summary of pages

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English version

Thermal insulating products — Evaluation of conformity
(includes amendment A1:2005)

Produits isolants thermiques — Evaluation de la conformité
(inclut l'amendement A1:2005)

Wärmedämmstoffe — Konformitätsbewertung
(enthält Änderung A1:2005)

This European Standard was approved by CEN on 16 April 2001. Amendment A1 was approved by CEN on 24 March 2005.

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 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 Management Centre 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.



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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 88, Thermal insulating materials and products, the Secretariat of which is held by DIN.

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 November 2001, and conflicting national standards shall be withdrawn at the latest by March 2003.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

It supports a series of product standards for thermal insulating materials and products, which are necessary for the demonstration of compliance with the mandate derived from the Construction Products Directive 89/106/EEC.

This European Standard contains five informative annexes:

Annex A, Certification of conformity (not for CE marking purposes).

Annex B, Certification of conformity (for products of reaction to fire classes under system 1).

Annex C, Declaration of conformity by the manufacturer (for the performance requirements under system 3).

Annex D, Declaration of conformity by the manufacturer (for products of reaction to fire classes under system 4).

Annex E, Guidance on the use of annex(es).

Evaluation of conformity is necessary for products in order to provide support for CE marking and for voluntary certification. The guidance contained in annex ZA of the product standards will determine which of the above annexes shall be used for CE marking.

Annex E describes how to use the annexes together with the mainbody of this standard to fulfill the requirements to the certification and/or declaration of conformity for a product.

Although the annexes are informative in this standard, their use by the manufacturer will require that they assume a normative status. When an annex is used the requirements in the annex shall be followed, as given in the text.

This standard applies to factory made products for buildings, factory made products for building equipment and industrial installations, in-situ products for buildings, in-situ products for building equipment and industrial installations and to external thermal insulation composite systems.

No existing European Standard is superseded.

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

Foreword to amendment A1

This European Standard (EN 13172:2001/A1:2005) has been prepared by Technical Committee CEN/TC 88, “Thermal insulating materials and products”, the secretariat of which is held by DIN.

This Amendment to the European Standard EN 13172:2001 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2005, and conflicting national standards shall be withdrawn at the latest by December 2005.

This amendment to EN 13172:2001 makes some corrections and clarifications and a re-arrangement to the text, viz,

- Terms and definitions have been modified and information on grouping have been added in Clause 4;
- Clause 7 is renamed as Annex F (informative) and the content has been revised;
- Annex A (informative, for voluntary certification) has been updated to avoid unnecessary testing in the case of nonconformity and Table A.1 has been updated to cover both the standards for factory made building products and for products for building equipment and industrial installations.

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 the United Kingdom.

1 Scope

This European Standard specifies the procedures and the criteria for the evaluation of the conformity of a thermal insulating product with the relevant European product specification.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

Not applicable.

3 Terms and definitions

For the purposes of this standard, the following terms and definitions apply:

3.1

product

item or good produced under conditions which are presumed uniform  to a given specification and placed on the market. 

3.2

factory production control

the permanent, internal control of production exercised either by the manufacturer or by his agent on the responsibility of the manufacturer himself

NOTE Factory production control comprises operational techniques and all measures necessary to regulate and maintain the conformity of the product to the requirements of the relevant product standard.

3.3

production line

assemblage of equipment that produces products using a continuous process

3.4

production unit

assemblage of equipment that produces products using a discontinuous process

3.5

production plant/factory

production equipment on the same site including all production lines and units 

3.6

third party

an approved organization or body which may provide independent verification or approval

3.7

witness testing

test performed by the manufacturer at his own facilities with the representative of the third party present

4 General requirements

The evaluation of conformity involves either a manufacturer or a manufacturer in conjunction with a third party. The procedure is given either in the relevant product standard or agreed between parties; it shall include at least those tasks given in clause 5. The tasks for the third party and/or the manufacturer shall be carried out in accordance with the requirements of **Annex A** Clause **7** of the product standard, which makes reference to this standard and one or more of the **Annexes B, C or D** for the purposes of CE marking.
Text deleted

NOTE Annex A is included for the purposes of voluntary product certification

The content of **Clause 5** will also be met by supplementing the provisions of EN ISO 9001 with requirements **of this standard**.

Products, **may be collected into product groups for *declaration and testing purposes*** subject to the following conditions:

- they shall have the same type of production process and shall be derived from the same family of raw material; a distinction is made between glass wool and rock wool and between foams with different blowing agents;
- they shall differ only in aspects that do not influence the properties required in the relevant product standard;
- they shall be covered by a single thermal insulation standard, e.g. from the series EN 13162 to EN 13171;
- products which differ only with regard to some properties may be grouped together by their common properties;
- products which are identical except the facing and for which the different facings have been shown to have the same effect on the declared characteristics (e.g. regarding thermal properties, the gas tight facings of some PUR products), may be grouped.

Products covered by more than one European Standard may be grouped for *testing purposes only* providing that,

- they have a common production specification and that they are from the same type of production process and the same family of raw material, e.g. cellular glass for the EN 13167 and prEN 14305.

The properties outside this (these) common group(s) shall be tested product by product.

Products which are outside the scope of a product standard cannot be grouped for declaration purposes with products declared under the scope of that standard. **Annex A**

Providing that a product within the group meets the requirements of the product standard then all products within the same group shall be deemed to comply with the product standard **Annex A** for the properties concerned. If the same product fails to comply **Annex A** with the product standard then the whole group shall be assumed to have failed to comply with the product standard.

5 Requirements for factory production control — Tasks for the manufacturer

This clause specifies the requirements for factory production control that shall be fulfilled by the manufacturer for each factory

5.1 Organization

5.1.1 General

Factory production control shall be operated according to a documented system that shall be given in a quality manual.

5.1.2 Responsibility and authority

The responsibility, authority and the interrelationships between all personnel who manage, perform, or verify work affecting quality, shall be defined. This applies particularly to personnel who need the organizational freedom and authority to:

- a) initiate action to prevent the occurrence of product nonconformity;
- b) identify and record any product quality problems.

5.1.3 Management representative for factory production control

At every place of production, a representative, with the appropriate knowledge and production experience, shall be appointed by the manufacturer and given responsibility for managing and supervising factory production control procedures and for ensuring that the requirements of this standard are implemented and maintained.

5.1.4 Management review

Management shall review at appropriate intervals the factory production control system to ensure its continuing suitability and effectiveness. Records of such reviews shall be maintained.

5.2 Quality manual

The manufacturer's documentation and procedures shall be relevant to the production and process control used during manufacture of the product, and shall provide the following details in a quality manual:

- a) the quality aims and the organizational structure, responsibilities and authority of the management with regard to product conformity;
- b) the procedures for specifying and verifying the raw materials and other constituent materials;
- c) the manufacturer's production control and other techniques, processes and systematic actions that will be used;
- d) the inspections and tests to be carried out before, during and after manufacture, together with their frequency (see 5.3) and possible retest procedures (see 5.4);
- e) the procedures for handling, storage, packaging, marking and labelling the product;
- f) the procedures for all personnel to receive training in the activities affecting quality (see 5.7).

5.3 Inspection and testing

5.3.1 General

All necessary facilities, equipment and personnel shall be available to carry out the inspections and tests. The manufacturer, or his representative, may employ, under contract, a subcontractor who has the facilities, equipment and personnel to carry out the inspection and tests on behalf of the manufacturer. The manufacturer shall be responsible for control, calibration, and maintenance of testing, measuring, and inspection equipment, whether owned by or on loan to the manufacturer or a subcontractor.

Inspection and testing shall be performed by personnel qualified for such tasks on the basis of documented appropriate education, training and/or experience.

Equipment shall be used in a manner that ensures that any measurement uncertainty is not greater than the required measurement capability.

5.3.2 Test equipment

Tests to demonstrate conformity of the finished product to the relevant product standard shall be performed using equipment in accordance with the test methods referred to in the product standard.

The test equipment shall be calibrated and/or checked against equipment or test specimens traceable to relevant internationally or nationally recognized reference test specimens (standards). Where no such reference test specimens exist, the basis used for internal checks and calibration shall be documented. The minimum frequencies of checks and calibrations for some test equipment are given in Table 1. Test equipment not listed in Table 1 shall be checked and/or calibrated in accordance with the manufacturer's documented procedures. The calibration records shall be maintained for a period of 10 years.

The manufacturer shall ensure that handling, preservation, and storage of test equipment is such that its accuracy and fitness for use is maintained.

Table 1 — Minimum frequencies of checks and calibrations of test equipment

Properties	Internal checks	Calibration of test equipment	Calibration of reference samples
Thickness	Once per month	Prior to first use of equipment and thereafter annually	Prior to first use of equipment and thereafter every 3 years
Mass	Once per month		
Mechanical properties	—		
Thermal properties ^a : — heat flow meter — guarded hot plate	Once per month Once per year		
^a For thermal properties a part of the calibration shall be to compare test results obtained by the manufacturer with those obtained by an approved body on the same sample.			

When production is intermittent the manufacturer shall ensure that test equipment which may be affected by the interruption is suitably checked and/or calibrated before use.

The calibration of all test equipment shall be repeated if any repair or failure which could upset the calibration of the test equipment occurs.

5.3.3 Inspection and testing of raw materials and other constituent materials

The manufacturer shall ensure that raw materials and other constituent materials conform to his specified requirements. In determining the checks necessary consideration shall be given to the control exercised by the supplier and the documented evidence of conformity.

The manufacturer shall ensure that incoming raw materials and other constituent materials are used or processed only after they have been verified as conforming to the specified requirements. Where incoming material is released for urgent production purposes prior to verification it shall be identified and recorded in order to permit immediate recall in the event of nonconformity.