

European Technical Assessment

ETA 09/0250

Version 01

Date of issue: 2017-04-07



UBA_{tc} Assessment Operator:
Belgian Construction Certification Association
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Technical Assessment Body issuing the European Technical Assessment: UBA_{tc}.

UBA_{tc} has been designated according to Article 29 of Regulation (EU) No 305/2011 and is member of EOTA (European Organisation for Technical Assessment)

Trade name of the construction product:

MASTERBOARD®

Product family to which the construction product belongs:

Fire Protective board

Manufacturer:

Promat International NV

Bormstraat 24

B-2830 Tiselt (Belgium)

Manufacturing plant(s):

Promat Internationals production plant 03

Website:

www.promat-international.com

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:

Guideline for European technical approval (ETAG), used as European Assessment Document (EAD): 018-4

This version replaces:

ETA 09/0250 issued on 2013/06/27

This European Technical Assessment contains:

14 pages, including 2 annexes which form an integral part of the document.



European Organisation
for Technical Assessment

Legal bases and general conditions

- 1 This European Technical Assessment is issued by UBAtc (Union belge pour l'Agrément technique de la construction, i.e. Belgian Union for technical Approval in construction), in accordance with:
 - Regulation (EU) No 305/2011¹ of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC
 - Commission Implementing Regulation (EU) No 1062/2013² of 30 October 2013 on the format of the European Technical Assessment for construction products
 - Guideline for European technical approval (ETAG), used as European Assessment Document (EAD): ETAG 018-4
- 2 Under the provisions of Regulation (EU) No 305/2011, UBAtc is not authorized to check whether the provisions of this European Technical Assessment are met once the ETA has been issued.
- 3 The responsibility for the conformity of the performances of the products with this European Technical Assessment and the suitability of the products for the intended use remains with the holder of the European Technical Assessment.
- 4 Depending on the applicable Assessment and verification of constancy of performance (AVCP) system, (a) notified body(ies) may carry out third-party tasks in the process of assessment and verification of constancy of performance under this Regulation once the European Technical Assessment has been issued.
- 5 This European Technical Assessment allows the manufacturer of the construction product covered by this ETA to draw up a declaration of performance for the construction product.
- 6 CE marking should be affixed to all construction products for which the manufacturer has drawn up a declaration of performance.
- 7 This European Technical Assessment is not to be transferred to other manufacturers, agents of manufacturers, or manufacturing plants other than those indicated on page 1 of this European Technical Assessment.
- 8 The European Technical Assessment holder confirms to guarantee that the product(-s) to which this assessment relates, is/are produced and marketed in accordance with and comply with all applicable legal and regulatory provisions, including, without limitation, national and European legislation on the safety of products and services. The ETA-holder shall notify the UBAtc immediately in writing of any circumstance affecting the aforementioned guarantee. This assessment is issued under the condition that the aforementioned guarantee by the ETA-holder will be continuously observed.
- 9 According to Article 11(6) of Regulation (EU) No 305/2011, when making a construction product available on the market, the manufacturer shall ensure that the product is accompanied by instructions and safety information in a language determined by the Member State concerned which can be easily understood by users. These instructions and safety information should fully correspond with the technical information about the product and its intended use which the manufacturer has submitted to the responsible Technical Assessment Body for the issuing of the European Technical Assessment.
- 10 Pursuant to Article 11(3) of Regulation (EU) No 305/2011, manufacturers shall adequately take into account changes in the product-type and in the applicable harmonised technical specifications. Therefore, when the contents of the issued European Technical Assessment do not any longer correspond to the product-type, the manufacturer should refrain from using this European Technical Assessment as the basis for their declaration of performance.
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- 13 Subject to the application introduced, this European Technical Assessment is issued in English and may be issued by the UBAtc in its official languages. The translations correspond fully to the English reference version circulated in EOTA.
- 14 A European Technical Approval was issued by UBAtc on 27 June 2013. Compared with this European Technical Approval, the current European Technical Assessment, issued on 7 April 2017, comprises no changes.

¹ OJEU, L 88 of 2011/04/04

² OJEU, L 289 of 2013/10/31

Technical Provisions

1 Technical description of the product

1.1 General

MASTERBOARD® is a fire protective calcium silicate board, composed of a calcium silicate matrix, cement and mineral fillers. The board is off-white in colour and has a smooth upper surface and an embossed or sanded reverse face.

MASTERBOARD® is manufactured at Promat International's production plant 03 (known as UBAtc).

1.2 Dimensions and density

Dimensions and density of the boards are given in Table 1.

Table 1 : Dimensions and density MASTERBOARD®

Density (dry 105°C): 975 kg/m³ ± 12,5%
Density (23°C, 50%RH): 1050 kg/m³ ± 12,5%

| Length x width (mm x mm) | Tolerances |
|-----------------------------|----------------|
| 2440 x 1220 | +3/-3 mm |
| 2400 x 1200 | +3/-3 mm |
| 2500 x 1200 | +3/-3 mm |
| 2500 x 1250 | +3/-3 mm |
| Thickness (mm) | |
| 6, 8 and 9 | + 0.5/ -0.5 mm |
| 10, 12 and 15 | +1/-1 mm |
| 20 and 25 | + 1.5/ -1.5 mm |

1.3 Ancillary products

Ancillary products referred to in this ETA, as a part of installation provisions or in the framework of determining performances (e.g. fire resistance test), are not covered by this ETA and may not be CE-marked on the basis of it.

2 Specification of the intended use(s) in accordance with the applicable EAD

2.1 Intended uses

This ETA covers fire protective MASTERBOARD® intended for:

- Internal use (ETAG 018-4 type Z₂;
- Internal use high humidity (ETAG 018-4 type Z₁).
- External semi-exposed use (ETAG 018-4, type Y).

MASTERBOARD® is intended to protect elements or to be used in assemblies as specified in Table 2.

Table 2: Intended use

| Protection of | ETAG 018-1 reference |
|--|----------------------|
| Horizontal membrane protection | Type 1 |
| Vertical membrane protection | Type 2 |
| Load-bearing concrete elements | Type 3 |
| Load-bearing steel elements | Type 4 |
| Load-bearing flat concrete profiled sheet composite elements | Type 5 |
| Load-bearing concrete filled hollow steel columns | Type 6 |
| Load-bearing timber elements | Type 7 |
| Fire separating assemblies with no load-bearing requirements | Type 8 |
| Technical services assemblies in buildings | Type 9 |
| Uses not covered by types 1-9 | Type 10 |

Table 2 shows the possible intended uses of the boards. Not all of these have been assessed in the framework of this ETA with regard to fire resistance performance. Annex 2 shows a list of the uses for which fire resistance assessment was carried out. This ETA covers assemblies installed in accordance with the provisions given in Annex 2.

With regard to fire resistance performance, the other intended uses may be supported by other means at national level (as specified in the note in paragraph 3.2.2 of this ETA).

The provisions made in this European Technical Assessment are based on an assumed intended working life of 25 years, provided that the assembled product is subject to appropriate use and maintenance, in accordance with this ETA.

Indications given regarding the working life cannot be interpreted as a guarantee given by the producer or the UBAtc, but are to be regarded only as a means for choosing the appropriate product(s) in relation to the expected economically reasonable working life of the construction works.

2.2 Assumptions

2.2.1 Manufacturing directives

This European Technical Assessment is issued for MASTERBOARD® on the basis of agreed data/information, deposited with the UBAtc, which identifies the product that has been assessed. Changes to the product/production process which could result in the deposited data/information being incorrect should be notified to the UBAtc before the changes are introduced.

The raw materials are mixed in water and combined in a slurry. The boards are shaped on a forming drum, cut and stacked for curing. The board is autoclaved under saturated steam pressure and dried. Edges are trimmed and the reverse surface sanded to the desired thickness. Each board is marked in accordance with paragraph 6 of this ETA. MASTERBOARD® boards are examined for visual defects and non-compliant boards are rejected.

2.2.2 Installation

2.2.2.1 Supporting structure

The distance between supports shall be in accordance with the information provided in the assemblies described in annex 2.

2.2.2.2 Cutting and machining

The fire protective MASTERBOARD® shall be cut and machined using conventional woodworking equipment. The use of saw blades with hardened teeth or with tungsten carbide tipped blades is recommended. When machining the fire protective board with power tools, dust extraction shall take place and inhalation of dust should be avoided.

A safety data sheet is available from the manufacturer upon request.

2.2.2.3 Joints

The fire protective MASTERBOARD® boards shall be butt jointed.

The boards can have square or bevelled edges. The type of edge shall be in accordance with the assemblies described in annex 2.

Joints in adjacent boards, where possible, shall be staggered over a minimum distance of 300 mm.

The use and type of joint filler shall be in accordance with the assemblies described in annex 2.

2.2.2.4 Mechanical fasteners

Fastening of MASTERBOARD® boards onto the support structure shall be in accordance with the assembly information provided in annex 2.

When applied in more than one layer, MASTERBOARD® boards may be attached to each other by staples or equivalent fasteners (screws, nails) without an adverse effect on the mechanical properties of the assembled system.

2.2.2.5 Surface treatment

The MASTERBOARD® board surface allows for most types of decoration. When applying a surface treatment, the absorption capacity and alkalinity of the boards have to be taken into account.

Assessment of the influence of surface treatment (such as plastering, paints, tiles, wallpaper), on the performance of the MASTERBOARD® boards, has not been performed in the framework of this ETA.

2.2.2.6 Assembly

The MASTERBOARD® board shall be applied as specified in the assemblies in annex 2.

2.3 Recommendations

2.3.1 Recommendations on packaging, transport and storage

During transport and storage, MASTERBOARD® boards should be stacked on a flat underground and covered. Storage should take place on pallets, in a sheltered and well-ventilated space.

2.3.2 Recommendations on use, maintenance and repair

Future modifications to the building should not adversely affect the fire protective properties of the system in which MASTERBOARD® boards are used. Care should be taken to prevent any reduction of fire performance as a result of increased applied load to protected elements of the works (e.g. beams, columns, ceilings, floors, or walls).

The assessment is based on the assumption that damage, for example caused by accidental impact, is repaired. It is further assumed that replacement of components during maintenance/repair will be undertaken using materials specified by the ETA.

3 Performance of the product and references to the methods used for its assessment

3.1 Mechanical resistance and stability (BWR1)

This basic requirement for construction works is not relevant for MASTERBOARD® boards according to ETAG 018.

3.2 Safety in case of Fire (BWR2)

3.2.1 Reaction to fire

MASTERBOARD® boards have a reaction to fire classification A1 according to EN 13501-1.

3.2.2 Fire resistance

Assemblies incorporating MASTERBOARD® boards have a resistance to fire classified according to EN 13501-2 as presented in Annex 2.

The tested assembly, a covering (intended use type 10 according to Table 2), protected by MASTERBOARD® fire protective boards (thickness 8 mm) has fire resistance classifications **K₁ 10** and **K₂ 10** according to EN 13501-2:2007+A1:2009.

NOTE: *In accordance with ETAG 018-4 (foreword), until 10 years after the initial issuing of this ETA, or until the withdrawal of relevant national test and classification standards, CE-marking will cover a limited number of assemblies subjected to fire resistance assessment. As time progresses, the performance declaration for fire resistance covered by CE-marking should gradually be enlarged by the ETA-holder and incorporated in this ETA by amendment or revision. In the meantime, and taking into account the transitional arrangements for test and classification standards and the corresponding national legislation (see EC Guidance paper JJ), the ETA-holder shall be permitted to maintain and be able to use - on a national basis - his portfolio of test data for this characteristic, based on relevant national standards, next to the performance declaration covered by the CE-marking based on this ETA.*

3.3 Hygiene, Health and the environment (BWR3)

3.3.1 Air and/or water permeability

In accordance with EN 12467, the MASTERBOARD® boards are impermeable to water.

3.3.2 Release of dangerous substances

3.3.2.1 General

The MASTERBOARD® boards comply with all relevant European and national provisions applicable for the uses for which it is brought to the market.

In addition to this ETA clause relating to dangerous substances, 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 Regulation, these requirements need also to be complied with, when and where they apply.

3.3.2.2 Release of formaldehyde

The MASTERBOARD® boards have no formaldehyde containing components.

3.4 Safety in Use (BWR4)

3.4.1 Flexural strength

In accordance with EN 12467, the MASTERBOARD® boards have a modulus of rupture (MOR) of $\geq 4,5$ MPa (95% confidence level).

The MASTERBOARD® boards have sufficient strength to support their own mass. The MASTERBOARD® boards are not intended to support additional loads.

3.4.2 Dimensional stability

The MASTERBOARD® boards, tested in accordance with EN 318, are dimensionally stable.

3.4.3 Resistance to impact and eccentric load

No performance assessed.

3.5 Protection against noise (BWR5)

3.5.1 Airborne sound insulation

No performance assessed.

3.5.2 Sound absorption

No performance assessed.

3.5.3 Impact sound insulation

No performance assessed.

3.6 Energy economy and heat retention (BWR6)

3.6.1 Thermal conductivity

No performance assessed.

3.6.2 Water vapour permeability

No performance assessed.

3.7 Aspects of durability, serviceability and identification

3.7.1 Durability and serviceability

3.7.1.1 Resistance to deterioration caused by water

In accordance with EN 12467, the MASTERBOARD® boards are resistant to water deterioration.

3.7.1.2 Resistance to soak/dry

In accordance with EN 12467, the MASTERBOARD® boards are resistant to soak/dry cycles.

3.7.1.3 Resistance to freeze/thaw

In accordance with ETAG 018-4 annex E, the MASTERBOARD® boards are resistant to freeze-thaw cycles for the intended use Y (external, semi-exposed).

3.7.1.4 Resistance to heat/rain

This characteristic is not relevant for the intended use Z₂ (internal use), Z₁ (internal use high humidity), and Y (semi-exposed external use)

3.7.1.5 Basic durability assessment

Product performances confirm a working life of minimum 25 years for the intended uses Z₂ (internal use), Z₁ (internal use high humidity) and Y (semi-exposed external use).

3.7.2 Identification

3.7.2.1 Length, Width (see Table 1)

The width of the MASTERBOARD® boards is 1200 mm, 1220 mm or 1250 mm.

The length of the MASTERBOARD® boards is 2400 mm, 2440 mm or 2500 mm.

3.7.2.2 Thickness (see Table 1)

The MASTERBOARD® boards are available in thicknesses between 6 mm and 25 mm, as presented in Table 1.

3.7.2.3 Dimensional tolerances

The tolerances of the MASTERBOARD® boards on length and on width are ± 3 mm. The tolerance on the thickness for boards with a thickness of 6, 8 and 9 mm is $\pm 0,5$ mm, for boards with thickness of 10, 12 or 15 mm it is ± 1 mm and for boards with thickness of 20 or 25 mm it is $\pm 1,5$ mm

3.7.2.4 Apparent density

The apparent density (23°C, 50%RH) of the MASTERBOARD® is $1050 \text{ kg/m}^3 \pm 12,5\%$. The dry density (dried at 105°C) is $975 \text{ kg/m}^3 \pm 12,5\%$.

3.7.2.5 Perpendicular tensile strength

The perpendicular tensile strength of the MASTERBOARD®, based on testing in accordance with ETAG 018-4 and EN 1607 is 77,9 kPa.

This value is a guidance value, and does not reflect a statistical evaluation nor a minimum guaranteed value.

3.7.2.6 Parallel tensile strength

The parallel tensile strength of the MASTERBOARD®, based on testing in accordance with ETAG 018-4 and EN 1608 is 989 kPa. This value is a guidance value, and do not reflect a statistical evaluation nor a minimum guaranteed value.

3.7.2.7 Compressive strength

The compressive strength of the MASTERBOARD®, based on testing in accordance with ETAG 018-4 and EN 826 is 9,3 MPa. This value is a guidance value, and does not reflect a statistical evaluation nor a minimum guaranteed value.

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with Regulation (EU) N° 305/2011, Article 65, Directive 89/106/EEC is repealed, but references to the repealed Directive shall be construed as references to the Regulation.

The system of assessment and verification of constancy of performance, specified in the Decision of the Commission 1999/454/EC of 1999/07/14³, as amended, is specified in the following Table.

Table 3– System of assessment and verification of constancy of performance applicable to MASTERBOARD®

| Product(s) | Intended use(s) | Level(s) or class(es) | Assessment and verification of constancy of performance system(s) ^a |
|--------------------------|--|-----------------------|--|
| Fire Protective Products | For fire compartmentation and/or fire protection or fire performance | Any | 1 |

* See Annex V to Regulation (EU) N° 305/2011

In addition, according to the decision 1999/454/EC of 1999/07/14³ of the European Commission, as amended, the systems of assessment and verification of constancy of performance specified in table 4 apply to fire protective products with regard to reaction to fire.

Table 4– Systems of assessment and verification of constancy of performance with respect to the reaction to fire

| Product(s) | Intended use(s) | Level(s) or class(es) (reaction to fire) | Assessment and verification of constancy of performance system(s) ^a |
|--------------------------|---|--|--|
| Fire Protective Products | For uses subject to regulations on reaction to fire | (A1, A2, B, C)* | 1 |
| | | (A1, A2, B, C)**, D, E | 3 |
| | | (A1 to E)***, F | 4 |

^a Systems 1, 3 and 4 : See Regulation (EU) N° 305/2011, Annex V
 * Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)
 ** Products/materials not covered by footnote (*)
 *** Products/materials that do not require to be tested for reaction to fire (e.g. products/materials of class A1 according to Commission Decision 96/603/EC⁴, as amended)

5 Technical details necessary for the implementation of the AVCP system, as foreseen in ETAG 018-1 and ETAG 018-4

5.1 Tasks for the ETA-holder

5.1.1 Factory production control (FPC)

The ETA-holder shall exercise permanent internal control of the production. All the elements, requirements and provisions adopted by the ETA-holder shall be documented in a systematic manner in the form of written policies and procedures. This factory production control system shall ensure that production is in conformity with this ETA.

The personnel involved in the production process shall be identified, sufficiently qualified and trained to operate and maintain the production equipment. Machinery equipment shall be regularly maintained and this shall be documented. All processes and procedures of production shall be recorded at regular intervals.

The ETA-holder shall maintain a traceable documentation of the production process from purchasing or delivery of raw or basic raw materials up to the storage and delivery of finished products.

The factory production control system for the product includes relevant design specifications, including adequate drawings and written instructions for:

- type and quality of all materials
- overall dimensions
- packaging and transport protection

³ see OJEU L178/52 of 1999/07/14

⁴ see OJEU L267 of 1996/10/19

The production control system shall specify how the control measures are carried out, and at which frequencies.

ETA-holders which have an FPC system that complies with EN ISO 9001 and that addresses the requirements of this ETA are recognised as satisfying the FPC requirements.

Products that do not comply with requirements as specified in the ETA shall be separated from the conforming products and marked as such. The ETA-holder shall register non-compliant production and action(-s) taken to prevent further non-conformities. External complaints shall also be documented, as well as actions taken.

When materials/products are delivered for incorporation into the production process, verification of conformity with specifications in the quality manual shall take place and be recorded.

If supplied materials/components are not manufactured and tested by the supplier in accordance with agreed methods, or where the ETA-holder purchases materials/components on the open market, then where appropriate, they shall be subject to suitable documented checks/tests by the ETA-holder before acceptance.

The characteristics of incoming material and components, for which the supplier demonstrates documented compliance with a product specification, for an intended use that is appropriate for its use as a raw material or component of the product, shall be considered satisfactory and need, except in justified doubt, no further checking, unless the control plan specifies differently.

5.1.2 Testing of samples taken at the factory

5.1.2.1 General

At least the following minimum information shall be recorded:

- date and time of manufacture
- type of product produced (boards)
- material specification (dimensions and thickness)
- all results of the verifications performed within the agreed upon control plan

5.1.2.2 Maintenance, checking and calibration of equipment

All testing equipment shall be maintained, calibrated and/or checked against equipment or test specimens traceable to relevant international or nationally recognised reference test specimens (standards). In case no such reference test specimens exist, the basis used for internal checks and calibration shall be documented.

The ETA-holder shall ensure that handling, preservation and storage of test equipment is such that the performances are maintained

When production is intermittent, the ETA-holder shall ensure that any 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 occurs which could upset the calibration of the test equipment.

5.1.2.3 Testing as part of Factory Production Control

Table 5 specifies minimum requirements for testing as part of FPC.

If constituent materials or components are supplied by other manufacturers to the ETA-holder, the supplier shall perform FPC on those constituent materials or components. If that is the case, those suppliers should submit the relevant records to the ETA-holder.

Table 5 : FPC test plan for MASTERBOARD®

| Property | Minimum frequency |
|---|--|
| Determination of organic content (reaction to fire) | 1 per week ⁵ |
| Determination of dimensional stability at high temperatures (fire resistance) | 1 per week |
| Indirect test method (small oven test) ⁶ | 1 per year |
| Water impermeability | 1 per 3 years |
| Dimensional stability | 1 per year |
| Identification | |
| length, width | 1 per day ⁷ , per dimension |
| thickness | 1 per day, per thickness |
| apparent density | 1 sample per n-boards |
| Flexural strength | 1 sample per n-boards |

5.2 Initial Type Testing

The assessment tests will have been conducted by the UBAtc or under its responsibility (which may include a proportion conducted by an independent laboratory or by the ETA-applicant, witnessed by the UBAtc). The UBAtc will have assessed the results of these tests in accordance with chapter 3 of this ETA, as part of the ETA issuing procedure.

The results of assessment testing shall be used by notified bodies (cf. Regulation (EU), Annex V, clause 1.6).

6 Other marking and/or information

Each board shall at least be marked with product name and a traceability code. Each package is marked with the product name, traceability code, thickness of the boards, and dimensions of the boards.

⁵ A week represents 5 production days.

⁶ Production shall be subjected to a small oven test (test performed on one thickness).

⁷ A day represents a 24h time period in which production is considered to be as usual for the production facility concerned.

UBAtc asbl is a non-profit organization according to Belgian law. It is a Technical Assessment Body notified by the Belgian notifying authority, the Federal Public Services Economy, SMEs, Self-Employed and Energy, on 17 July 2013 in the framework of Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC and is member of the European Organisation for Technical Assessment, EOTA (www.eota.eu).

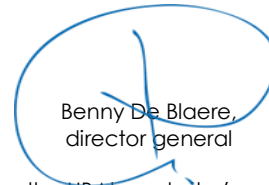
This European Technical Assessment has been issued by UBAtc asbl on the basis of the technical work carried out by the Assessment Operator, BCCA.

On behalf of UBAtc asbl,

On behalf of the Assessment Operator, BCCA, responsible for
the technical content of the ETA,



Peter Wouters,
director



Benny De Blaere,
director general

The most recent version of this European Technical Assessment may be consulted on the UBAtc website (www.ubatc.be).

Annex I: References

Reference number ETAG 018-1 (edition 2004)

Document title Fire protective products - Part 1: General.

Reference number ETAG 018-4 (edition 2004)

Document title Fire protective products - Part 4: Fire protective board, slab and mat products and kits.

Reference number EN 13501-1:2002

Document title Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests

Reference number EN 13501-2:2003

Document title Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services

Reference number EN 12467:2004

Document title Fibre-cement flat sheets - Product specification and test methods

Reference number EN 318:2002

Document title Wood based panels - Determination of dimensional changes associated with changes in relative humidity

Reference number EN 12524

Document title Building materials and products - Hygrothermal properties - Tabulated design values

Reference number EN 826:1996

Document title Thermal insulating products for building applications - Determination of compression behaviour

Reference number EN 1607:1996

Document title Thermal insulating products for building applications - Determination of tensile strength perpendicular to faces

Reference number EN 1608:1996

Document title Thermal insulating products for building applications - Determination of tensile strength parallel to faces

Reference number prEN 14566 (September 2002)

Document title Mechanical fasteners for gypsum plasterboard systems – Definitions, requirements and test methods.

NOTE: The editions of reference documents given above are those which have been adopted by the UBAtc for its specific use when establishing this ETA. When new editions become available, these supersede the editions mentioned only when confirmed by the UBAtc.

Annex II : Fire resistance performances and assembly methods for uses of boards covered by this ETA

A 2.1 Overview of fire resistance performances for MASTERBOARD® assemblies

The fire protective assemblies in Table A.2.1 have been assessed within the framework of this ETA. Assemblies installed according to the provisions given in this annex are covered by this ETA.

Table A 2.1

| Assemblies assessed within the framework of this ETA | Classification according to EN 13501-2 | Test Standard | Intended use category according to ETAG 018 | Installation details | Date of addition to this ETA |
|---|--|---------------|---|----------------------|------------------------------|
| Covering consisting of MASTERBOARD® fire protective boards (nominal thickness 8 mm) | K ₁ 10 K ₂ 10 | EN 14135:2004 | Type 10 | Annex 2.1 | 2009-12-02 |

Annex 2.2: Specification of a covering (intended use type 10), composed of MASTERBOARD® fire protective board (thickness 8 mm), and contributing to the fire protection ability of a substrate

A2.2.1 Date of addition to this ETA

This annex was added ETA 09/0250 on 2009-12-02. This assembly was not covered by this ETA prior to the addition of this annex.

A2.2.2 Classification

The assembly described in this annex has been tested according to EN14135:2004 and classified K₁ 10 and K₂ 10 in accordance with EN 13501-2.

A2.2.3 Installation requirements

The installation provisions given in paragraph 2.2.2 of this ETA shall be taken into account.

A2.2.4 Supporting structure

The protected substrate shall meet the specifications listed in Table A.2.2.1.

The covering shall be mounted directly on the substrate. A cavity is not necessary.

The covering can be as well in horizontal, vertical or in sloped application.

Table A2.2.1

| Element | Requirement | Characteristic of substrate |
|----------------|--------------------|------------------------------------|
| Substrate | K ₁ 10 | Density ≥ 300 kg/m ³ |
| Substrate | K ₂ 10 | All substrates |

A2.2.5 Covering by fire protective boards

The MASTERBOARD® fire protective boards (thickness 8 mm) are fixed to the substrate with galvanized steel screws (gypsum board screws for use in wet rooms) with minimum dimensions of Ø 4,2 x 41 mm at ≤ 300 mm centres in the longest direction; distance from the edge ca 50 mm and at ≤ 580 mm centres in the shortest direction; distance from the edge ca 20 mm. The boards are butt jointed.

Specifications for the components are given in Table A2.2.2.

Table A2.2.2

| Element | Identification | Characteristics | Mounting and fixing |
|----------------|---|--|--|
| Boards | MASTERBOARD® | Width: 1200 mm Height: 2500 mm Thickness: ≥ 8 mm | Fixed directly to the substrate |
| Screws | Galvanized steel screws according to prEN 14566 or equivalent | ≥ Ø 4,2 x 41 mm | Used for fixing of the boards at ≤ 300 mm centres in the length and ≤ 580 mm centres in the width. |

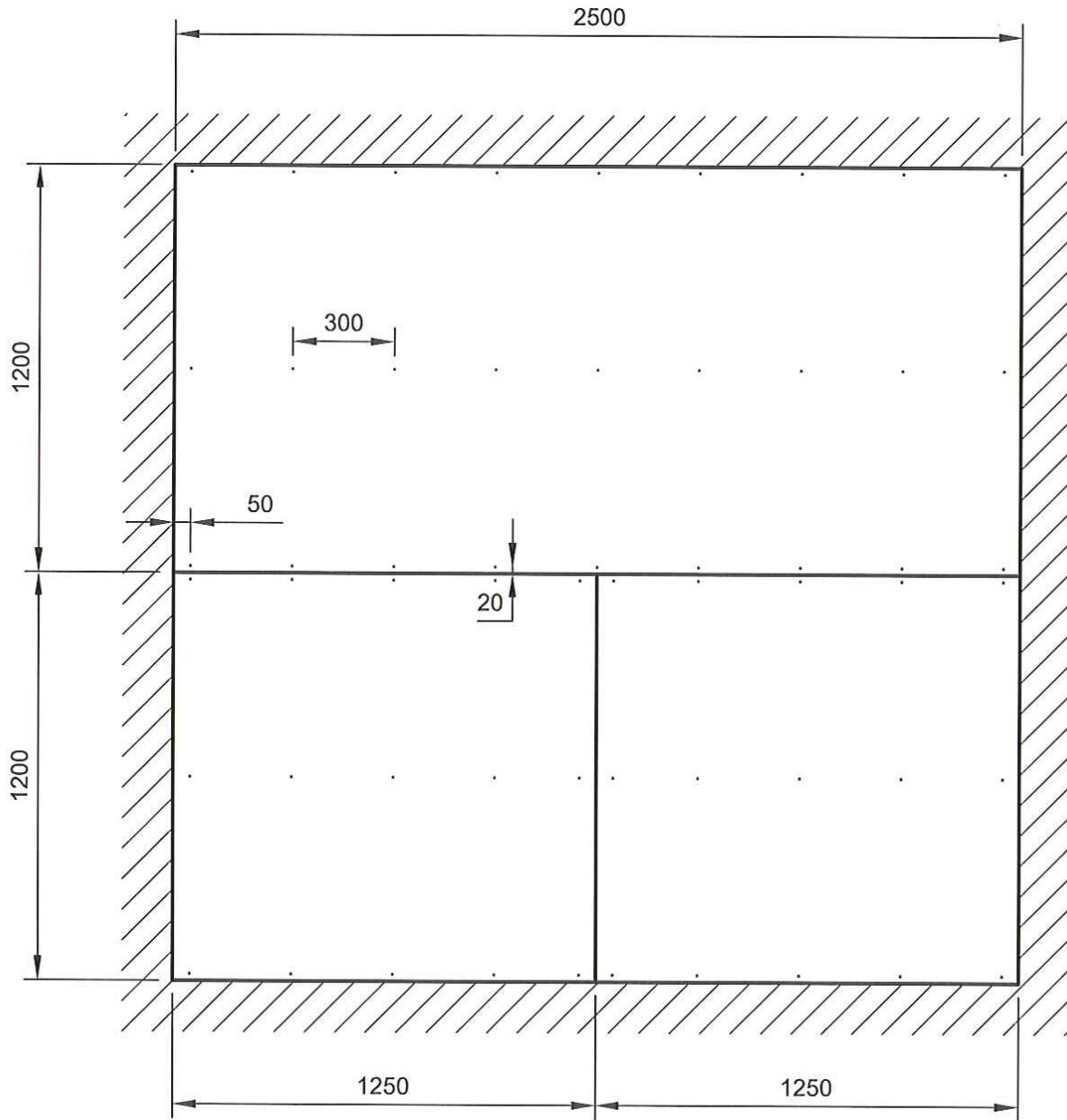
A2.2.6 Joints

No finishing of the joints is necessary;

A2.2.8 Details

All details (connections) shall be executed as presented in the figures in paragraph A2.2.9.

A2.2.9 Figures



Key

MASTERBOARD®, thickness ≥ 8 mm