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GUIDELINE FOR
EUROPEAN TECHNICAL APPROVAL
of

Watertight covering kits for wet room floors and or walls

Annex I Mounting and fixing rules for the reaction to fire testing

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Annex I

1. Reaction to fire: Mounting and fixing provisions

1.1 Terminology

Module:

A sample of the kit fully reflecting all components (e.g. board, frame, fasteners etc.) in the kit cut to fit the size of the test rig.

1.2 Mounting and fixing in accordance with EN 13823

1.2.1 Dimensions of the test rig

The test rig consists of a corner with a long (1000 ± 5 mm) and a short (495 ± 5 mm) wing. The long wing consists of 2 modules, with one vertical and one horizontal module-to-module joint in between. All modules shall be tested vertically. In accordance with EN 13823 clause 5.1 the dimensions of the specimens shall be:

Assembly dimensions (mm – nominally)		
	Length	Height
Short wing	495	1500
Long wing (see figure I.1)	200 + t	1500
	800 – t	1500
Where t = thickness of the kit		

1.2.2 Test specimen

The watertight board kit shall be mounted and fixed according to EN 13823.

The test specimen shall fully represent all the envisaged components in the end use condition as specified by the applicant, as e.g.:

- facings and/or coatings,
- adhesives,
- sealing compounds,
- collars,
- primers
- joint profiles
- fasteners

Further details are stated in clause 1.3.

The assembly including corner and joint details shall be in accordance with the end use conditions as specified by the applicant.

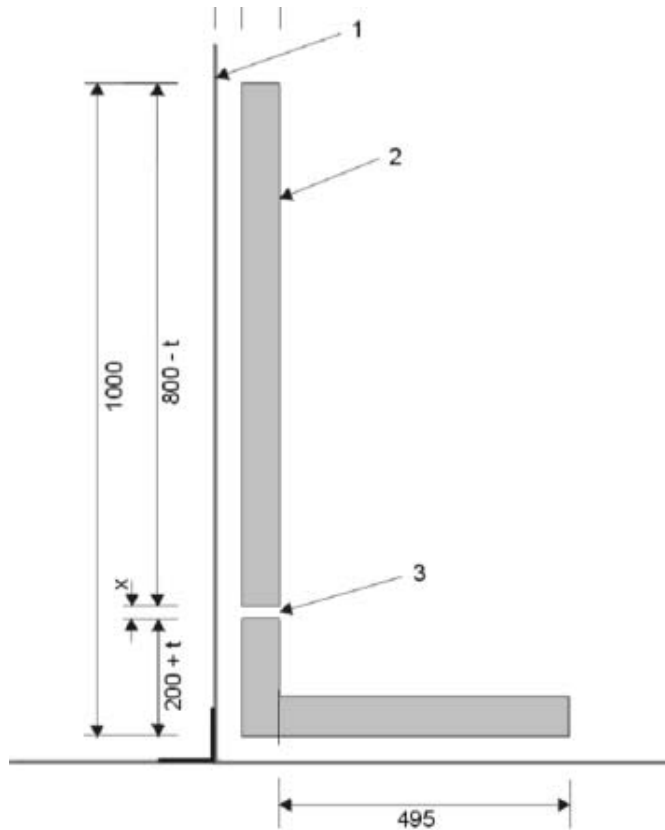
The type and dimensions of materials and products used, the dimensions and location of possible fixings etc shall be recorded in the test report.

The manner in which the product is tested, and the number of different tests conducted, has a direct consequence upon the scope of the applicability of the classification(s) to potential variations in product properties and the range of end use conditions that may be adopted in practice (see also clause 1.3).

1.2.3 Mounting and fixing of the test assembly

The mounting and fixing of the test specimens shall be in accordance with EN 13823 and shall be fully representative of the product's end use conditions, e.g. fixed to a substrate, with or without cavity, ventilated or non-ventilated or free-standing.

The assembly may be prepared, and fixed together, away from the test chamber. The complete assembly can then be transported to the chamber.



Key

- 1 Backing board
- 2 Watertight board kit sample
- 3 Joint
- t Thickness of watertight board kit sample
- x Joint width

Figure I.1:
Model test assembly for end-use application with cavity (schematic drawing)
For other end-uses specifications as per clauses 1.2.3 and 1.3.1 to 1.3.7 have to be considered

1.3 End Use Application

When determining the testing programme all potential variations in product properties and in its potential end-use condition need to be considered. For this type of construction product, the following provides guidance on the potential end-use application rules that may apply depending on the testing programme undertaken.

1.3.1 Influence of thickness of the watertight boards

The influence of increased thickness of the watertight boards shall be determined as well as the influence of the use of multi-layer boards. Tests shall be conducted, as a minimum, on the watertight boards at minimum and maximum thickness of the thickness range. If the thickness range reaches the same classification then that classification shall apply to all thicknesses within that range.

1.3.2 Influence of density / mass per unit area

The influence of density / mass per unit area shall be determined. Therefore, tests have to be conducted at minimum and maximum density / mass per unit area for each tested thickness.

1.3.3 Influence of air space and substrate

The dimension of the cavity behind the tested watertight board has to be in accordance with EN 13823 and representative of the end use, e.g. in respect of it either being ventilated or non-ventilated. A tested depth of 40 mm represents cavity dimensions equal to or greater than 40 mm. If a cavity in end use has a depth of less than 40 mm this dimension has to be tested separately.

Tests performed on timber framework also apply to metal framework. Where the applicant claims a better performance with a metal frame or where the applicant does not use timber framework, the test can also be performed on a metal frame.

Metal frames shall be made from components detailed in EN 14195. Wooden frames shall be made from vertical members (40 ± 1) mm x (40 ± 1) mm and horizontal members (20 ± 1) mm x (40 ± 1) mm. They shall be fixed by nails or screws.

The material forming the opposite face of the air space behind the watertight board in the EN 13823 test determines the type of element in front of which the watertight board can be used.

If in end use the watertight board is mounted directly on a substrate the sample shall be tested with a representative substrate directly behind it.

EN 13238 gives guidance on appropriate substrates to represent the requested end-use situation in fire tests.

1.3.4 Influence of insulation product

If in the SBI test the standard mineral wool substrate according to EN 13238 is used this represents end use insulation products of reaction to fire class A1 or A2-s1,d0 which have a density and thickness equal to or greater than the one of the insulation product tested.

The use of any other type of insulation material with reaction to fire class A2-s2,d0 or below, is to be tested separately, whereas the lowest and the greatest thickness and density of the product is to be taken into account.

1.3.5 Influence of surface finishes and colour

The classification of the watertight board will be influenced by the presence and nature of any applied surface finish, e.g. paint or wall-covering. The external surface of the kit used in the test assembly shall always include all facings and/or coatings that are applied to the product, as placed on the market. Each facing and/or coating shall be considered.

To determine the colour with the highest content of organic material the PCS-value per unit area according to EN ISO 1716 shall be confirmed. The colour with the highest PCS-value per unit area shall then be used for testing.

1.3.6 Influence of joint seals, joint profiles and collars

The watertight board has to be tested together with any type of joint seal foreseen in end-use.

Where a national regulation exists, a separate additional classification shall be provided for any material included as a jointing material or cover strip. This may not be required to have the same classification as the watertight board surface itself, dependent upon the national requirements.

1.3.7 Influence of means of fixing

Test results achieved with metal fasteners like e.g. screws are applicable to all end-use situations where metal fasteners are used with spacing equal to or smaller than the one tested.

Test results from specimens where the watertight board has been glued to the substrate are only valid for the same type of adhesive with the same or less amount of adhesive applied. No grouping is possible.

1.3.8 General note

If different classifications are obtained when investigating the influence of variation in product properties or end use application, additional testing shall be conducted to redefine the product family to which any single classification applies.

2. Mounting and fixing in accordance with EN ISO 11925-2

Where, in end use conditions, the watertight boards are fixed to substrates the test specimen shall represent the end use conditions. Substrate shall be selected in accordance with EN 13238.

The tests shall be conducted to surface exposure and to edge exposure. The edges of the test specimen shall not be covered (cut edges). For multi-layered boards or if the boards are glued on a substrate the specimen shall be rotated by 90 degrees around its vertical axis. EN ISO 11925-2 clause 7.3.3.2.3 is to be taken into account.

The rules according to EN ISO 11925-2 apply. Testing shall further be in line with the rules as stated in clauses 1.3.1, 1.3.2, 1.3.4, 1.3.5, 1.3.6 and 1.3.7 of this Annex.