

## EUROPEAN ASSESSMENT DOCUMENT

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# DRY FLOATING FLOORING KIT BASED ON PREFABRICATED INTERLOCKED UNITS MADE OF CERAMIC TILES AND RUBBER MATS

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This European Assessment Document (EAD) has been developed taking into account up-to-date technical and scientific knowledge at the time of issue and is published in accordance with the relevant provisions of Regulation (EU) No 305/2011 as a basis for the preparation and issuing of European Technical Assessments (ETA).

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# 1 SCOPE OF THE EAD

## 1.1 Description of the construction product

Dry floating flooring kit based on prefabricated interlocked units made of ceramic tiles and rubber mats, composed of the following components:

- prefabricated units formed by ceramic tiles glued on rubber mats made of natural or synthetic rubber (e.g. EPDM). The rubber mats have jigsaw patterns that enable the interlocking between prefabricated units. The rubber mats could also come from recycled rubber (e.g. from used tyres, medical waste material) whereas the glue is an acrylic adhesive.
- grout based on acrylic resin for jointing the flooring units;
- a two-faced acrylic based adhesive strip, used to fix the units placed in the perimeter of each room.

The composite units are fully supported on the floor without any adhesive.

Figures with schematic views of examples of prefabricated units are enclosed in Annex 1.

The product is not covered by a harmonised European standard (hEN).

Concerning product packaging, transport, storage, maintenance, replacement and repair it is the responsibility of the manufacturer to undertake the appropriate measures and to advise his clients on the transport, storage, maintenance, replacement and repair of the product as he considers necessary.

It is assumed that the product will be installed according to the manufacturer's instructions or (in absence of such instructions) according to the usual practice of the building professionals.

Relevant manufacturer's stipulations having influence on the performance of the product covered by this European Assessment Document shall be considered for the determination of the performance and detailed in the ETA.

## 1.2 Information on the intended use(s) of the construction product

### 1.2.1 Intended use(s)

This EAD covers the following intended uses and (assembled) systems:

- Dry and wet indoor areas of residential and commercial buildings.
- New or retrofit buildings.

The kit may contribute to the impact sound insulation of floors.

The following intended uses are excluded:

- Swimming pools.
- Storage and industrial areas, as well as trafficked and car park areas (categories E1, E2, F and G, according to EN 1991-1-1, respectively).

### 1.2.2 Working life/Durability

The assessment methods included or referred to in this EAD have been written based on the manufacturer's request to take into account a working life of the dry floating flooring kit for the intended use of 25 years when installed in the works. These provisions are based upon the current state of the art and the available knowledge and experience.

When assessing the product the intended use as foreseen by the manufacturer shall be taken into account. The real working life may be, in normal use conditions, considerably longer without major degradation affecting the basic requirements for works<sup>1</sup>.

The indications given as to the working life of the construction product cannot be interpreted as a guarantee neither given by the product manufacturer or his representative nor by EOTA when drafting this EAD nor by the Technical Assessment Body issuing an ETA based on this EAD, but are regarded only as a means for expressing the expected economically reasonable working life of the product.

### 1.3 Specific terms used in this EAD

The following specific terms used in this EAD are obtained from the EN 12431 and from the EOTA TR 037, in which they are mentioned and defined.

#### 1.3.1 $CR_{absolute,n}$ , $CR_{relative,n}$

$CR_{absolute,n}$ : absolute creep rate per decade.

$CR_{relative,n}$ : relative creep rate per decade.

#### 1.3.2 CRS

CRS: creep rate straightness.

#### 1.3.3 ER

ER: elastic recuperation.

#### 1.3.4 $\epsilon_{ct}$ , $\epsilon_t$

$\epsilon_{ct}$ : creep in compression (%).

$\epsilon_t$ : total relative reduction of thickness (%).

#### 1.3.5 $d_L$ , $d_B$

$d_L$ : thickness of a product under a load of 250 Pa.

$d_B$ : thickness of a product under a load of 2 kPa after the application of a supplementary load (48 kPa) during a short period of time.

#### 1.3.6 c

c: compressibility as difference between  $d_L$  and  $d_B$ .

## 2 ESSENTIAL CHARACTERISTICS AND RELEVANT ASSESSMENT METHODS AND CRITERIA

### 2.1 Essential characteristics of the product

#### 2.1.1 Essential characteristics of the assembled system

Table 1 shows how the performance of the dry floating flooring kit is assessed in relation to the essential characteristics.

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<sup>1</sup> The real working life of a product incorporated in a specific works depends on the environmental conditions to which that works is subject, as well as on the particular conditions of the design, execution, use and maintenance of that works. Therefore, it cannot be excluded that in certain cases the real working life of the product may also be shorter than referred to above.

**Table 1** Essential characteristics of the product and methods and criteria for assessing the performance of the product in relation to those essential characteristics.

No	Essential characteristic	Assessment method	Type of expression of product performance
<b>Basic Works Requirement 2: Safety in case of fire</b>			
1	Reaction to fire	2.2.1.1	Class
<b>Basic Works Requirement 4: Safety and accessibility in use</b>			
2	Slipperiness of floor finishes	2.2.1.2	Level
3	Thickness and compressibility of the rubber mat	2.2.1.3	Level
4	Presence of sharp or cutting edges	2.2.1.4	Description
5	Resistance to functional failure from soft body impact load	2.2.1.5	Level
<b>Basic Works Requirement 5: Protection against noise</b>			
6	Improvement of impact sound insulation	2.2.1.6	Level
7	Improvement of airborne sound insulation	2.2.1.7	Level
<b>Basic Works Requirement 6: Energy economy and heat retention</b>			
8	Thermal resistance	2.2.1.8	Level

### 2.1.2 Essential characteristics of the components of the dry floating flooring kit

The tables 1a, 1b and 1c show how the performances of the components (prefabricated units, grout and two-faced adhesive strip) of the dry flooring kit are assessed in relation to the essential characteristics.

**Table 1a** Essential characteristics of the prefabricated unit and methods and criteria for assessing the performance of the product in relation to those essential characteristics.

No	Essential characteristic	Assessment method	Type of expression of product performance
<b>Basic Works Requirement 2: Safety in case of fire</b>			
9	Reaction to fire of the prefabricated unit	2.2.2.1	Class
<b>Basic Works Requirement 4: Safety and accessibility in use</b>			
10	Peel adhesion between tile and mat	2.2.2.2	Level
11	Breaking load and bending strength of the prefabricated unit	2.2.2.3	Level
12	Impact resistance of the prefabricated unit by measurement of the coefficient of restitution	2.2.2.4	Level
13	Resistance to punctual loads of the prefabricated unit	2.2.2.5	Level
14	Peel adhesion between tile and mat after thermal and water ageing	2.2.2.6	Level

No	Essential characteristic	Assessment method	Type of expression of product performance
15	Dimensional stability of the prefabricated unit	2.2.2.7	Level
16	Creep in compression of the prefabricated unit	2.2.2.8	Level
<b>Basic Works Requirement 6: Energy economy and heat retention</b>			
17	Thermal resistance of the prefabricated unit	2.2.2.9	Level

**Table 1b** Essential characteristics of the grout and methods and criteria for assessing the performance of the product in relation to those essential characteristics.

No	Essential characteristic	Assessment method	Type of expression of product performance
<b>Basic Works Requirement 2: Safety in case of fire</b>			
18	Reaction to fire of the grout	2.2.2.10	Class
19	Water absorption of the grout	2.2.2.11	Level
<b>Basic Works Requirement 4: Safety and accessibility in use</b>			
20	Resistance to abrasion of the grout	2.2.2.12	Level
21	Chemical resistance of the grout	2.2.2.13	Level

**Table 1c** Essential characteristics of the two-faced adhesive strip and methods and criteria for assessing the performance of the product in relation to those essential characteristics.

No	Essential characteristic	Assessment method	Type of expression of product performance
<b>Basic Works Requirement 2: Safety in case of fire</b>			
22	Reaction to fire of the two-faced adhesive strip	2.2.2.14	Class
<b>Basic Works Requirement 4: Safety and accessibility in use</b>			
23	Peel adhesion of the two-faced adhesive strip	2.2.2.15	Level
24	Peel adhesion after thermal and water ageing	2.2.2.16	Level

## 2.2 Methods and criteria for assessing the performance of the product in relation to essential characteristics of the product

### 2.2.1 Methods and criteria for assessing the performance of the assembled system in relation to essential characteristics of the assembled system

#### 2.2.1.1 Reaction to fire

The dry floating flooring kit shall be tested, using the test method(s) relevant for the corresponding reaction to fire class, in order to be classified according to EN 13501-1.

### 2.2.1.2 Slipperiness of floor finishes

The slipperiness of the assembled system shall be obtained from the slipperiness of the ceramic tile according EN 14411.

The slipperiness of the assembled system according to EN 14411 shall be expressed in the ETA by means of a level.

### 2.2.1.3 Thickness and compressibility of the rubber mat

The thickness, the compressibility and the difference between the maximum and the minimum thickness shall be determined in accordance with EN 12431 and the following test conditions:

- The specimens shall consist of rubber mats.
- The compressibility (c) shall be determined as difference between  $d_L$  and  $d_B$ .

The thickness, the compressibility and the difference between the maximum and the minimum thickness shall be expressed in the ETA by means of a level.

### 2.2.1.4 Presence of sharp or cutting edges

For the assessment of the presence of sharp or cutting edges, no tests are necessary. The product specification, the product itself and trial installations shall be examined to confirm that sharp or cutting edges are not present at, for example, corners, protrusions, joints or trims.

The presence or the absence of sharp or cutting edges shall be expressed in the ETA by means of a description.

### 2.2.1.5 Resistance to functional failure from soft body impact loads

The resistance to functional damage produced by soft body impact loads shall be tested in accordance with the EOTA Technical Report 001 and the specific test conditions:

- The assembled system shall be fully supported.
- The impact energy will be defined by the applicant of the ETA

The assessment is favourable when:

- No penetration of the face of the test specimen occurs.
- No degradation occurs: no visible (to the naked eyes) cracks, depressions, protuberances or any other defects in the materials, which may influence the functionality of the assembled system. Deformations which only affect the appearance are allowed.

The impact energy will be expressed in the ETA by means of a level.

### 2.2.1.6 Improvement of impact sound insulation

The improvement of impact sound insulation provided by the dry floating kit shall be determined in accordance with EN ISO 10140-3, following the indications in annex H of EN 10140-1.

The standardized reference floor used in the tests shall be selected in accordance with annex C of EN 10140-5.

The improvement of the impact sound insulation shall be expressed in the ETA by means of a level according to EN ISO 717-2.

### 2.2.1.7 Improvement of airborne sound insulation

The improvement of airborne sound insulation provided by the dry floating flooring kit shall be determined in accordance with EN ISO 10140-2, following the indications in annex G of EN 10140-1.

The standardised reference floor used in the tests shall be selected in accordance with annex B of EN 10140-5.



The improvement of the airborne sound insulation shall be expressed in the ETA by means of a level according to EN ISO 717-1.

#### 2.2.1.8 Thermal resistance

The thermal resistance of the assembled system shall be determined by calculation in accordance with EN ISO 6946, or by testing in accordance with EN ISO 8990.

The thermal resistance shall be expressed in the ETA by means of a level.

## **2.2.2 Methods and criteria for assessing the performance of the components of the assembled system in relation to essential characteristics**

### 2.2.2.1 Reaction to fire of the prefabricated units

The prefabricated units shall be tested, using the test method(s) relevant for the corresponding reaction to fire class, in order to be classified according to EN 13501-1.

### 2.2.2.2 Peel adhesion between tile and mat

The peel adhesion between tile and rubber mat shall be determined in accordance with EN ISO 8510-2.

The peel adhesion shall be expressed in the ETA by means of a level.

### 2.2.2.3 Breaking load and bending strength of the prefabricated unit

The breaking load and bending strength of the prefabricated units shall be determined in accordance with EN ISO 10545-4.

The mean values of the breaking load and of the bending strength shall be expressed in the ETA by means of a level.

### 2.2.2.4 Impact resistance of the prefabricated unit by measurement of the coefficient of restitution

The impact resistance of the prefabricated units shall be determined by the measurement of the coefficient of restitution in accordance with EN ISO 10545-5 and the specific test conditions:

- The specimens shall be fully supported -and not glued- to the concrete.

The mean value of the coefficient of restitution shall be expressed in the ETA by means of a level.

### 2.2.2.5 Resistance to punctual loads of the prefabricated unit

The resistance to punctual loads of the prefabricated units shall be determined in accordance with section 5.2 of EN 12825 and the specific test conditions:

- The prefabricated unit shall be fully supported.
- A stabilisation preload shall not be applied.
- The load shall be only applied in the centre of the prefabricated unit. The test shall be performed on 3 different specimens.

The mean value of the breaking load shall be expressed in the ETA by means of a level.

### 2.2.2.6 Peel adhesion between tile and mat after thermal and water ageing

The peel adhesion between tile and rubber mat after thermal and water ageing shall be determined in accordance with the following:

- Thermal and water ageing following the provisions of cycle D9 of EN ISO 9142 (immersion in boiling water followed by drying, dry heat and reimmersion in boiling water). One cycle is required.
- The peel adhesion between tile and rubber mat shall be determined on the aged specimens in accordance with EN ISO 8510-2.

The variation between the peel adhesion before and after ageing shall be determined and shall be expressed in the ETA by means of a level. Results of peel adhesion before ageing shall be taken from tests according to section 2.2.2.2.

#### 2.2.2.7 Dimensional stability of the prefabricated unit

The dimensional stability of the prefabricated unit shall be determined in accordance with EN 1604 and the specific test conditions:

- During 48 h at 70°C and 90% RH.

The dimensional stability of the prefabricated unit shall be expressed in the ETA by means of a level.

#### 2.2.2.8 Creep in compression of the prefabricated unit

The absolute and relative creep rate per decade ( $CR_{\text{absolute},n}$  and  $CR_{\text{relative},n}$ ), creep rate straightness (CRS) and elastic recuperation (ER) shall be determined in accordance with EOTA TR 037 and the specific following test conditions:

- The dimensions of the specimens will be the same as those used in the compression behaviour test.
- 3 specimens of the prefabricated unit will be tested for each load compression value.

The mean values of the  $CR_{\text{absolute},n}$ ,  $CR_{\text{relative},n}$ , CRS and ER shall be expressed in the ETA by means of a level.

#### 2.2.2.9 Thermal resistance of the prefabricated unit

The thermal resistance (R-value) and the corresponding thermal transmittance (U-value) of the prefabricated unit shall be calculated in accordance with EN ISO 6946, using the design thermal conductivity values for materials according to EN 12524, relevant harmonised European product standards, or conductivities determined according to EN ISO 10456. Alternatively the thermal resistance may be verified by testing in accordance with EN ISO 8990.

The thermal resistance value R in  $\text{m}^2\cdot\text{K}/\text{W}$  and the corresponding thermal transmittance U of the prefabricated unit shall be expressed in the ETA by means of a level.

#### 2.2.2.10 Reaction to fire of the grout

The grout shall be tested, using the test method(s) relevant for the corresponding reaction to fire class, in order to be classified according to EN 13501-1.

#### 2.2.2.11 Water absorption of the grout

The water absorption of the grout shall be determined in accordance with EN 12808-5. It shall be possible to reduce proportionally the dimensions of the specimens mentioned in EN 12808-5 in order to make the test feasible.

The amount of water absorbed shall be expressed in the ETA by means of a level.

#### 2.2.2.12 Resistance to abrasion of the grout

The resistance to abrasion of the grout shall be determined in accordance with EN 12808-2.

The resistance to abrasion of the grout shall be expressed in the ETA by means of a level.

#### 2.2.2.13 Chemical resistance of the grout

The chemical resistance of the grout shall be determined in accordance with EN 12808-1.

The chemical resistance of the grout shall be expressed in the ETA by means of a level.

#### 2.2.2.14 Reaction to fire of the two-faced adhesive strip

The two-faced adhesive strip shall be tested, using the test method(s) relevant for the corresponding reaction to fire class, in order to be classified according to EN 13501-1.

The two-faced adhesive strip shall be classified according to EN 13501-1.

### 2.2.2.15 Peel adhesion of the two-faced adhesive strip

The peel adhesion of the two-faced adhesive strip shall be tested, in accordance with the method 3 and Annex A of EN 1939 and the following specific test conditions:

- Test temperature: will be chosen by the ETA applicant.
- Six specimens shall be tested.

The peel adhesion of the two-faced adhesive strip shall be expressed in the ETA by means of a level.

### 2.2.2.16 Peel adhesion of the two-faced adhesive strip after thermal and water ageing

The peel adhesion of the two-faced adhesive strip after thermal and water ageing shall be determined in accordance with the following:

- Thermal and water ageing following the provisions of cycle D9 of EN ISO 9142 (immersion in boiling water followed by drying, dry heat and reimmersion in boiling water). One cycle is required.
- The peel adhesion of the two-faced adhesive shall be determined on the aged specimens in accordance with the method 3 and Annex A of EN 1939.

The variation between the peel adhesion before and after ageing shall be determined and shall be expressed in the ETA by means of a level. Results of peel adhesion before ageing shall be taken from tests according to section 2.2.2.15.

## 3 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE

### 3.1 System(s) of assessment and verification of constancy of performance to be applied

For the products covered by this EAD the applicable European legal act is: Decision 1997/808/CE.

The system is: **4**

In addition, with regard to reaction to fire for products covered by this EAD the applicable European legal act is: Decision 2006/190/EC.

The systems are: **1, 3 or 4.**

### 3.2 Tasks of the manufacturer

The cornerstones of the actions to be undertaken by the manufacturer of the product in the procedure of assessment and verification of constancy of performance are laid down in Table 2.

**Table 2 Control plan for the manufacturer; cornerstones**

No	Subject/type of control	Test or control method	Criteria, if any	Minimum number of samples	Minimum frequency of control
<b>Factory production control (FPC)</b> [including testing of samples taken at the factory in accordance with a prescribed test plan]					
<b>Prefabricated units</b>					
1	Geometric characteristics of the prefabricated unit	3.4.1	3.4.1	-----	Daily
2	Water absorption and moulding method of the ceramic tile	3.4.2	3.4.2	Testing is not required	Each delivery

No	Subject/type of control	Test or control method	Criteria, if any	Minimum number of samples	Minimum frequency of control
3	Thickness and compressibility of the rubber mat	3.4.3	3.4.3	Testing is not required	Each delivery
4	Mass per unit area of the rubber mat	3.4.4	3.4.4	Testing is not required	Each delivery
5	Peel adhesion between tile and mat	2.2.2.2	2.2.2.2	Acc. to clause 5.3 of EN ISO 8510-2	Annually
6	Peel adhesion between tile and mat after thermal and water ageing	2.2.2.6	2.2.2.6	Acc. to clause 5.3 of EN ISO 8510-2	Annually
7	Origin of the rubber	3.4.5	3.4.5	Testing is not required	Each delivery
8	Type of adhesive between tile and mat	3.4.6	3.4.6	Testing is not required	Each delivery
<b>Grout</b>					
9	Water absorption of the grout	2.2.2.11	2.2.2.11	Testing is not required	Each delivery
10	Flexural strength of the grout	3.4.7	3.4.7	Testing is not required	Each delivery
11	Compressive strength of the grout	3.4.8	3.4.8	Testing is not required	Each delivery
12	Shrinkage of the grout	3.4.9	3.4.9	Testing is not required	Each delivery
13	Type of grout	3.4.10	3.4.10	Testing is not required	Each delivery
<b>Two-faced adhesive strip</b>					
14	Geometric characteristics of the two-faced adhesive strip	3.4.11	3.4.11	Testing is not required	Each delivery
15	Type of adhesive of the two-faced adhesive strip	3.4.12	3.4.12	Testing is not required	Each delivery

### 3.3 Tasks of the notified body

The cornerstones of the actions to be undertaken by the notified body in the procedure of assessment and verification of constancy of performance for the dry floating flooring kit are laid down in Table 3.

**Table 3 Control plan for the notified body; cornerstones**

No	Subject/type of control	Test or control method	Criteria, if any	Minimum number of samples	Minimum frequency of control
1	Reaction to fire	2.2.1.1	2.2.1.1	2.2.1.1	----
<b>Initial inspection of the manufacturing plant and of factory production control</b> <i>(for system 1 only)</i>					
2	The notified body shall ascertain that, in accordance with the control plan, the manufacturing plant of the single product manufacturer, in particular personnel and equipment, and the factory production control are suitable to ensure a continuous and orderly manufacturing of the element according to the European Technical Assessment.				----
<b>Continuous surveillance, assessment and evaluation of factory production control</b> <i>(for system 1 only)</i>					
3	It shall be verified that the system of factory production control and the specified manufacturing process are maintained taking account of the control plan.				Once per year

### 3.4 Special methods of control and testing used for the verification of constancy of performance

#### 3.4.1 Geometric characteristics of the prefabricated unit

The following dimensions of the prefabricated unit shall be measured in accordance with EN ISO 10545-2:

- Length and width.
- Thickness.
- Squareness.
- Orthogonality.
- Flatness

The dimensions shall be expressed by means of a level.

#### 3.4.2 Water absorption and moulding method of the ceramic tile

The water absorption and the moulding method of the tile shall be taken from the documents accompanying the CE marking of the ceramic tile.

The water absorption and the moulding method shall be expressed in accordance with the relevant annex -A to M- of EN 14411.

#### 3.4.3 Thickness and compressibility of the rubber mat

The thickness, the compressibility and the difference between the maximum and the minimum thickness of the rubber mat shall be taken from the documentation of the supplier of the rubber, in which  $d_L$  and  $d_B$  shall be determined on at least three test specimens in accordance with EN 12431 with the following specific conditions:

- The compressibility  $c$  shall be determined as difference between the mean value of thickness  $d_L$  and  $d_B$ .

The mean value of the thickness  $d_L$  and  $d_B$ , as well as the compressibility  $c$  shall be expressed by means of a level.

#### **3.4.4 Mass per unit area of the rubber mat**

The mass per unit area of the rubber mat shall be taken from the documentation of the supplier, determined in accordance with EN 1602 on samples in which the thickness  $d_L$  was previously determined.

The mean value of the mass per unit area of the rubber mat shall be expressed by means of a level.

#### **3.4.5 Origin of the rubber**

The origin of the rubber used in the rubber mat shall be taken from the documentation of the supplier and shall be expressed by means of a description.

#### **3.4.6 Type of adhesive between tile and mat**

The type of adhesive used between tile and mat shall be taken from the documentation of the supplier and shall be expressed by means of a description.

#### **3.4.7 Flexural strength of the group**

The flexural strength of the grout shall be taken from the documentation of the supplier, determined in accordance with EN 12808-3. It shall be possible to reduce proportionally the dimensions of the specimens mentioned in the EN 12808-3 in order to make the test feasible.

The mean value of the flexural strength of the grout shall be expressed by means of a level.

#### **3.4.8 Compressive strength of the grout**

The compressive strength of the grout shall be taken from the documentation of the supplier, determined in accordance with EN 12808-3. It shall be possible to reduce proportionally the dimensions of the specimens mentioned in the EN 12808-3 in order to make the test feasible.

The mean value of the compressive strength of the grout shall be expressed by means of a level.

#### **3.4.9 Shrinkage of the grout**

The shrinkage of the grout shall be taken from the documentation of the supplier, determined in accordance with EN 12808-4. It shall be possible to reduce proportionally the dimensions of the specimens mentioned in the EN 12808-4 in order to make the test feasible.

The mean value of the shrinkage of the grout shall be expressed by means of a level.

#### **3.4.10 Type of grout**

The type of the grout shall be taken from the documentation of the supplier and shall be expressed by means of a description.

#### **3.4.11 Geometric characteristics of the two-faced adhesive strip**

The following dimensions of the two-faced adhesive strip shall be taken from the documentation of the supplier:

- Width, as the mean value of 4 measurements on 1 m length of adhesive strip. The 4 measurements shall be equidistant along the length, at 0,25 m intervals.
- Thickness, in accordance with EN 1942.

The dimensions shall be expressed by means of a level.

#### **3.4.12 Type of adhesive of the two-faced adhesive strip**

The type of adhesive used in the two-faced adhesive strip shall be taken from the documentation of the supplier and shall be expressed by means of a description.

## 4 REFERENCE DOCUMENTS

As far as no edition date is given in the list of standards thereafter, the standard in its current version at the time of issuing the European Technical Assessment, is of relevance.

EN 1604	Thermal insulating products for building applications. Determination of dimensional stability under specified temperature and humidity conditions.
EN 1939	Self-adhesive tapes. Determination of peel adhesion properties.
EN 1942	Self-adhesive tapes. Measurement of thickness
EN 1991-1-1	Eurocode 1: Actions on structures. Part 1-1: General actions. Densities, self-weight, imposed loads for buildings.
EN 12431	Thermal insulating products for building applications. Determination of thickness for floating floor insulating products.
EN 12524	Building materials and products. Hygrothermal properties. Tabulated design values.
EN 12808-1	Grout for tiles. Part 1: Determination of chemical resistance of reaction resin mortars.
EN 12808-2	Grout for tiles. Part 2: Determination of resistance to abrasion.
EN 12808-3	Grout for tiles. Part 3: Determination of flexural and compressive strength.
EN 12808-4	Grout for tiles. Part 4: Determination of shrinkage.
EN 12808-5	Grout for tiles. Part 5: Determination of water absorption.
EN 13501-1:2007+A1	Fire classification of construction products and building elements. Part 1: Classification using data from reaction to fire tests.
EN 13888	Grout for tiles. Requirements, evaluation of conformity, classification and designation.
EN 14411	Ceramic tiles. Definitions, classification, characteristics and marking.
EN 29052-1	Acoustics. Determination of dynamic stiffness. Part 1: materials used under floating floors in dwellings.
EN ISO 717-1	Acoustics. Rating of sound insulation in buildings and of building elements. Part 1: Airborne sound insulation (ISO 717-1:1996).
EN ISO 717-2	Acoustics. Rating of sound insulation in buildings and of building elements. Part 2: Impact sound insulation (ISO 717-2:1996).
EN ISO 6946	Building components and building elements. Thermal resistance and thermal transmittance. Calculation method (ISO 6946:2007)
EN ISO 8510-2	Adhesives. Peel test for a flexible-bonded-to-rigid test specimen assembly. Part 2: 180 degree peel (ISO 8510-2:2006)
EN ISO 8990	Thermal insulation. Determination of steady-state thermal transmission properties. Calibrated and guarded hot box (SIO 8990:1994).

EN ISO 9142	Adhesives. Guide to the selection of standard laboratory ageing conditions for testing bonded joints (ISO 9142:2003).
EN ISO 10140-1	Acoustics. Laboratory measurement of sound insulation of building elements. Part 1: Application rules for specific products (ISO 10140-1:2010).
EN ISO 10140-3	Acoustics. Laboratory measurement of sound insulation of building elements. Part 3: Measurement of impact sound insulation.
EN ISO 10140-5	Acoustics. Laboratory measurement of sound insulation of building elements. Part 5: Requirements for test facilities and equipment (ISO 10140-5:2010).
EN ISO 10456	Building materials and products. Hygrothermal properties. Tabulated design values and procedures for determining declared and design thermal values (ISO 10456:2007)
EN ISO 10545-2	Ceramic tiles. Part 2: Determination of dimensions and surface quality (ISO 10545-2:1995, including Technical Corrigendum 1:1997).
EN ISO 10545-4	Ceramic tiles. Determination of modulus of rupture and breaking strength (ISO 10545-4:2004)
EN ISO 10545-5	Ceramic tiles. Determination of the impact resistance by measurement of coefficient of restitution (ISO 10545-5:1996 including Technical Corrigendum 1: 1996)
EN 12825	Raised access floors
EOTA TR 001	Determination of impact resistance of panels and panels assemblies.
EOTA TR 037	Test method for elastomeric insulating elements. Determination of creep.



**ANNEX 1 FIGURES OF EXAMPLES OF PREFABRICATED UNITS**



Figure 1: General view of the prefabricated unit.

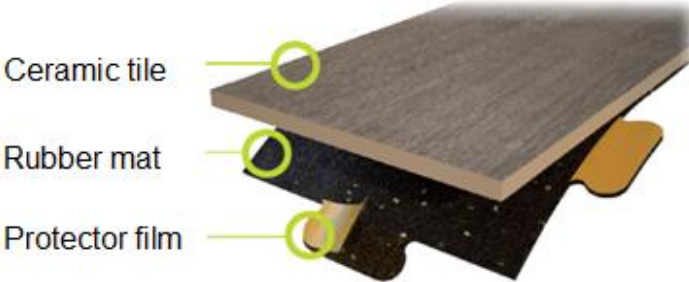


Figure 2: Composition of the prefabricated unit.