ITeC The Catalonia Institute of Construction Technology

Wellington 19
ES-08018 Barcelona
Tel. +34 93 309 34 04
qualprod@itec.cat
www.itec.cat

European Technical Assessment

ETA 15/0131
of 18.05.2016

General part

Trade name of the construction product	**Kerfloat®**
Product family to which the construction product belongs	Dry floating flooring kit based on prefabricated interlocked units made of ceramic tiles and rubber mats
Manufacturer	**AZULEV SAU** Av. Manuel Escobedo, 13 ES-12200 Onda (Castellón) Spain
Manufacturing plant(s)	Av. Manuel Escobedo, 13 ES-12200 Onda (Castellón) Spain
This European Technical Assessment contains	9 pages including 1 Annex which forms an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) 305/2011, on the basis of	European Assessment Document (EAD) 190002-00-0502. *Dry floating flooring kit based on prefabricated interlocked units made of ceramic tiles and rubber mats*. Edition April 2016
This version replaces	ETA 15/0131, issued on 22.07.2015

General comments

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document.

Specific parts of the European Technical Assessment

1 Technical description of the product

Kerfloat® is a dry floating flooring kit based on prefabricated interlocked units made of ceramic tiles and rubber mats. Kerfloat® is composed of the following components:

<table>
<tr><th>Component</th><th>Description</th></tr>
<tr><td>Prefabricated unit (ceramic tile glued on rubber mats)</td><td>
• Ceramic tiles: CE marked in accordance with EN 14411. Type BI_a ($E_b \leq 0,5\%$)
– Available nominal dimensions of the ceramic tiles (length x width x thickness):
– 60,0 cm x 60,0 cm x 10,0 mm
– 45,0 cm x 45,0 cm x 9,0 mm
– 15,0 cm x 60,0 cm x 10,0 mm
– 30,0 cm x 60,0 cm x 10,0 mm
– 15,0 cm x 90,0 cm x 11,5 mm
– Several surface finishes are possible.
• Rubber mats: made of recycled rubber coming from used tyres. Composition: 92 % of SBR[1] and EPDM[2], 8 % of mixing product. Trade name: Slycer3.
Jigsaw patterns in the mat enable the interlocking between prefabricated units.
An acrylic adhesive is used to glue the ceramic tiles and the rubber mats.
– Dimensions and tolerances:
– Thickness: 3,0 ± 0,3 mm
– Length and width: ± 0,6 %
– Surface mass: 2,46 kg/m^2 ± 5 %
– Density: 820 kg/m^3 ± 5 %
• Prefabricated units: fully supported on the floor without any adhesive.
– Thickness: sum of the ceramic tile and rubber mat thicknesses
– Length and width: ± 0,6 %
– Dimensions of the jigsaw patterns:
– Male: 65 mm length
– Female: 22 mm width
<table>
<tr><th>Format of the prefabricated unit</th><th>Number of jigsaw patterns</th></tr>
<tr><td>60 x 60</td><td>4 x 4</td></tr>
<tr><td>45 x 45</td><td>3 x 3</td></tr>
<tr><td>15 x 60</td><td>1 x 4</td></tr>
<tr><td>30 x 60</td><td>2 x 4</td></tr>
<tr><td>15 x 90</td><td>1 x 6</td></tr>
</table>
</td></tr>
<tr><td>Grout</td><td>
• Based on acrylic resin and used for joining the prefabricated units. The width of the joint varies from 1 mm to 3 mm.
Two products are possible (Elastimor and Kerastic Plus).
</td></tr>
</table>

[1] Styrene Butadiene Rubber.

[2] Ethylene Propylene Diene Monomer.

Component	Description
Two-faced adhesive strip	• A two-faced acrylic based adhesive strip, used to fix the units placed in the perimeter of each room. Trade name: Self 2005/75. – Dimensions: – Thickness: 0,09 mm – Width: 70,0 mm

Table 1: Components of Kerfloat® kit.

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

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

Kerfloat® is used as flooring in:

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

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).

The provisions made in this ETA are based on an assumed 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.

The indications given as to the working life of the construction product cannot be interpreted as a guarantee, but are regarded only as a means for choosing the appropriate products in relation to the expected economically reasonable working life of the works.

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

The assessment of Kerfloat® and its components for the intended use considering the basic requirements for construction works 2, 3, 4, 5 and 6 was performed following the EAD 190002-00-0502 (April 2016). Essential characteristics for the Kerfloat® kit are indicated in table 2, whilst the essential characteristics for the components of the kit (prefabricated unit, grout and two-faced adhesive strip) are indicated in tables 3, 4 and 5.

Basic requirement	Essential characteristic	Performance(*)
BWR 2	Reaction to fire	B_{FL}-s1
BWR 4	Slipperiness of floor finishes	R_d (slip resistance) value of the ceramic tile according to ENV 12633 and/or DIN 51130 for the relevant surface finish.
	Thickness and compressibility of the rubber mat	Thickness = 3,0 mm c = 0,3 mm
	Presence of sharp and cutting edges	No sharp or cutting edges.
	Resistance to functional failure from soft body impact load	1.200 N·m
BWR 5	Improvement of impact sound insulation	Not assessed
	Improvement of airborne sound insulation	Not assessed
BWR 6	Thermal resistance	Not assessed

(*) The performances of the Kerfloat® kit have been assessed –when necessary- for both types of grout. The same value is achieved for both types of grout if only one value is shown for a characteristic in the table.

Table 2: Performance of Kerfloat® kit.

Basic requirement	Essential characteristic	Performance		
BWR 2	Reaction to fire	See reaction to fire in table 2		
BWR 4	Peel adhesion between ceramic tile and rubber mat (N)	3,50		
	Breaking load (kN)	2,40		
	Bending strength (kN)	2,30		
	Impact resistance by measurement of the coefficient of restitution	0,20		
	Resistance to punctual loads (kN)	2,40		
	Peel adhesion between tile and mat after thermal and water ageing (N)	4,60		
	Dimensional stability	$\Delta\varepsilon_\ell$ = 0,0 %		
		$\Delta\varepsilon_b$ = 0,0 %		
		$\Delta\varepsilon_d$ = 0,0 %		
	Creep on compression	Load: 125 kN/m^2		
		n	$CR_{absolute,n}$ (mm)	$CR_{relative,n}$ (%)
		1	---	-2,03

		2	-0,43	-1,50
		3	-0,23	-1,06
		4	-0,17	-0,86
		5	-0,14	-0,73
		CRS = 111,4 %		
		ER_{30} = 98,7 %		
		ER_{240} = 99,0 %		
		$CR_{absolute,n}$: Absolute creep rate, for n decades.		
		$CR_{relative,n}$: Relative creep rate, for n decades.		
		CRS: Creep rate straightness.		
		ER: Elastic recuperation.		
BWR 6	Thermal resistance	Not assessed		

Table 3: Performance of the prefabricated unit.

Basic requirement	**Essential characteristic**	**Performance**			
		Kerastic Plus		Elastimor	
BWR 2	Reaction to fire	See reaction to fire in table 2			
BWR 3	Water absorption (g)	W_{m30}	< 0,5	W_{m30}	< 0,5
		W_{m240}	< 0,5	W_{m240}	≤ 0,5
BWR 4	Resistance to abrasion (mm^3)	86		131	
	Chemical resistance	Not assessed		Not assessed	

Table 4: Performance of the grout.

Basic requirement	**Essential characteristic**	**Performance**
BWR 2	Reaction to fire	See reaction to fire in table 2
BWR 4	Peel adhesion (N)	5,60
	Peel adhesion after thermal and water ageing (N)	6,70

Table 5: Performance of the two-faced adhesive strip.

3.1 Essential characteristics of the product

3.1.1 General

The dry floating flooring kit and its components correspond to the specifications given in tables 2, 3, 4 and 5.

3.2 Assessment methods

3.2.1 General

The assessment of Kerfloat® and its components for the intended use considering the basic requirements for construction works 2, 3, 4, 5 and 6 of Regulation (EU) Nº 305/2011 has been made in accordance with the European Assessment Document (EAD) 190002-00-0502 *Dry floating flooring kit based on prefabricated interlocked units made of ceramic tiles and rubber mats.*

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

For the assessment and verification of constancy of performance the following systems (see EC delegated regulation (EU) No 568/2014 amending Annex V to Regulation (EU) 305/2011) apply to the dry floating flooring kit:

- system 4 in general
- system 3 with regard to reaction to fire.

5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD

All the necessary technical details for the implementation of the AVCP system are laid down in the *Control Plan* deposited with the ITeC[3] and the factory production control shall be in accordance with it (the Control Plan specifies the type and frequency of checks/tests conducted during production and on the final product).

Products not manufactured by the kit manufacturer shall also be controlled according to the Control Plan.

Where materials/components are not manufactured and tested by the supplier in accordance with agreed methods, then they shall be subject to suitable checks/tests by the kit manufacturer before acceptance.

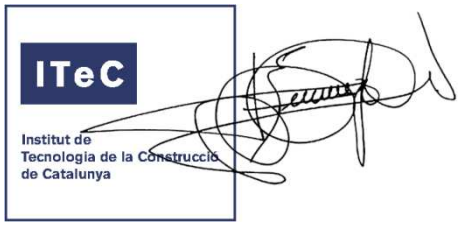
The results of the tests regarding reaction to fire, performed as part of the assessment, shall be used for initial type-testing unless changes in the manufacturing procedure affect the product properties.

[3] The *Control Plan* is a confidential part of the ETA and only handed over to the notified certification body involved in the assessment and verification of constancy of performance.

Any change in the manufacturing procedure which may affect the properties of the product shall be notified and the necessary type-testing revised according to the *Control Plan.*

Issued in Barcelona on 18 May 2016

by the Catalonia Institute of Construction Technology.



Ferran Bermejo Nualart

Technical Director, ITeC

ANNEX 1: Examples of prefabricated units of the Kerfloat® dry floating flooring kit