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European Technical Assessment ETA 22/ 0677 of 02/ 10/ 2024

English translation prepared by IETcc. Original version in Spanish language

General Part

Technical Assessment Body issuing the European Technical Assessment: Instituto de Ciencias de la Construcción Eduardo Torroja (IETcc)	
Trade name of the construction product	**APLICAPROOF PUA P**
Product family to which the construction product belongs	Liquid Applied Roof Waterproofing Kit, based on pure polyurea
Manufacturer	**CEMENTOS CAPA S.L.** Muelle cierre de Ribera-Poniente, s/n Puerto de Almería, 04002, Almería (España)
Manufacturing plant(s)	Plant 1
This European Technical Assessment contains	5 pages + 1 Annex contains confidential information and is not included in the European Technical Assessment when that assessment is publicly disseminated
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	EAD 030350-00-0402 Liquid applied roof waterproofing kits
This version replaces	ETA 22/0677 issued 22-09-2022

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

Specific parts

1 Technical description of the product

The Liquid Applied Roof Waterproofing Kit (LARWK) APLICAPROOF PUA P is designed and installed in accordance with the manufacturer, design and installation instructions, deposited at the IETcc. This LARWK comprises the following components, which are factory produced by the manufacturer or a supplier.

Components	Trade name	Consumption	Thickness
Primer	For concrete APLICAPROOF PRIMER PU (polyurethane based)	≥ 0.2 kg/m^2	≥ 190 microns
	For metal and PU APLICAPROOF PRIMER EP ALL: (epoxy water based)	≥ 0.2 kg/m^2	≥ 120 microns
	For concrete APLICAPROOF PRIMER RP (epoxy 100% solids)	≥ 0.250 kg/m^2	≥ 170 microns
	For concrete APLICAPROOF PRIMER EP ALL (epoxy 100 % solids)	≥ 0.150 kg/m^2	≥ 140 microns
	For concrete, ceramic tiles and metal APLICAPROOF PRIMER EP ALL (epoxy 100 % solids)	≥ 0.150 kg/m^2	≥ 140 microns
	For concrete APLICAPROOF PRIMER WET (epoxy 100 % solids)	≥ 0.450 kg/m^2	≥ 300 microns
Waterproofing membrane	APLICAPROOF PUA P	≥ 1.5 kg/m^2.	≥ 1.4mm
Finish layer: Protection UV	APLICAPROOF COAT 2K	≥ 250 g/m^2	≥ 150 microns
Film Slipperiness	APLICAPROOF PLASTIC	8 % weight mixed APLICAPROOF COAT 2K colored	----

APLICAPROOF PUA P is a liquid applied roof waterproofing based on pure polyurea 100% consists of a pure polyurea resins, bi-component, elastomeric without internal protection layer; which once polymerised conforms an elastic lining, in form of a layer completely bonded to the support (steel, concrete, mortar, ceramic, extruded polystyrene and OSB. The minimum layer thickness of the assembled membrane has to be 1,4 mm.

2 Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)

2.1 Intended use(s)

The intended use of this System is the waterproofing of roof against the water, as in liquid as vapour form, with any slope between 0 and >30 % (S1-S4), for any type of categorisation of user load between P1 a P4 and resists the effects of low surface temperatures of –20 ºC (TL3), high temperatures of 90 ºC (TH4) and a severe climatic zone of use. This LARWK fulfils the Basic works requirements n.º 2 (Safety in case of fire), n.º 3 (Hygiene, health and the environment) and n.º 4 (Safety in use) of the European Regulation 305/11.

This LARWK is made of non load-bearing construction elements. It does not contribute directly to the stability of the roof on which is installed, but it can contribute its durability by providing enhanced protection from the effect of weathering.

This LARWK can be used on new or existing (retrofit) roofs. It can also be used on vertical surfaces (singular details).

2.2 Relevant general conditions for the use of the kit

The provisions made in this European Technical Assessment are based on an assumed working life of 25 years from installation in the works, according to EAD030350-00-0402, provided that the conditions lay down for the installation, packaging, transport and storage as well as appropriate use, maintenance and repair are met. In this respect.

The indications given on the working life cannot be interpreted as a guarantee given neither by the product manufacturer nor by EOTA nor by the Technical Assessment Body issuing this ETA, but are regarded only as a means for choosing the right product in relation to the expected economically reasonable working life of the works.

Installation. The Kit is installed on site. It is the responsibility of the manufacturer to guarantee that the information about design and installation of this system is effectively communicated to the concerned people. This information can be given using reproductions of the respective parts of this ETA. Besides, all the data

concerning the execution shall be clearly indicated on the packaging and/or the enclosed instruction sheets using one or several illustrations.

Design. The fitness of the respective use for the levels of performance of this System stated in Annex 1 complies with the Spanish national requirements. In the MTD the manufacture gives information on the quantities consumed and the processing, which shall lead to a thickness of the roof waterproofing ≥ 1.4 mm.

Execution. Particularly, it is recommended to consider the:

- kit installation has to carried out by qualified installers and it can only be used the components of the kit indicated in this ETA,
- supervision of the amount of material used (kg/m^2) and the control visual to check that each coat covers totally the one below, can ensure the minimum thickness of the kits, inspection of the roof surface (cleanliness and correct preparation) before applying the roof waterproofing,
- It is applied by projection device in heat, with the following characteristics: Pressure 150- 200 bar, deposit temperature product 80 ºC, temperature product conduct 75 ºC,
- recommended temperature of the product to be assembled will be between 5 ºC and 40 ºC and it will be not admitted support temperatures upper to 45 ºC. In other conditions it will need to follow the manufacturer's instructions.

Before, the installation of APLICAPROOF PUA P, it is recommended to read its security card.

Use, maintenance and repair of the works. In those roofs with deteriorated areas of the waterproof layers, they will be repaired carrying out some light grinding to open the pore of the deteriorated layers. Afterwards, the new product will be assembled following the installation instruction and the new coats must overlap, at least 15-20 cm, to the coat no deteriorated. Further installation details are laid down in the MTD place at IETcc.

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

The identification tests and the assessment for the intended use of APLICAPROOF PUA P according to the Basic Work Requirements (BWR) were carried out in compliance with EAD 030350-00-0402. The characteristics of each system shall correspond to the respective values laid down in following tables of this ETA, checked by IETcc.

Methods of verification and of assessing and judging are listed afterwards.

3.1 Safety in case of fire (BWR 2)

Basic requirement for construction works 2: Safety in case of fire		
Essential characteristic	**Relevant clause in EAD**	**Performance**
External fire performance	2.2.1	Broof (t1): pitches < 20° and support A1-A2
		Broof (t2): All range of piccches and for combustible and non-combustible with density ≥ 510 kg/m^2
		Broof (t3): Pitches < 10° and non-combustible supports with thickness ≥ 10 mm
		Broof (t4): Pitches < 10° and non-combustible supports with thickness ≥ 10 mm
Reaction to fire	2.2.2	E

3.2 Hygiene, health and environment (BWR 3)

Basic requirement for construction works 3: Hygiene, health, and the environment		
Essential characteristic	**Relevant clause in EAD**	**Performance**
Content, emission and/or release of dangerous substances	2.2.3	NPA
Resistance to water vapour	2.2.4	μ = 2279
Watertightness	2.2.5	Watertight

Resistance to wind loads	2.2.6	Delamination strength: Pass (> 50 kPa)		MPa
		Concrete + APLICAPROOF PRIMER PU		1,9
		Steel+ APLICAPROOF PRIMER EP ALL		0,75
		Concrete + APLICAPROOF PRIMER RP		2.0
		Concrete + APLICAPROOF PRIMER EP ALL		1.7
		Ceramic tiles + APLICAPROOF PRIMER EP ALL		2.4
		Concrete + APLICAPROOF PRIMER WET		2.0
		XPS and EPS (cohesive support)		0.1
		OSB (cohesive support)		0.5
Resistance to mechanical damage (perforation)	2.2.7	**P1 - P4**		
	2.2.7.1	Resistance to dynamic indentation (23 ºC)	steel/concrete	I4 (6 mm)
			EPS/XPS/OSB	I4 (6 mm)
	2.2.7.2	Resistance to static indentation (23 ºC)	steel/concrete	L4 (250 N)
			EPS /XPS/OSB.	L4 (250 N)
Resistance to fatigue movement	2.2.8	W3 1000 cycles (-10 ºC) *without UV protection*: Pass		
Resistance to the effects of low and high surface temperatures	2.2.9	**Low temperatures:TL3** **High temperatures: TH4**		
	2.2.9.1	Dynamic Indentation at -20 ºC	EPS /XPS / OSB	I4 (6 mm)
			steel/concrete	I4 (6 mm)
	2.2.9.3	Static indentation at 90 ºC	EPS/ XPS/ OSB	L4 (250 N)
			steel/concrete	L4 (250 N)
Resistance to ageing media (heat and water)	2.2.10.1	**Resistance to heat ageing W3, S (severe)** (200 days at 80 ºC) without UV protection		
		Dynamic Indentation -20 ºC	XPS / OSB	I4 (6 mm)
			steel/concrete	I4 (6 mm)
		Fatigue movement (50 cycles) at -10 ºC: Pass		
		T. Strength (MPa) / Elongation (%)	Initial	23 / 315
			Ageing	17 / 328
	2.2.10.3	**Resistance to water ageing W3, S1-S2, P1-P4** (60 - 180 days at 60 ºC) without UV protection		
		R. Static indentation (60 d)	XPS / OSB at 90 ºC	L4 (250 N)
			steel/concrete at 90 ºC	L4 (250 N)
		R. Static indentation (180 d)	XPS/ OSB at 60 ºC	L4 (250 N)
			steel/concrete: at 90 ºC	L4 (250 N)
		Resistance to delamination	Concrete + PRIMER PU -1050	1.6 MPa
Resistance to UV radiation in the presence of moisture	2.2.10.2	**W3, S (severe), 5000 hours** with UV protection		
		Dynamic Indentation at -10 ºC	EPS /XPS / OSB	I4 (6 mm)
			steel/concrete:	I4 (6 mm)
		T. Strength (MPa) / Elongation (%)	Initial	23 / 315
			Ageing	17 / 372
Resistance to plant root	2.2.11	Not penetration of roots		
Effects of variations in kit components and site practices	2.2.12	**Minimum 5 ºC and maximum 40 ºC**		
		Dynamic Indentation at -20 ºC	steel at 5 ºC	I4 (6 mm)
			steel at 40 ºC	I4 (6 mm)
		T. Strength (MPa) / Elongation (%)	at *5 ºC*	19 / 274
		T. Strength (MPa) / Elongation (%)	at *40 ºC.*	21 / 263
Effects of day joints	2.2.13	1,5 MPa		

3.3 Safety and accessibility in use: (BWR 4)

Basic requirement for construction works 4: Safety and accessibility in use		
Essential characteristic	**Relevant clause in EAD**	**Performance**
Slipperiness	2.2.14	NPA[1]

[1] The kit with APLICAPROOF PUA P + APLICAPROOF COAT 2K colored + APLICAPROOF MASTIC (8%), show a Rd= 67 (ENV 12633:2003 Annex A)

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

4.1 System of assessment and verification of constancy of performance

According to the decision 98/599/EC of October 1998, Official Journal of the European Communities N° L 287, 24.10.1998) of the European Commission, system 3 of assessment and verification of constancy of performance (see EC delegated regulation (EU) No 568/2014 amending Annex V to Regulation (EU) Nº 305/2011) applies.

Product	Intended uses	Level or Classes	System
APLICAPROOF PUA P	Liquid Applied Roof Waterproofing Kit	Any	3

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

5.1 Tasks of the manufacturer

Factory production control. The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall ensure that the product is in conformity with this ETA.

The manufacturer may only use components stated in the technical documentation of this ETA including Control Plan. The incoming raw materials are subjected to verifications by the manufacturer before acceptance.

The factory production control shall be in accordance with the Control Plan. The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan

Other tasks of the manufacturer. The manufacturer shall make a declaration of conformity, stating that the construction product is in conformity with the provisions of this ETA.

5.2 Tasks of notified bodies.

Initial type-testing of the product. For type testing, the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases, the necessary type testing has to be agreed between IETcc and the notified body.

The initial type-testing have been conducted by the IETcc to issue this ETA in accordance with the EAD 030350-00-0402 “Liquid applied roof waterproofing kits”. The verifications underlying this ETA have been furnished on samples from the current production.

Issued in Madrid on 02 october 2024

By

Director
on behalf of Instituto de Ciencias de la Construcción Eduardo Torroja (IETcc – CSIC)