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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	**MORCEM ELASTIC POLIUREA P**
Product family to which the construction product belongs	Liquid Applied Roof Waterproofing Kit, based on polyurea
Manufacturer	**GRUPO PUMA ESPAÑA, S.L.** Avda. Agrupación Córdoba, n.º 17. 14014 Córdoba, Spain
Manufacturing plant(s)	Plant 1
This European Technical Assessment contains	5 pages. + Annex 1 contains confidential information and is not included in this ETA
This European Technical Assessment is issued in accordance with Regulation (EU) No 2024/3110, on the basis of	EAD 030350-00-0402 Liquid applied roof waterproofing kits

Specific parts

1. Technical description of the product

1 Technical description of the product

The Liquid Applied Roof Waterproofing Kit(LARWK) “MORCEM ELASTIC POLIUREA 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
Primer	IMPLAREST EPOXY POLIUREA/PU (epoxy)	0,3 – 0,8 kg/m^2
	IMPLAREST EPW (epoxy primer in water dispersion)	0,3 – 0,5 kg/m^2
Waterproofing membrane	MORCEM ELASTIC POLIUREA P	≥ 2 kg/m^2
UV protection	MORCEM ELASTIC PM BARNIZ U.V. ELASTIC	0,25 - 0,35 kg/m^2
	MORCEM ELASTIC PM BARNIZ U.V.	
	MORCEM ELASTIC PM BARNIZ U.V. ECO	

This kit show the following working life:

Product	Working life	Minimum thickness (mm)
MORCEM ELASTIC POLIUREA P	25	1,9

MORCEM ELASTIC POLIUREA P is a liquid applied roof waterproofing membrane based on a pure resin of pure polyurea. Consists of a pure polyurea resins, bi-component, elastomeric without internal protection layer; which once polymerised conforms a jointless elastic lining, in form of a layer completely bonded to the support (concrete, mortar, ceramic, wood, metal and polyurethane foam (≥ 50 kg/m^3). Depending on support condition other type of primer may be advisable.

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) and high temperatures of 90 ºC (TH4). 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 2024/3110.

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 10-25 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 (W3) 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 ETICS is effectively communicated to the concerned people. This information can be given using reproductions of the respective parts of this European Technical Assessment. 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 ≥ 1.9 mm.

Execution. Particularly, it is recommended to consider:

- The kit installation has to be carried out by qualified installers,
- it can only be used the components of the kit indicated in this ETA,
- the supervision of the amount of material used (kg/m^2) and the control visual to check that each coat cover 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 a hot spray applied machines. Temperatures, component A, 55-65 ºC. Component B, 65-70 ºC. Pressure about 140 bars.

Before, the installation of MORCEM ELASTIC POLIUREA 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 10 cm, to the coat no deteriorated. Further installation details are laid down in the MTD place at IETcc
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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 “IMPERMAX” 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 of roofs	2.2.1	Broof(t1) and Broof(t4) supports with fire classification A1-A2 with slope< 20º NPA. For support with no A1-A2 fire classification
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 = 1500 (2.2 mm thickness)	
Watertightness	2.2.5	Watertight	
Resistance to wind loads	2.2.6	Delamination strength: **Support + primer + membrane**	Pass **≥ 50 kPa** (kPa)
		Concrete + IMPLAREST EPOXY POLIUREA/PU	1500
		Concrete + IMPLAREST EPW	NPA
		Steel + IMPLAREST EPOXY POLIUREA/PU	1560
		Steel + IMPLAREST EPW	NPA
		PU foam	200
		The failure mode was between support and membrane on concrete – steel support, on the PU support collapse the support	

Resistance to mechanical damage (perforation)	2.2.7	**P1 - P4**	
	2.2.7.1	*Resistance to dynamic indentation (23 ºC) without UV protection*	
		Steel: I4 (6 mm)	
		PU: I4 (6 mm)	
Resistance to mechanical damage (perforation)	2.2.7.2	*Resistance to static indentation (23 ºC) without UV protection*	
		Steel: L4 (25 kg)	
		PU: L4 (25 kg)	
Resistance to fatigue movement	2.2.8	W3 1000 cycles (-10 ºC) *without UV protection*	
Resistance to the effects of low and high surface temperatures	2.2.9	**Low temperatures:TL3** **High temperatures: TH4**	
	2.2.9.1	*R. Dynamic Indentation at TL3 without UV protection*	
		Steel: I4 (6 mm) at -20 ºC	
		PU: I4 (6 mm) at -20 ºC	
	2.2.9.3	R. Static indentation (90 ºC) *without UV protection*	
		Steel: L4 (25 kg)	
		PU: L4 (25 kg)	
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	
		R. Dynamic Indentation (-20 ºC) W3	
		Steel: I4 (6 mm)	
		PU: I4 (6 mm)	
		Fatigue movement (50 cycles) at -10 ºC: Pass	
		Tensile properties (MPa / %) at 23 ºC	
		Initial 15 / 377	
		ageing: 18 / 266	
	2.2.10.3	**Resistance to water ageing W3, S1-S2, P4** (180 days at 60 ºC) without UV protection	
		R. Static indentation	
		Steel: L4 (25 kg)	
		PU: L4 (25 kg)	
		Resistance to delamination (kPa) ***≥ 50 kPa*** *(180 days)*	
		Concrete + without primer	NPA
		Concrete + IMPLAREST EPOXY POLIUREA/PU	1500
		Concrete + IMPLAREST EPW	NPA
		PU foam	200
Resistance to UV radiation in the presence of moisture	2.2.10.2	**W3, S (severe), 5000 hours with UV protection**	
		R. Dynamic Indentation (-10 ºC)	
		MORCEM ELASTIC POLIUREA P + MORCEM ELASTIC PM BARNIZ U.V. ELASTIC	Steel: I4 (6 mm)
			PU: I4 (6 mm)
		MORCEM ELASTIC POLIUREA P + MORCEM ELASTIC PM BARNIZ U.V,	Steel: I4 (6 mm)
			PU: I4 (6 mm)
		MORCEM ELASTIC POLIUREA P + MORCEM ELASTIC PM BARNIZ U.V. ECO	Steel: I4 (6 mm)
			PU: I4 (6 mm)
		Tensile properties (MPa / %) 23 ºC	
		MORCEM ELASTIC POLIUREA P + MORCEM ELASTIC PM BARNIZ U.V. ELASTIC	Initial 13/ 346
			Ageing: 16 / 331
		MORCEM ELASTIC POLIUREA P + MORCEM ELASTIC PM BARNIZ U.V.	Initial 11 / 387
			Ageing: 16 / 336
		MORCEM ELASTIC POLIUREA P + MORCEM ELASTIC PM BARNIZ U.V. ECO	Initial 14 / 384
			Ageing: 15/ 303
Resistance to plant roots	2.2.11	NPA	
Effects of variations in kit components and site practices	2.2.12	2 kg/m^2 (without internal mesh)	
		5 ºC. Tensile properties (MPa / %)	12 /371
		40 ºC. Tensile properties (MPa / %)	13 / 367
		5 ºC. R. Dynamic Indentation	Steel: I4 (6 mm) at 23 ºC
		40 ºC. R. Dynamic Indentation	Steel: I4 (6 mm) at 23 ºC
Effects of the days joint	2.2.13	Delamination strength: 1400 kPa	

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] ENV 12633:2003 Annex A). The kit with MORCEM ELASTIC PM BARNIZ U.V. shows a Rd= 48

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 IX to Regulation (EU) Nº 2024/3110) applies.

Product	Intended uses	Level or Classes	System
MORCEM ELASTIC POLIUREA 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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan which is deposited at IETcc[2].

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Issued in Madrid on 27 February 2025

By

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

[2] 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.