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European Technical Assessment

ETA-23/0735
of 30/04/2024

General Part

Technical Assessment Body issuing the European Technical Assessment	Łukasiewicz Research Network – Warsaw Institute of Technology
Trade name of the construction product	**Zestaw HYDRONYLON®**
Product family to which the construction product belongs	Liquid Applied Roof Waterproofing Kits
Manufacturer	Proof-Tech Sp. z o.o. ul. Tarnogórska 9, 42-677 Szałsza, Poland
Manufacturing plant	Proof-Tech Sp. z o.o. ul. Sowińskiego 5, 44-121 Gliwice, Poland
This European Technical Assessment contains	10 pages including 1 Annex which form an integral part of this Assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	European Assessment Document (EAD) 030350-00-0402

Specific Part

1. Technical description of the product

The Liquid Applied Roof Waterproofing Kit (LARWK) "**HYDRONYLON®**" comprises the following components, which are factory produced by the manufacturer or a supplier.

Table 1. Composition of the LARWK (**HYDRONYLON®**)

Components	Trade name	Consumption	Thickness
Primer for mineral substrate	EMULSA GRUNTUJĄCA EG	0,2 – 0,3 kg/m²	< 0,10
Primer for bitumen substrate *) (polymeric self-crosslinking waterproofing mass)	HYDRONYLON®HP	HYDRONYLON®HP min. 2 kg/m² for two layers	1,3 mm
Primer for metal substrate (polymeric anticorrosive mass)	HYDRONYLON® HMS(P)	0,25 – 0,30 kg/m²	0,17 – 0,20 mm
Primer for membrane PVC *)	HYDRONYLON®HN	HYDRONYLON®HN 1,2 kg/m²	0,7 mm
Technical mesh	SW-1	1,05 m²/m²	-
Waterproofing membrane **)	HYDRONYLON® HN	min. 1 kg/m²	0,5 mm

*) Always used with Technical mesh SW-1

**) For an adequate adhesion of the waterproofing layer, a primer can be required.

This system is designed and installed in accordance with the ETA holder's design and installation instructions, deposited with Łukasiewicz Research Network–Warsaw Institute of Technology

This HYDRONYLON® kit shows the following working life:

Table 2.

Product	Working life	Minimum thickness
HYDRONYLON®HP Technical mesh SW-1 HYDRONYLON®HN Bitumen substrate	10	1,8 mm
HYDRONYLON®HMS(P) HYDRONYLON®HN Metal substrate	10	0,7 mm
Emulsja gruntująca EG HYDRONYLON®HN Mineral substrate	10	0,75 mm
HYDRONYLON®HN Technical mesh SW-1 PVC membrane substrate	10	1,2 mm

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

2.1.Specification of the intended use

The kit is used for the waterproofing of roof surfaces against penetration of atmospheric water. The kit is applied on concrete substrate, reinforced bitumen sheets, PVC membrane substrate or metal substrate. In the technical documents the manufacturer gives information about the substrate pre-treatment, if needed.

2.2 Working life / Durability

The verification and assessment methods on which this European Technical Assessment is based lead to the assumption of working life of the product of 10 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

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

3.1 Safety in the case of fire (Basic Work Requirements 2)

Table 3.

Basic requirement for construction works 2: Safety in case of fire		
Essential characteristic	**Relevant clause in EAD**	**Performance**
External fire performance	2.2.1	B(roof) (t1)
Reaction to fire	2.2.2	Class E

3.2 Hygiene, health and the environment (Basic Work Requirements 3)

Table 4.

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	No performance assessed
Resistance to water vapour	2.2.4	Sample: HYDRONYLON®HP, technical mesh SW-1, HYDRONYLON®HN: $\mu = 148 \pm 12$ Sample: HYDRONYLON®HMS(P), HYDRONYLON®HN: $\mu = 79,6 \pm 6$
Watertightness	2.2.5	Watertight
Resistance to wind loads	2.2.6	Delamination strength: Pass (> 50 kPa) Bitumen sheet substrate: 308±40 kPa Metal substrate: 978±215 kPa Mineral substrate: 2076±125 kPa PVC membrane substrate: 1126±158 kPa

Resistance to mechanical damage (perforation): - Resistance to dynamic indentation - Resistance to static indentation	2.2.7 2.2.7.1 2.2.7.2	P3 I_3 L_3
Resistance to fatigue movement	2.2.8	Pass
Resistance to the effects of low and high surface temperatures: - Low temperatures - Extreme low temperatures - High temperatures	2.2.9 2.2.9.1 2.2.9.2 2.2.9.3	 I_3 No performance assessed L_3
Resistance to ageing media Resistance to heat ageing	2.2.10 2.2.10.1	Resistance to dynamic indentation: I_3 Resistance to fatigue movement (W2): Pass Tensile properties before ageing (bitumen substrate): **HYDRONYLON®HP, technical mesh SW-1, HYDRONYLON®HN**: 6,49±1,62 MPa /101,5±17,3 % Tensile properties after ageing (bitumen substrate): **HYDRONYLON®HP, technical mesh SW-1, HYDRONYLON®HN**: 8,21±0,74 MPa / 75,3±12,8 % Tensile properties before ageing (metal substrate): **HYDRONYLON®HMS(P), HYDRONYLON®HN:** 6,82±1,71 MPa / 93,3±18,7 % Tensile properties after ageing (metal substrate): **HYDRONYLON®HMS(P), HYDRONYLON®HN:** 7,38±0,89 MPa / 77,4±15,5 %
Resistance to UV-radiation in the presence of moisture ageing	2.2.10.2	Dynamic indentation: I_3 Tensile properties before ageing (bitumen substrate): **HYDRONYLON®HP, technical mesh SW-1, HYDRONYLON®HN:**

		6,49±1,62 MPa / 101,5±17,3 % Tensile properties after ageing (bitumen substrate): **HYDRONYLON®HP, technical mesh SW-1, HYDRONYLON®HN:** 8,21±0,74 MPa / 116,1±11,6 % Tensile properties before ageing (metal substrate): **HYDRONYLON®HMS(P), HYDRONYLON®HN:** 6,82±1,71 MPa / 93,3±18,7 % Tensile properties after ageing (metal substrate): **HYDRONYLON®HMS(P), HYDRONYLON®HN:** 6,16±0,55 MPa / 104,6±8,4 %
Resistance to water ageing	2.2.10.3	Resistance to static indentation: L_3 Resistance to delamination: Product: HYDRONYLON®HP, technical mesh SW-1, HYDRONYLON®HN 2060±206 kPa Product: HYDRONYLON®HMS(P), HYDRONYLON®HN 2167±152 kPa
Resistance to plant roots	2.2.11	No performance assessed
Effects of variations in kit components and site practices	2.2.12	No performance assessed
Effects of day joints	2.2.13	No performance assessed

3.3 Safety and accessibility in use (Basic Work Requirements 4)

Table 5.

Basic requirement for construction works 4: Safety and accessibility in use		
Essential characteristic	**Relevant clause in EAD**	**Performance**
Slipperiness	2.2.14	Product: HYDRONYLON® 0,91

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

According to the European Commission2 Decision 98/599/EC, amended Decision 2001/596/EC3, the system of AVCP (see EC delegated regulation (EU) No 568/2014 amending Annex V to Regulation (EU) 305/2011) given in the following table applies

Table 6.

Product	Intended use	Level or class (Reaction to fire)	System
HYDRONYLON®	Liquid applied roof waterproofing kit	Any	3

5. Technical details necessary for the implementation of the AVCP system, as provided for in the applicable European Assessment Document (EAD)

The manufacturer shall exercise permanent 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. The production control system shall ensure performance constancy of the product covered by this European Technical Assessment.
The manufacturer may only use materials stated in the technical documentation of this European Technical Assessment. The factory production control shall be performed in accordance with the Control Plan which is a confidential part of the European Technical Assessment. The Control Plan was developed as a part of factory production control system.
The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan.

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Annex No 1 of European Technical Assessment ETA-23/0735

1. Characteristics of the HYDRONYLON®

Table 1 Characteristics of the HYDRONYLON®

Minimum thickness	**Mineral substrate:** EMULSJA GRUNTUJĄCA EG HYDRONYLON®HN 0,75 mm **Bitumen substrate:** HYDRONYLON®HP Technical mesh SW-1 HYDRONYLON®HN 1,8 mm **Metal substrate:** HYDRONYLON®HMS(P) HYDRONYLON®HN 0,7 mm **PVC membrane substrate:** HYDRONYLON®HN Technical mesh SW-1 HYDRONYLON®HN 1,2 mm
Content, emission and/or release of dangerous substances	NPD
Resistance to water vapour	HYDRONYLON®HP, technical mesh SW-1, HYDRONYLON®HN: μ = min. 130 HYDRONYLON®HMS(P), HYDRONYLON®HN: μ = min. 70
Watertightness	Watertight
Resistance to wind loads	Pass (> 50 kPa)
Resitance to mechanical damage (perforation)	P3
Resistance to fatigue movement	Pass
Resistance to the effects of low and high surface temperatures: - Low temperatures - Extreme low temperatures - High temperatures	 I_3 NPD L_3

Resistance to plant roots	NPD
Effects of variations in kit components and site practices	NPD
Effects of day joints	NPD
Slipperiness	min. 0,90

2. Performance levels according to the intended use

Table 2 Performance levels according to the intended use

External fire performance	B(roof) (t1)
Reaction to fire	E
Expected working life (years)	W2 (10 years)
Climate zone of use	M (Moderate)
User loads	P3 (Normal)
Roof slopes (%)	S1 - S4
Minimum surface temperature (^{0}C)	TL3 (-20^{0}C)
Maximum surface temperature (^{0}C)	TH3 (+80^{0}C)