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## European Technical Assessment **ETA 24/ 1234** of 16/ 12/ 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**

**Sikalastic-854R HE**

**Product family to which the construction product belongs**

Liquid Applied Roof Waterproofing Kit, based on polyurea

**Manufacturer**

**Sika Services AG**  
Tüffenwies 16, 8048, Zürich, Switzerland.

**Manufacturing plant(s)**

Plant 1.

**This European Technical Assessment contains**

6 pages  
+ 1 Annex, contains confidential information and is not included in this ETA

**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

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## Specific parts

### 1. Technical description of the product

The Liquid Applied Roof Waterproofing Kit (LARWK) "Sikalastic-854R HE" 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.

| Components             | Trade name              | Consumption                   |
|------------------------|-------------------------|-------------------------------|
| Primer on concrete     | Sikafloor-151           | 0,3 – 0,5 kg/m <sup>2</sup>   |
|                        | Sika Concrete Primer    | 0,25 – 0,35 kg/m <sup>2</sup> |
| Primer on metal        | Sikalastic Metal Primer | 0,2 – 0,3 kg/m <sup>2</sup>   |
| Waterproofing membrane | Sikalastic-854R HE      | ≥ 2 kg/m <sup>2</sup>         |
| UV protection          | Sikalastic-701          | 0,25 – 0,35 kg/m <sup>2</sup> |

Sikalastic-854R HE is a liquid applied roof waterproofing membrane based on a hybrid polyurea resin, consists of a polyurea resin, 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, steel and other metals and XPS). Depending on support condition other type of primer may be advisable.

The minimum thickness of the Sikalastic-854R HE has to be 1.9 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 °C (TL3), high temperatures of 90 °C (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 (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 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.** In the MTD the manufacture gives information on the quantities consumed and the processing, which shall lead to a thickness of the roof waterproofing  $\geq 1.9$  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 ( $\text{kg/m}^2$ ) 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 a hot spray applied machines. Temperatures, component A, 65-70 °C. Component B, 70-75 °C. Pressure about 150 bars.

Before, the installation of Sikalastic-854R HE, 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 placed 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 "Sikalastic-854R HE" 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                                           | Assessment method | Product performance                                                                                                                                         |
| External fire performance of roofs                                 | 2.2.1             | $B_{\text{roof}}(t1)$<br>supports with fire classification A1-A2,<br>and roof slope $<20^\circ$ .<br>NPA.<br>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                                                         | Assessment method | Product performance                                                 |
| Content, emission and/or release of dangerous substances                         | 2.2.3             | NPA                                                                 |
| Resistance to water vapour                                                       | 2.2.4             | $\mu = 673$ (2.2 mm thickness)                                      |
| Watertightness                                                                   | 2.2.5             | Watertight                                                          |
| Resistance to wind loads                                                         | 2.2.6             | Support + Primer + membrane $\geq 50$ kPa (kPa)                     |
|                                                                                  |                   | Concrete + Sikafloor 151 2400                                       |
|                                                                                  |                   | Concrete + Sika Concrete Primer 3500                                |
|                                                                                  |                   | Steel + Sikalastic Metal Primer 3600                                |
|                                                                                  |                   | PU 600                                                              |
| Resistance to mechanical damage (perforation)                                    | 2.2.7             | XPS NPA                                                             |
|                                                                                  |                   | <b>P1-P2 on XPS support</b><br><b>P4 on concrete /steel support</b> |
|                                                                                  | 2.2.7.1           | Resistance to dynamic indentation (23 °C) without UV protection     |
|                                                                                  |                   | Steel I4 (6 mm)                                                     |
|                                                                                  |                   | PU I4 (6 mm)                                                        |
|                                                                                  |                   | XPS I4 (6 mm)                                                       |
|                                                                                  | 2.2.7.2           | Resistance to static indentation (23 °C) without UV protection      |
|                                                                                  |                   | Steel L4 (250 N)                                                    |
|                                                                                  |                   | PU -----                                                            |
|                                                                                  |                   | XPS L3 (200 N)                                                      |



|                                                                |          |                                                                                              |                                                                           |
|----------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Resistance to fatigue movement                                 | 2.2.8    | W3 1000 cycles (-10 °C) without UV protection : Pass                                         |                                                                           |
| Resistance to the effects of low and high surface temperatures | 2.2.9    | <b>Low temperatures: TL3</b><br><b>High temperatures: TH4</b>                                |                                                                           |
|                                                                | 2.2.9.1  | R. Dynamic Indentation at -20 °C                                                             | Steel: I4 (6 mm)                                                          |
|                                                                |          |                                                                                              | PU: I3 (10 mm)                                                            |
|                                                                |          |                                                                                              | XPS: I4 (6 mm)                                                            |
|                                                                | 2.2.9.3  | R. Static indentation at 90 °C                                                               | Steel: L4 (250 N)<br>(3 mm thickness)<br>L3 (200 N)<br>(1.9 mm thickness) |
|                                                                |          |                                                                                              | PU: -----<br>XPS: L1 (70 N)                                               |
|                                                                |          | R. Static indentation at 80 °C                                                               | XPS: L2 (150 N)                                                           |
|                                                                |          | R. Static indentation at 60-30 °C                                                            | Steel: L4 (250 N)<br>(1.9 mm thickness)                                   |
| Resistance to ageing media (heat and water)                    | 2.2.10.1 | <b>Resistance to heat ageing W3, S (severe)</b><br>(200 days at 80 °C) without UV protection |                                                                           |
|                                                                |          | R. Dynamic Indentation -20 °C                                                                | Steel: I4 (6 mm)                                                          |
|                                                                |          |                                                                                              | PU: I2 (20 mm)                                                            |
|                                                                |          |                                                                                              | XPS: NPA                                                                  |
|                                                                |          | Fatigue mouvement (50 cycles) at -10 °C: Pass                                                |                                                                           |
|                                                                | 2.2.10.3 | <b>Resistance to water ageing W3, S1-S2, P4</b><br>(180 days at 60 °C) without UV protection |                                                                           |
|                                                                |          | R. Static indentation 90 – 80 °C                                                             | Steel: L4 (250 N)<br>(3mm thickness)<br>L3 (200 N)<br>(1.9 mm thickness)  |
|                                                                |          |                                                                                              | PU: -----                                                                 |
|                                                                |          |                                                                                              | XPS: NPA                                                                  |
|                                                                |          | R. Static indentation 60 - 30 °C                                                             | Steel: L4 (250 N)                                                         |
|                                                                |          |                                                                                              | Concrete + Rayston Epoxy 100: 2600                                        |
|                                                                |          | Resistance to delamination (kPa)                                                             | Concrete + Primer GC 1600                                                 |
|                                                                |          |                                                                                              | Concrete + Porosity Sealer Flex: 1900                                     |
|                                                                |          |                                                                                              | Concrete + Polyurea Primer Flex: 2300                                     |
|                                                                |          |                                                                                              | PU: 400                                                                   |
|                                                                |          |                                                                                              | XPS: NPA                                                                  |
| Resistance to UV radiation in the presence of moisture         | 2.2.10.2 | <b>W3, S (severe), 5000 hours</b>                                                            |                                                                           |
|                                                                |          | Resistance to dynamic Indentation -20 °C                                                     | Without top coat<br>Steel: I4 (6mm)<br>PU: I2 ( 20 mm)                    |
|                                                                |          |                                                                                              | Without top coat<br>Initial: 14 /634<br>UV ageing: 15 / 1170              |
|                                                                |          | Tensile properties (MPa / %)                                                                 | Colodur Pigmented<br>Initial: 11 / 634<br>UV ageing: 13 / 1140            |
|                                                                |          |                                                                                              | Impertrans Pigmented<br>Initial: 10 / 610<br>UV ageing: 14 / 1170         |
|                                                                |          |                                                                                              | Impertrans Eco<br>Initial: 12 / 633<br>UV ageing:14 / 1170                |
|                                                                |          |                                                                                              | Colodur 2K<br>Initial: 12 / 633<br>UV ageing: 13 / 634                    |
| Resistance to plant roots                                      | 2.2.11   | NPA                                                                                          |                                                                           |
| Effects of variations in kit components and site practices     | 2.2.12   | Tensile properties (MPa / %) 5 °C                                                            | 13 / 634                                                                  |
|                                                                |          | Tensile properties (MPa / %) 40 °C                                                           | 13 / 633                                                                  |
|                                                                |          | R. Dynamic Indentation (23 °C) at 5 °C                                                       | Steel: I4 (6 mm)                                                          |
|                                                                |          | R. Dynamic Indentation (23 °C) at 40 °C                                                      | Steel: I4 (6 mm)                                                          |
| Effects of the days joint                                      | 2.2.13   | 2200 kPa                                                                                     |                                                                           |



### 3.3 Safety and accessibility in use (BWR 4)

| Basic requirement for construction works 4: Safety and accessibility in use |                   |                                           |
|-----------------------------------------------------------------------------|-------------------|-------------------------------------------|
| Essential characteristic                                                    | Assessment method | Type of expression of product performance |
| Slipperiness                                                                | 2.2.14            | NPA                                       |

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

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<sup>1</sup>, system 3 of assessment and verification of constancy of performance (see EC delegated regulation (EU) No 568/2014 amending Annex V to Regulation (EU) N° 305/2011) applies.

| Product            | Intended uses                         | Level or Classes | System |
|--------------------|---------------------------------------|------------------|--------|
| Sikalastic-854R HE | 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<sup>2</sup>.

Realizado por Dr. Julián Rivera (Unidad de evaluación de productos innovadores, IETcc-CSIC)

Issued in Madrid on 16 of December 2024  
By

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

<sup>1</sup> Published in the Official Journal of the European Union (OJEU) L 262, 14/10/2003 P. 0034 - 0036.  
See [www.new.eur-lex.europa.eu/oj/direct-access.html](http://www.new.eur-lex.europa.eu/oj/direct-access.html)

<sup>2</sup> 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.

