

EUROPEAN TECHNICAL ASSESSMENT

ETA 13/0285

Version 01

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UBAtc Assessment Operator:
Belgian Construction Certification Association
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Technical Assessment Body issuing the European Technical Assessment: UBAtc.
UBAtc has been designated according to Article 29 of Regulation (EU) No 305/2011
and is member of EOTA (European Organisation for Technical Assessment)

Trade name of the construction product:

TEKNOTAN BT

Product family to which the construction product belongs:

Liquid Applied Roof Waterproofing Kits

Manufacturer:

IKO nv

Manufacturing plant:D'Herbouvillekaai 80
2020 Antwerpen
Belgium**Website:**www.ikoprotect.com**This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:**

European Technical Approval Guidelines (ETAG): 005, Parts 1 and 6, used as European Assessment Document (EAD)

This version replaces:

ETA 13/0285, issued on 7 June 2013

This European Technical Assessment contains:

7 pages, including 1 annex, which forms an integral part of the document.



European Organisation for Technical Assessment

Legal bases and general conditions

- 1 This European Technical Assessment is issued by UBAtc (Union belge pour l'Agrément technique de la construction, i.e. Belgian Union for technical Approval in construction), in accordance with:
 - Regulation (EU) No 305/2011¹ of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC, as amended
 - Commission Implementing Regulation (EU) No 1062/2013² of 30 October 2013 on the format of the European Technical Assessment for construction products
 - European Technical Approval Guidelines (ETAG): 005, parts 1 and 6
- 2 Under the provisions of Regulation (EU) No 305/2011, UBAtc is not authorized to check whether the provisions of this European Technical Assessment are met once the ETA has been issued.
- 3 The responsibility for the conformity of the performances of the products with this European Technical Assessment and the suitability of the products for the intended use remains with the holder of the European Technical Assessment.
- 4 Depending on the applicable Assessment and verification of constancy of performance (AVCP) system, (a) notified body(ies) may carry out third-party tasks in the process of assessment and verification of constancy of performance under this Regulation once the European Technical Assessment has been issued.
- 5 This European Technical Assessment allows the manufacturer of the construction product covered by this ETA to draw up a declaration of performance for the construction product.
- 6 CE marking should be affixed to all construction products for which the manufacturer has drawn up a declaration of performance.
- 7 This European Technical Assessment is not to be transferred to other manufacturers, agents of manufacturers, or manufacturing plants other than those indicated on page 1 of this European Technical Assessment.
- 8 The European Technical Assessment holder confirms to guarantee that the product(-s) to which this assessment relates, is/are produced and marketed in accordance with and comply with all applicable legal and regulatory provisions, including, without limitation, national and European legislation on the safety of products and services. The ETA-holder shall notify the UBAtc immediately in writing of any circumstance affecting the aforementioned guarantee. This assessment is issued under the condition that the aforementioned guarantee by the ETA-holder will be continuously observed.
- 9 According to Article 11(6) of Regulation (EU) No 305/2011, when making a construction product available on the market, the manufacturer shall ensure that the product is accompanied by instructions and safety information in a language determined by the Member State concerned which can be easily understood by users. These instructions and safety information should fully correspond with the technical information about the product and its intended use, which the manufacturer has submitted to the responsible Technical Assessment Body for the issuing of the European Technical Assessment.
- 10 Pursuant to Article 11(3) of Regulation (EU) No 305/2011, manufacturers shall adequately take into account changes in the product-type and in the applicable harmonised technical specifications. Therefore, when the contents of the issued European Technical Assessment do not any longer correspond to the product-type, the manufacturer should refrain from using this European Technical Assessment as the basis for their declaration of performance.
- 11 All rights of exploitation in any form and by any means of this European Technical Assessment is reserved for UBAtc and the ETA-holder, subject to the provisions of the applicable UBAtc regulations.
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- 13 Subject to the application introduced, this European Technical Assessment is issued in English and may be issued by the UBAtc in its official languages. The translations correspond fully to the English reference version circulated in EOTA.
- 14 This European Technical Assessment was first issued by UBAtc on 7 January 2019 and replaces the European Technical Approval 13/0285. Compared with that ETA, apart from the name of the ETA-holder, this European Technical Assessment comprises no changes.

¹ OJEU, L 88 of 2011/04/04

² OJEU, L 289 of 2013/10/31

Technical Provisions

1 Technical description of the product

1.1 General

This ETA is being issued for the products specified on the cover page on the basis of agreed data/information, deposited with the UBAtc, which identifies the products that have been assessed. Changes to the product/production process, which could result in the deposited data/information being incorrect, should be notified to the UBAtc before the changes are introduced. The UBAtc will decide whether such changes affect the ETA and if so whether further assessment/alterations to the ETA, shall be necessary.

1.2 Characteristics and components of the Liquid Applied Roof Waterproofing Kits

The Liquid Applied Roof Waterproofing system TEKNOTAN BT is a kit.

The kit consists of a first layer of TEKNOTAN BT on which TEKNOFLEECE 225 reinforcement is embedded, and a second layer of TEKNOTAN BT.

Specific substrates require a TEKNOPRIMER or TEKNOPRIMER DETAIL primer to promote adhesion of the waterproofing layer.

As assembled, these components form a homogeneous waterproofing system.

The waterproofing layer shall be covered by different finishing layers as described in Table 1.

Table 1. TEKNOTAN BT – thickness of layers

Layer of the system (from bottom to top)	Product	Thick-ness [mm]	Coverage
Primer			
Primer	TEKNOPRIMER or TEKNOPRIMER DETAIL	-	0,10 – 0,20 l/m ²
Waterproofing layer			
1 st layer	TEKNOTAN BT		1,10 l/m ²
Reinforcement	TEKNOFLEECE 225	1,6	-
2 nd layer	TEKNOTAN BT		0,65 l/m ²
Finishing layer (option 1): Tiles			
Mortar	TEKNOFIX	≤ 10	0,9 – 2,1 kg/m ² (1)
Tile	-	≥ 40	-
Finishing layer (option 2): Mortar of quartz			
Coating	TEKNOCOL	-	0,1 l/m ²
Mortar of quartz	TEKNOCOL + TEKNOQUARTZ	3,0	~5,0 kg/m ²
Coating (optional)	TEKNOTRANS	-	≥ 0,4 l/m ²
Finishing layer (option 3): Flakes			
Coating	TEKNOTAN BT	-	0,3 l/m ²
Flakes	TEKNOFLAKES	0,2	0,05 – 0,30 kg/m ²
Coating (required)	TEKNOTRANS	-	≥ 0,4 l/m ²
Finishing layer (option 4): Anti-slip layer			
Coating	TEKNOTAN BT	-	0,3 – 0,4 l/m ²
Quartz	TEKNOGRIP	0,6	1,0 – 3,0 kg/m ² (2)
Coating (optional)	TEKNOTRANS	-	≥ 0,4 l/m ²

(1) According to the thickness of the layer

(2) Partial or full surface spreading

1.2.1 TEKNOTAN BT waterproofing layer

TEKNOTAN BT is a one-component moisture curing polyurethane (PU) that forms an elastic film after polymerisation.

1.2.2 TEKNOFLEECE 225 reinforcement

TEKNOFLEECE 225 reinforcement is a glass fleece, with a mass per unit area of approx. 225 g/m².

1.2.3 Primers

1.2.3.1 TEKNOPRIMER primer

The TEKNOPRIMER primer is a two-component aqueous phase epoxy resin.

The TEKNOPRIMER Part A is an aqueous phase epoxy resin. The TEKNOPRIMER Part B is an aqueous phase polyamine.

The TEKNOPRIMER shall be used in case of substrates made of concrete, cement-based substrates or tiles.

2,3 parts (mass) of TEKNOPRIMER Part B shall be added to 1 part (mass) of the TEKNOPRIMER Part A.

1.2.3.2 TEKNOPRIMER DETAIL primer

The TEKNOPRIMER DETAIL primer is one-component based upon solvents.

It shall be used in case of metallic substrates, bituminous existing waterproofing sheets or hard synthetic substrates.

1.2.4 Finishing layer - components

1.2.4.1 TEKNOFIX lightweight mortar

The TEKNOFIX is a lightweight flexible, C2 mortar adhesive according to EN 12004-1.

The TEKNOFIX is used to bond the tiles on the TEKNOTAN BT waterproofing layer.

1 kg of TEKNOFIX shall be mixed with 0,6 l of water.

1.2.4.2 TEKNOCOL coating

The TEKNOCOL coating is a one-component aliphatic polyurethane resin.

A first layer of TEKNOCOL coating shall be applied on the TEKNOTAN BT waterproofing layer. Then a mortar of quartz shall be applied. The mortar of quartz consists of 6 parts of TEKNOQUARTZ mixed with 1 part of TEKNOCOL. An optional layer of TEKNOTRANS may be applied over the mortar of quartz.

1.2.4.3 TEKNOTRANS coating

The TEKNOTRANS coating is a one-component aliphatic polyurethane resin.

1.2.4.4 TEKNOQUARTZ quartz

The TEKNOQUARTZ exists in different colours: Mixed Grey, Red Brick, Yellow Beach, Green Wimbledon, Red Terra Cotta, Graffito Elite...

1.2.4.5 TEKNOGRIP quartz

The TEKNOGRIP quartz exists in 2 standard colours: Grey, Beige.

The TEKNOGRIP quartz shall be broadcast in an additional layer of TEKNOTAN BT. An optional layer of TEKNOTRANS may be applied over the TEKNOGRID-TEKNOTAN BT layer.

1.2.4.6 TEKNOFLAKES flakes

The TEKNOFLAKES flakes are made of acrylate resin.

A layer of TEKNOTRANS shall be applied over the TEKNOFLAKES flakes.

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

The Liquid Applied Roof Waterproofing Kit TEKNOTAN BT is used for the waterproofing of terraces and balconies against penetration of water into the internal structure of the building.

The following substrate is suitable for the Liquid Applied Roof Waterproofing Kit: concrete, cement-based substrates or tiles, metallic substrates, bituminous existing waterproofing sheets or hard synthetic substrates.

The provisions made in this ETA are based on an assumed working life of the waterproofing system of 10 years (W2).

The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, but are to be used as a means for selecting the appropriate 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

3.1 ER2: Safety in case of fire

3.1.1 External fire performance of roofs

The Liquid Applied Roof Waterproofing Kit finished with TEKNOFIX mortar and tiles (as described in Table 1 – option 1) has an external fire performance classification class B_{ROOF}(t1) according to EN 13501-5.

For all other applications, the external fire performance classification is class F_{ROOF}(t1, t2, t3, t4) (no test performed).

3.1.2 Reaction to fire

No performance has been assessed for the Liquid Applied Roof Waterproofing Kit regarding reaction to fire classification according to EN 13501-1.

3.1.3 Working life, durability

During the intended use, Liquid Applied Roof Waterproofing Kit remains undamaged and the properties are not subject to unacceptable changes due to external agencies in such a way as to affect the reaction to fire and the external fire performance of the assembled system

3.2 ER3: Hygiene, Health and the Environment

3.2.1 Release of dangerous substances

In matter of "Dangerous substances", the manufacturer provided a declaration of conformity to the Council Directive 76/769/EEC published in "Official Journal of the European Communities" of 27/07/1976 and its amendments.

3.2.2 Working life, durability

The product has been successfully subjected to the following tests, which are relevant for Liquid Applied Roof Waterproofing Kits: §5.3.1.1, 5.3.1.2, 5.3.3.1, 5.3.3.2.1, 5.3.3.3, 5.3.3.3.4.1, 5.3.3.4.3, 5.3.3.5.1, 5.3.3.5.2, 5.3.3.5.3 with reference to the ETAG 005-1 and -6.

3.3 ER4: Safety in use

3.3.1 Slipperiness

No performance has been assessed for the Liquid Applied Roof Waterproofing Kit regarding the slipperiness according EN 13894.

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

In accordance with Regulation (EU) N° 305/2011, Article 65, Directive 89/106/EEC is repealed, but references to the repealed Directive shall be construed as references to the Regulation.

The systems of assessment and verification of constancy of performance, specified in the Decision of the Commission 98/599/EC³ of the European Commission, as amended by Commission Decision 2001/596/EC⁴, and Commission Delegated Regulation (EU) 2016/364⁵, are specified in the following table.

Table 2. System(s) of assessment and verification of constancy of performance (AVCP)

	Roof coverings subject to reaction to fire regulations	(A1, A2, B, C) ^b (A1, A2, B, C) ^c , D, E, F (A1, A2, B, C, D, E, F) ^d , NPD ^e	1 3 4
Liquid Applied Roof Waterproofing Kit	Roof coverings subject to external fire performance regulations	Products requiring testing Products deemed to satisfy without testing, to be confirmed in discussions with the Fire Regulators Group	3 4
	All uses not referred to above	-	3
	<p>^a See Annex V to Regulation (EU) N° 305/2011</p> <p>^b Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)</p> <p>^c Products/materials not covered by footnote (*)</p> <p>^d Products/materials that do not require to be tested for reaction to fire (e.g. Products/materials of class A1 according to Commission Decision 96/603/EC, as amended)</p> <p>^e 'No Performance Declared' in accordance with Regulation (EU) N° 305/2011, Article 6(f)</p>		

Because the Liquid Applied Roof Water-proofing Kit can be subject to external fire regulations and the Liquid Applied Roof Waterproofing Kit are not deemed to satisfy without testing, AVCP 3 system applies.

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

5.1 Tasks for the ETA-holder

5.1.1 Factory production control (FPC)

5.1.1.1 General

The manufacturer shall establish, document and maintain a FPC system to ensure that the products placed on the market conform to the stated performance characteristics. The FPC system shall consist of procedures, regular inspections and tests and/or assessments and the use of the results to control raw and other incoming materials or components, equipment, the production process and the product.

The results of inspections, tests or assessments requiring action shall be recorded, as shall any action taken. The action to be taken when control values or criteria are not met shall be recorded.

5.1.1.2 Equipment

All weighing, measuring and testing equipment shall be calibrated and regularly inspected according to documented procedures, frequencies and criteria.

5.1.1.3 Raw materials and components

The specifications of all incoming raw materials and components shall be documented, as shall the inspection scheme for ensuring their conformity.

5.1.1.4 Non-conforming products

In the event of any non-conformity of any product, that product shall be placed into quarantine and action taken to rectify the cause of the non-conformity. Products may not subsequently be dispatched until the problem has been resolved.

5.1.1.5 Tests and frequencies

All the elements, requirements and provisions adopted by the manufacturer are documented in a systematic manner in the form of written policies and procedures. This production control system ensures that the product is in conformity with the European Technical Assessment (ETA).

The manufacturing and quality control procedures are confidential and deposited with the Assessment Operator.

5.2 Tasks of notified bodies

5.2.1 Assessment of the performance of the product

Assessment tests on the Liquid Applied Roof Waterproofing Kit have been conducted under the responsibility by the assessment body (UBA_{tc}) in accordance with Chapter 8 of the ETAG 005-1 and -6. The assessment body (UBA_{tc}) has assessed the results of these tests in accordance with Chapter 6 of this ETAG, as part of the ETA issuing procedure.

For characteristics under AVCP system 3, Regulation (EU) N° 305/2011, Annex V, clause 1.6 applies.

³ OJEU L 287, 24.10.1998

⁴ OJEU L 209, 2.8.2001

⁵ OJEU L 68/4, 15.03.2016

6 Bibliography

- ETAG 005-1 (2000) Guideline for European Technical Approval of Liquid Applied Roof Waterproofing Kits, Part 1: General
- ETAG 005-6 (2000) Guideline for European Technical Approval of Liquid Applied Roof Waterproofing Kits, part 6: specific stipulations for kits based on polyurethane
- EN ISO 1675 Plastics - Liquid resins - Determination of density by the pycnometer method
- EN ISO 2555 Plastics - Resins in the liquid state or as emulsions or dispersions - Determination of apparent viscosity by the Brookfield Test method
- EN ISO 3451-1 Plastics - Determination of ash - Part 1: General methods
- EN 12004-1 Adhesives for ceramic tiles - Part 1: Requirements, assessment and verification of constancy of performance, classification and marking
- EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests
- EN 13501-5 Fire classification of construction products and building elements - Part 5: Classification using data from external fire exposure to roofs tests
- EN 29073-1 Textiles - Test methods for nonwovens - Part 1: Determination of mass per unit area
- EN 29073-3 Textiles - Test methods for nonwovens - Part 3: Determination of tensile strength and elongation

NOTE: The editions of reference documents given above are those, which have been adopted by the UBAtc for its specific use when establishing this ETA. When new editions become available, these supersede the editions mentioned only when confirmed by the UBAtc.

Annex I – TEKNOTAN BT SYSTEM

The levels of performance presented in Table 3 apply, under the assumption that the waterproofing system build-up is as follows:

- Primer TEKNOPRIMER or TEKNOPRIMER DETAIL;
- 1st layer of TEKNOTAN BT in which TEKNOFLEECE 225 reinforcement is embedded;
- 2nd layer of TEKNOTAN BT;
- Finishing layer as described in Table 1.

The thicknesses of the components of the system are specified in Table 1 of this ETA. The substrates, primers and finishing applicable to this kit are defined in the body of this ETA.

Table 3. Level Of Performance

External fire performance (according to EN 13501-5)	B _{ROOF} (†1) ⁽¹⁾ F _{ROOF} (†1) ⁽²⁾
Reaction to fire (according to EN 13501-1)	NPD ⁽³⁾
Expected working life	W2
Climatic zone of use	M
User loads	P3
Roof slopes	S1 to S4
Surface temperature	
Lowest	TL3
Highest	TH3
Status on dangerous substances	None contained
Slipperiness	NPD ⁽³⁾

(dynamic coefficient of friction)	
Root resistance	NPD ⁽³⁾
Resistance to wind loads	≥ 50 kPa
Water vapour diffusion resistance factor μ	~ 7.850
⁽¹⁾ Finishing with TEKNOFIX mortar and tiles (thickness ≥ 40 mm)	
⁽²⁾ No test performed for all other finishings than mentioned in comment ⁽¹⁾	
⁽³⁾ NPD = No Performance Determined	

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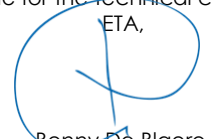
This European Technical Assessment has been issued by UBAtc asbl, in Sint-Stevens-Woluwe, on the basis of the technical work carried out by the Assessment Operator, BCCA.

On behalf of UBAtc asbl,



Peter Wouters,
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On behalf of the Assessment Operator, BCCA,
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director general

The most recent version of this European Technical Assessment may be consulted on the UBAtc website (www.ubatc.be).