

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-08/0265
of 8 July 2016

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Roof waterproofing "Concrete Power Seal flex"
Roof waterproofing "Concrete Power Seal thix"
Roof waterproofing "Concrete Power Seal TT"

Product family
to which the construction product belongs

Liquid applied roof waterproofing kit based on
polymethylmethacrylate

Manufacturer

Deutsche Windtechnik Rotor
und Turm GmbH & Co. KG
Hüttenstraße 20 a
28237 Bremen
DEUTSCHLAND

Manufacturing plant

Werk H

This European Technical Assessment
contains

7 pages including 2 annexes 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

Guideline for European technical approval of "Liquid
applied roof waterproofing kits", ETAG 005 Part 4:
"Specific stipulations for kits based on flexible unsaturated
polyester",
used as European Assessment Document (EAD)
according to Article 66 Paragraph 3 of Regulation (EU)
No 305/2011.

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Specific part

1 Technical description of the product

The liquid applied roof waterproofings "Concrete Power Seal flex", "Concrete Power Seal thix" and "Concrete Power Seal TT" are kits, which consist of the components:

- liquid applied roof waterproofing on the basis of a two-component reactive polymethylmethacrylate
- polyester fleece as felt layer for reinforcing

For an adequate adhesion of the waterproofing layer – depending on the type of substrate – a primer is in responsibility of the manufacturer required. The primer "Concrete Power Seal Primer" on the basis of reactive polymethylmethacrylate is used in addition for mineral substrates as concrete, mortar or screed.

"Concrete Power Seal thix" is the thixotropy variation for applications on details as up stands, corners or connections.

"Concrete Power Seal TT" is a variation with a shorter curing time for applications at low temperatures.

The minimum layer thickness of the roof waterproofing applied is 1.7 mm.

As an assembled system these components form a homogeneous seamless roof waterproofing.

Annex A shows the components and the system build-up of the roof waterproofings "Concrete Power Seal flex", "Concrete Power Seal thix" and "Concrete Power Seal TT".

2 Specification of the intended use in accordance with the applicable EAD

The product is used for the waterproofing of roof surfaces against penetration of atmospheric water.

In the technical file the manufacturer give information concerning the substrates which the product is suitable for and on how these substrates shall be pre-treated.

The levels of use categories are given in Annex A.

The verification and assessment methods on which this European Technical Assessment is based lead to the assumption of working life of the product of 25 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.

The levels of use categories and performances given in Section 3 are only valid if the liquid applied roof waterproofing is used in compliance with the specifications and conditions given in Annex B and the installation instructions of the manufacturer stated in the technical documents.

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

3.1 Mechanical resistance and stability (BWR 1)

Not applicable

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
External fire performance	See Annex A
Reaction to fire	See Annex A

3.3 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Water vapour permeability	See Annex A
Watertightness	See Annex A
Release of dangerous substances	The chemical composition of the product has to be in compliance with the composition deposited at the Technical Assessment Body (DIBt). The product does not contain dangerous substances according to EOTA TR 034 (version April 2014)
Resistance to mechanical damage (perforation)	See Annex A, Levels of use categories
Resistance to plant roofs	See Annex A

3.4 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Resistance to wind loads	See Annex A
Slipperiness	See Annex A

3.5 Protection against noise (BWR 5)

Not applicable

3.6 Energy economy and heat retention (BWR 6)

Not applicable

3.7 Sustainable use of natural resources (BWR 7)

For the sustainable use of natural resources no performance was investigated for this product.

3.8 General aspects

The verification of durability and serviceability is part of testing the essential characteristics. Durability and serviceability is only ensured if the specifications of intended use according to Annex B and the specifications of the technical file of the manufacturer are kept.

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

According to Decision of the Commission of 12 October 1998 (98/599/EC) (OJ L 287 of 24.10.98, p. 30), as amended by Decision of the Commission of 8 January 2001 (2001/596/EC) (OJ L 209 of 02.08.2001, p. 33), the system of assessment and verification of constancy of performance (see Annex V and Article 65 Paragraph 2 to Regulation (EU) No 305/2011) given in the following table applies.

Product	Intended use(s)	Level or class	System
Liquid applied roof waterproofing kits	For uses subject to external fire performance regulations	B _{ROOF} (t1)	3
	For uses subject to reaction to fire	E	3
	All other roof waterproofing uses (all other characteristics)	—	3

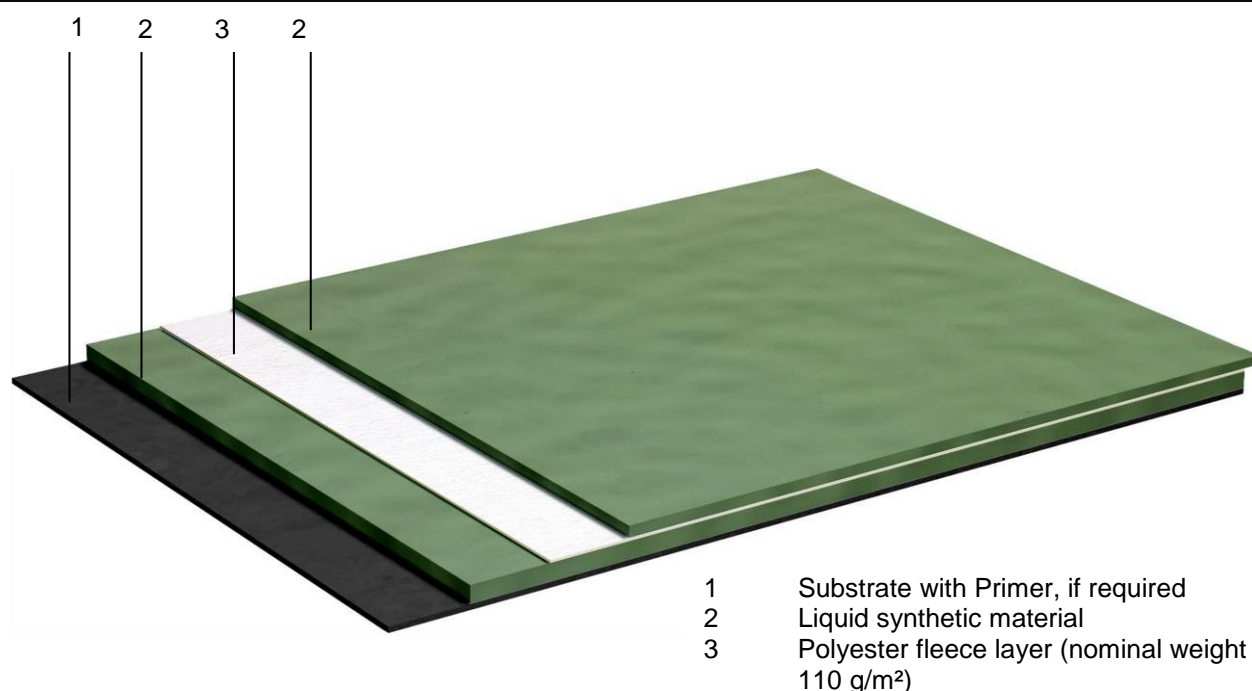
5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 8 July 2016 by Deutsches Institut für Bautechnik

Uwe Bender
Head of Department

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Applicable to the roof waterproofing **"Concrete Power Seal flex"**, **"Concrete Power Seal thix"** and **"Concrete Power Seal TT"**:

Minimum layer thickness	1.7 mm	
minimum quantity consumed:	2.5 kg/m²	
<u>Levels of use categories according to ETAG 005 with relation to:</u>		
Working life:	W3 (25 years)	
Climatic zones	M and S (moderate and severe climatic)	
Resistance to mechanical damage (perforation) (compressible and non-compressible substrates)	P1 to P3 (from low to normal)	
Roof slope		
Lowest surface temperature	TL3 (-20 °C)	
Highest surface temperature	TH3 (80 °C)	
Use category related to BWR 3:	S/W 2	
<u>Performance of the product:</u>		
External fire performance	EN 13501-5	F _{Roof}
Reaction to fire	EN 13501-1	E
Water vapour diffusion resistance factor μ		μ ≈ 4330
Watertightness		pass
Statement on dangerous substances		see section 3.3
Resistance to plant roots		no performance determined
Resistance to wind loads		≥ 50 kPa for tear resistant substrates
Resistance to slipperiness		no performance determined

Roof waterproofing **"Concrete Power Seal flex"**, **"Concrete Power Seal thix"** and **"Concrete Power Seal TT"**

System built-up, levels of use categories and performances of the product

Annex A

Installation

The levels of use categories and the performances of the roof waterproofing can be assumed only, if the installation is carried out according to the installation instructions stated in the technical file of the manufacturer, in particular taking account of the following points:

- installation by appropriately trained personnel,
- installation of only those components which are marked components of the kit,
- installation with the required tools and adjuvants, such as the thixotropy variant "Concrete Power Seal thix" for details as up stands, corners, connections etc.,
- precautions during installation,
- inspecting the roof surface for cleanliness and correct preparation, if need be, applying a primer before applying the product,
- inspecting compliance with suitable weather and curing conditions,
- finding out whether to the given ambient temperature the application with the adjustment for summer ("Concrete Power Seal flex") or winter ("Concrete Power Seal TT") is to be accomplished,
- ensuring a thickness of the cured waterproofing of at least 1.7 mm by processing appropriate minimum quantities of material,
- inspections during installation and of the finished product and documentation of the results.

Roof waterproofing "Concrete Power Seal flex", "Concrete Power Seal thix" and "Concrete Power Seal TT"

Intended use
Specifications

Annex B