

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-23/0532
of 4 December 2023

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General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

SOLITEX QUANTHO 3000 /
SOLITEX QUANTHO 3000 connect

Product family
to which the construction product belongs

Membranes for use as roof underlays

Manufacturer

MOLL bauökologische Produkte GmbH
pro clima
Rheintalstraße 35-43
68723 Schwetzingen
DEUTSCHLAND

Manufacturing plant

Plant 1

This European Technical Assessment
contains

8 pages including 3 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

EAD 030218-01-0402

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Specific part

1 Technical description of the product

"SOLITEX QUANTHO 3000" and "SOLITEX QUANTHO 3000 connect" are 2-layer roof underlay membranes, which consist of a polyester nonwoven carrier with a diffusion-open polyurethane coating (TPU) on the upper side.

"SOLITEX QUANTHO 3000 connect" is provided with alternately arranged, factory-integrated self-adhesive zones along both longitudinal edges (integrated self-sealing edges).

The membranes do not contain any substances that are intended to inhibit or prevent root penetration (root protection agents).

The roof underlay membranes are fastened to the timber construction with nails or screws, e.g., by means of nailed or screwed counter battens.

For an adequate application of product – depending on the specific roof design, e. g. roof slope, roof built-up, details – other adjuvants may be needed, e. g. mastic sealant, adhesive tape, nail-sealing tape. These adjuvants are given in the manufacturer's technical documents¹.

An additional product description is given in Annex A.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The membranes are intended for use as roof underlay under roof covering of discontinuous roofs.

In the technical documents the manufacturer gives information concerning the substrates, roof build-ups, roof pitches and exposure time to weathering which the product is suitable for.

The performance given in Section 3 is only valid if the roof underlay membranes are used in compliance with the specifications and conditions given in Annex B.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the roof underlay membranes of at least 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

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	see Annex A
External fire performance of roofs	see Annex A

¹ The manufacturer's technical documents comprise all information necessary for the production and the installation of the product as well as for the repair and it is deposited with DIBt.

3.2 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Resistance to water penetration	see Annex A
Water column resistance	see Annex A
Water vapour transmission properties	see Annex A
Tensile properties	see Annex A
Resistance to tearing	see Annex A
Hail resistance	see Annex A
Dimensional stability	see Annex A
Flexibility at low temperature	see Annex A
Resistance to penetration of air	see Annex A
Water tightness of seams	see Annex A
Emissivity	see Annex A
Tightness of perforations from nails and screws	see Annex A
Content, emission and/or release of dangerous substances	see Annex A

3.3 Aspects of durability

Essential characteristic	Performance
Artificial ageing behaviour by exposure to combination of UV radiation (336 h) and elevated temperature and to heat	see Annex A
High heat resistance	see Annex A
Artificial ageing behaviour by exposure to combination of UV radiation (5000 h) and elevated temperature and to heat	see Annex A
Artificial ageing behaviour by prolonged exposure to heat with accelerated air-speed 5±2 m/s	see Annex A

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

In accordance with EAD No. 030218-01-0402, the applicable European legal act is: Decision 1999/90/EC.

The system to be applied is: 3

In addition, with regard to reaction to fire for products covered by this EAD the applicable European legal act is: Decision 1999/90/EC, as amended by 2001/596/EC.

The system to be applied is: 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 4 December 2023 by Deutsches Institut für Bautechnik

Bettina Hemme
Head of Section

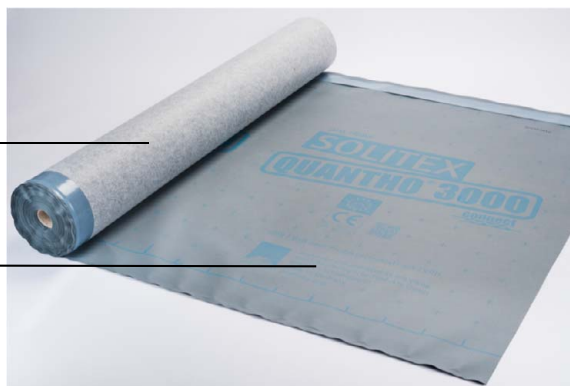
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**Description of the roof underlay membranes
"SOLITEX QUANTHO 3000" / "SOLITEX QUANTHO 3000 connect"**

Built-up:

Polyester nonwoven carrier

Polyurethane coating (TPU)



Length	50 m (- 0 %)
Width	1.5 m (+ 1.5 / - 0.5 %)
Straightness	≤ 30 mm/10 m
Mass per unit area	230 g/m ² (± 10%)

**Performance of the roof underlay membranes "SOLITEX QUANTHO 3000" /
"SOLITEX QUANTHO 3000 connect "**

Essential characteristic	Performance
Reaction to fire	Class E ¹⁾
External fire performance of roofs	NPA
Resistance to water penetration	Class W1 ²⁾
Water column resistance	≥ 4500 mm water column
Water vapour transmission properties (S _d)	0.16 m
Tensile properties	
Maximum tensile force	longitudinal / transverse 335 N/50 mm / 355 N/50 mm
Elongation	longitudinal / transverse 36 % / 55 %
Resistance to tearing	longitudinal / transverse 200 N / 200 N
Hail resistance (damaging velocity v _d)	
Soft support in accordance with EN 13583	24
Support of wood fibre insulation product (soft wood fibre board) according to EN 13171; thickness: 60 mm; apparent density: 140 kg/m ³	> 50

(NPA: no performance assessed)

- 1) Class according to EN 13501-1
The tests for reaction to fire have been performed regarding mounting and fixing as follows:
- free hanging
- 2) Class according to EN 13859-1

SOLITEX QUANTHO 3000 / SOLITEX QUANTHO 3000 connect	MOLL bauökologische Produkte GmbH	Annex A1
Description and performance of product		

Essential characteristic		Performance
Dimensional stability	longitudinal / transverse	NPA
Flexibility at low temperature		- 40 °C
Resistance to penetration of air		< 0.1 m ³ /(m ² × h × 50 Pa)
Water tightness of seams		
Integrated self-sealing edges (connect)		Watertight
Adhesive tape "TESCON VANA"		(2 h, 200 mm water column)
Emissivity (ε _n)		0.85
Tightness of perforations from nails and screws		
Laboratory test (wind-driven rain test)		No dripping water
- on a full-surface and pressure-resistant substrate (at fastening points)		(eligible for the hygrothermal simulation)
- with integrated self-sealing edges (connect) or adhesive tape "TESCON VANA"		
- roof pitch ≥14°		
- heavy rain ≤ 2 l/m ² ×min and wind pressure ≤ 600 Pa		
Hygrothermal assessment (hygrothermal simulation) of a roof structure with rain entry ³⁾ through nail penetrations into the roof rafters:		No additional nail-sealing material necessary
- exposure time (without roof covering) of 3 months + drying phase (ventilated roof covering) of 5 years		
- central European climate conditions (altitudes ≤ 690 m above sea level with an average total annual rainfall ≤ 1185 mm/a)		
Content, emission and/or release of dangerous substances		NPA
Artificial ageing behaviour by exposure to combination of UV radiation (336 h) and elevated temperature and to heat		
Resistance to water penetration after aging		Class W1 ²⁾ (resistant against artificial ageing; 336 h UV + 90 d at 70°C)
Tensile properties after aging		
Maximum tensile force	longitudinal / transverse	325 N/50 mm / 335 N/50 mm
Elongation	longitudinal / transverse	33 % / 53 %
High heat resistance		NPA
Artificial ageing behaviour by exposure to combination of UV radiation (5000 h) and elevated temperature and to heat		NPA
Artificial ageing behaviour by prolonged exposure to heat with accelerated air-speed 5±2 m/s		NPA

(NPA: no performance assessed)

²⁾ Class according to EN 13859-1

³⁾ Rain entry in the hygrothermal simulation = moisture entry obtained in the laboratory test

SOLITEX QUANTHO 3000 / SOLITEX QUANTHO 3000 connect	MOLL bauökologische Produkte GmbH	Annex A2
Performance of product		

Installation

The performance of the roof underlay membranes can be assumed only, if the installation is carried out according to the installation instructions stated in the technical documents of the manufacturer, in particular taking account of the following points:

- installation by appropriately trained personnel;
- installation with the required tools and adjuvants;
- precautions during installation;
- substrate, roof build-up, roof pitch and exposure time to weathering in accordance with manufacturer's instructions;
- inspecting the roof structure for sufficient stability;
- appropriate fixation in accordance with manufacturer's instructions, e. g., permanent fixation with nailed or screwed counter battens, maximum / minimum fixing distances;
- treatment of overlaps and details, e. g. eave, ridge, free end, in accordance with manufacturer's instructions;
- where applicable, inspecting the overlapping and bonding areas which shall be clean, dry and free of dust, frost and grease;
- inspecting compliance with suitable weather conditions, e. g. considering the respective installation temperatures;
- applying a nail-sealing tape where necessary (in accordance with manufacturer's instructions), e. g. in case of non-full-surface or non-pressure-resistant substrate at fastening points or in case of a not appropriate roof pitch*.

* Manufacturer's instructions regarding roof pitch:

Min. roof pitch:	Application as:	Execution of counter batten:	Execution of seams:
≥ 10° pitch	rainproof roof underlayment	with nail-sealing material "TESCON NAIDECK"	integrated self-sealing edges (connect) or adhesive tape "TESCON VANA"
≥ 14° pitch	roof underlayment with secured seams and perforations	without additional nail-sealing material	integrated self-sealing edges (connect) or adhesive tape "TESCON VANA"

**SOLITEX QUANTHO 3000 /
SOLITEX QUANTHO 3000 connect**

MOLL bauökologische Produkte GmbH

**Intended use
Specifications**

Annex B