Deutsches Institut für Bautechnik

Public-law institution jointly founded by the federal states and the Federation

European Technical Assessment Body for construction products

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European Technical Assessment ETA-26/0075 of 16 March 2026

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	DELTA-MAXX X
Product family to which the construction product belongs	Membranes for use as roof underlays
Manufacturer	Dörken GmbH & Co. KG Wetterstraße 58 58313 Herdecke GERMANY
Manufacturing plant	Dörken GmbH & Co. KG Wetterstraße 58 58313 Herdecke
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 Article 95(4) of Regulation (EU) No 2024/3110, on the basis of	EAD 030218-01-0402

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Specific Part

1 Technical description of the product

"DELTA-MAXX X" is a roof underlay membrane, which consists of a special polyester nonwoven (PET) with a vapour-permeable polyurethane coating (TPU) on the upper side.

"DELTA-MAXX X" is provided with a factory-integrated self-adhesive zone along both edges (integrated self-adhesive edges).

The membranes do not contain any substances that are intended to inhibit or prevent root penetration (root protection agents) [1].

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 documents [2].

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 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 underlay membranes of at least 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.

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] Manufacturer's statement.

[2] 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 16 March 2026 by Deutsches Institut für Bautechnik

Bettina Hemme
Head of Section

beglaubigt:
Hannoun

Deutsches Institut für Bautechnik DIBt

Description of the underlay membrane "DELTA-MAXX X"

Built-up:

Polyurethane coating (TPU)

Special polyester nonwoven (PET)

Length	50 m (- 0 %)
Width	1.5 m (+ 1.5 / - 0.5 %)
Straightness	≤ 30 mm/10 m
Mass per unit area	220 g/m² (± 20 g/m²)

Performance of the underlay membrane "DELTA-MAXX X"

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		NPA
Water vapour transmission properties (S_d)		0.15 m (± 0.05 m)
Tensile properties		
Maximum tensile force	longitudinal / transverse	500 N/50 mm / 500 N/50 mm
Elongation	longitudinal / transverse	60 % / 60 %
Resistance to tearing	longitudinal / transverse	300 N / 325 N
Hail resistance (damaging velocity v_d)		NPA
Dimensional stability	longitudinal / transverse	≤ 1 % / ≤ 1 %

(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:
- loosely on a non-combustible mineral wool board, having a density of 50 kg/m3 approximately. The mineral wool board substrate fulfils the criteria in EN 13238:2020.

2) Class according to EN 13859-1

DELTA-MAXX X
Dörken GmbH & Co. KG

Description and performance of product

Annex A1

Performance of the underlay membrane "DELTA-MAXX X" (continued)

Essential characteristic		Performance
Flexibility at low temperature		- 25 °C
Resistance to penetration of air		NPA
Water tightness of seams		NPA
Emissivity (ε_n)		NPA
Tightness of perforations from nails and screws		NPA
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 to artificial ageing; 336 h UV + 90 d at 70°C)
Tensile properties after aging		
Maximum tensile force	longitudinal / transverse	450 N/50 mm / 450 N/50 mm
Elongation	longitudinal / transverse	55 % / 55 %
High heat resistance (80 °C)		
Resistance to water penetration after aging		Class W1 [2)] (resistant to artificial ageing; 336 h UV + 90 d at 80°C)
Tensile properties after aging		
Maximum tensile force	longitudinal / transverse	400 N/50 mm / 400 N/50 mm
Elongation	longitudinal / transverse	50 % / 50 %
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		
Resistance to water penetration after aging		Class W1 [2)] (resistant against prolonged exposure to heat with accelerated air-speed 5 ±2 m/s; 64 weeks at 70 °C)

(NPA: no performance assessed)

[2)] Class according to EN 13859-1

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Installation

The performance of the underlay membrane 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;
- inspecting the substrate in the overlapping (and bonding) areas which shall be clean, dry and free of dust, frost and grease;
- inspecting the roof structure for sufficient stability;
- inspecting compliance with suitable weather conditions, e. g., gluing of overlaps at ≥ +5 °C;
- appropriate fixation in accordance with manufacturer's instructions, e.g. permanent fixation with nailed or screwed counter battens, maximum / minimum fixing distances;
- treatment of details in accordance with manufacturer's instructions, e.g. eave, ridge, free end.

DELTA-MAXX X Dörken GmbH & Co. KG	Annex B
Intended use Specifications for the installation	