

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

**ETA-22/0901**  
**of 3 March 2023**

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-FASSADE 20 / DELTA-FASSADE 20 PLUS

Product family  
to which the construction product belongs

Membrane for use as wall underlay

Manufacturer

Dörken GmbH & Co. KG  
Wetterstraße 58  
58313 Herdecke  
DEUTSCHLAND

Manufacturing plant

Dörken GmbH & Co. KG  
Wetterstraße 58  
58313 Herdecke  
DEUTSCHLAND

This European Technical Assessment  
contains

7 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

"DELTA-FASSADE 20" and "DELTA-FASSADE 20 PLUS" are wall underlay membranes (underlay membranes for facades), which consist of a polyester nonwoven (PET) with a diffusion-open waterproof acrylic coating.

"DELTA-FASSADE 20 PLUS" is provided with a factory-integrated self-adhesive zone along both edges (integrated self-adhesive edges).

The wall 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 facade design, e. g. wall built-up, details – other adjuvants may be needed, e. g. mastic sealant, adhesive tape. In general, these adjuvants are given in the manufacturer's technical documents<sup>1</sup>.

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 wall underlays, which are to be used in walls behind outside wall coverings in order to avoid penetration of wind and water from outside.

The membranes are intended to be exposed to UV rays in accordance with EN 13859-2, e. g. due to open joints of the wall covering.

In the technical documents the manufacturer gives information concerning the substrates, wall build-up and wall coverings the product is suitable for.

The performance given in Section 3 is only valid if the wall 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 wall 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

<sup>1</sup> 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 vapour transmission	see Annex A
Tensile properties	see Annex A
Resistance to tearing	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

### 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
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 $5 \pm 2$ 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: 1

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

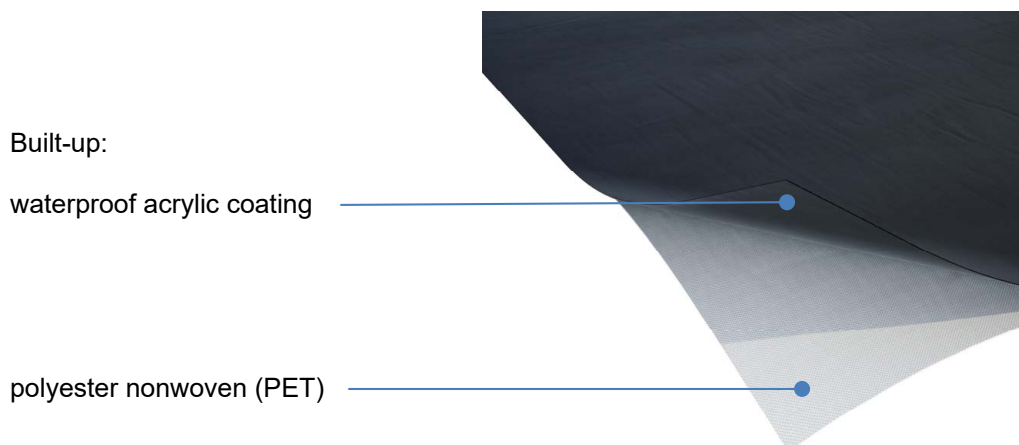
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 3 March 2023 by Deutsches Institut für Bautechnik

Bettina Hemme  
Head of Section

*beglaubigt:*  
Hannoun

### Description of the wall underlay membranes "DELTA-FASSADE 20" / "DELTA-FASSADE 20 PLUS"



Length	50 m (-0 %)
Width	1.5 m (+1.5 / -0.5 %)
Straightness	≤ 30 mm/10 m
Mass per unit area	210 g/m <sup>2</sup> (+20 /-10 %)

### Performance of the wall underlay membranes "DELTA-FASSADE 20" / "DELTA-FASSADE 20 PLUS"

Essential characteristic	Performance
Reaction to fire	Class B – s1, d0 <sup>1)</sup>

<sup>1)</sup> Class according to EN 13501-1.

The tests for reaction to fire have been performed regarding mounting and fixing as follows:

- free hanging / free standing (distance from the backing board 200 mm)
- mechanically fixed
- horizontal joints/seams (with integrated self-adhesive edges)

**DELTA-FASSADE 20 / DELTA-FASSADE 20 PLUS**

Dörken GmbH & Co. KG

**Description and performance of product**

Annex A1

Performance of the wall underlay membrane "DELTA-FASSADE 20" / "DELTA-FASSADE 20 PLUS" (continued)		
Essential characteristic	Performance	
Resistance to water penetration	Class W1 <sup>2)</sup>	
Water vapour transmission	s <sub>d</sub> = 0.02 m (+0.04 / -0.01 m)	
<b>Tensile properties</b>		
F <sub>max</sub>	longitudinal / transverse	250 N/50 mm / 205 N/50 mm
Elongation	longitudinal / transverse	25 % / 40 %
Resistance to tearing (nail shank)	longitudinal / transverse	140 N / 135 N
Dimensional stability	longitudinal / transverse	≤ 0.5 % / ≤ 0.5 %
Flexibility at low temperature	-40 °C	
Resistance to penetration of air	No performance assessed	
Water tightness of seams	No performance assessed	
Emissivity	No performance assessed	
<b>Artificial ageing behaviour by: exposure to combination of UV radiation (336 h) and elevated temperature and to heat</b>		
Resistance to water penetration after aging	Class W1 <sup>2)</sup> (resistant against artificial ageing; 336 h UV + 90 d at 70 °C)	
Tensile properties after aging		
F <sub>max</sub>	longitudinal / transverse	245 N/50 mm / 200 N/50 mm
Elongation	longitudinal / transverse	25 % / 40 %
<b>exposure to combination of UV radiation (5000 h) and elevated temperature and to heat</b>		
Resistance to water penetration after aging	Class W1 <sup>2)</sup> (resistant against artificial ageing; 5000 h UV + 90 d at 70 °C)	
Tensile properties after aging		
F <sub>max</sub>	longitudinal / transverse	240 N/50 mm / 190 N/50 mm
Elongation	longitudinal / transverse	15 % / 25 %
<b>prolonged exposure to heat with accelerated air-speed 5 ±2 m/s</b>		
Resistance to water penetration after aging	Class W1 <sup>2)</sup> (resistant against prolonged exposure to heat with accelerated air-speed 5 ±2 m/s; 64 weeks at 70 °C)	
<b>DELTA-FASSADE 20 / DELTA-FASSADE 20 PLUS</b> Dörken GmbH & Co. KG		Annex A2
<b>Performance of product</b>		

<sup>2)</sup> Class according to EN 13859-2

### Installation

The performance of the wall 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 wall structure for sufficient stability;
- inspecting compliance with suitable weather conditions, e. g. gluing of overlaps at  $\geq +5$  °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 joints (if necessary) and of details in accordance with manufacturer's instructions, e.g. overlaps, connection areas, corners, edges, penetrations;
- maximum width and proportion of open joints of the wall covering in accordance with manufacturer's instructions.

<b>DELTA-FASSADE 20 / DELTA-FASSADE 20 PLUS</b> Dörken GmbH & Co. KG	Annex B
<b>Intended use</b> Specifications	