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for construction products



European Technical
Assessment

ETA-21/0916
of 28 May 2026

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General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	VC 102/090 05-5, VC 102/085 01-25 V, VC 103/099 01-25 V
Product family to which the construction product belongs	Humidity-dependent vapour control layer
Manufacturer	Lenzing Plastics GmbH & Co. KG Werkstraße 2 4860 Lenzing ÖSTERREICH
Manufacturing plant	Lenzing Plastics GmbH & Co. KG Werkstraße 2 4860 Lenzing
This European Technical Assessment contains	7 pages including 1 annex 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 030271-00-0605
This version replaces	ETA-21/0916 issued on 21 February 2022

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Specific part

1 Technical description of the product

The VC 102/090 05-5, VC 102/085 01-25 V and VC 103/099 01-25 V are humidity-dependent vapour control layers. The VC 102/090 05-5 consists of a backing layer and a humidity-dependent coating. The VC 102/085 01-25 V consists of a polypropylene non-woven and a humidity-dependent special-coating. The VC 103/099 01-25 V consists of a polypropylene non-woven, an integrated scrim and a humidity-dependent coating.

The thickness for VC 102/090 05-5 is $0.2 \text{ mm} \pm 0.02 \text{ mm}$, for VC 102/085 01-25 V it is $0.3 \text{ mm} \pm 0.02 \text{ mm}$ and for VC 103/099 01-25 V it is $0.46 \text{ mm} \pm 0.02 \text{ mm}$. The mass per unit for VC 102/090 05-5 is $90 \text{ g/m}^2 -2.7 \text{ g/} +9 \text{ g}$, for VC 102/085 01-25 V it is $85 \text{ g/m}^2 -2 \text{ g/} +8 \text{ g}$ and for VC 103/099 01-25 V it is $99 \text{ g/m}^2 -3 \text{ g/} +10 \text{ g}$.

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

The performances given in Section 3 are only valid if the humidity-dependent vapour control layers VC 102/090 05-5, VC 102/085 01-25 V and VC 103/099 01-25 V are used in compliance with the specifications and conditions given in Annex 1.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the humidity-dependent vapour control layers VC 102/090 05-5, VC 102/085 01-25 V and VC 103/099 01-25 V of at least 50 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	Euroclass E* in accordance with EN 13501-1 ¹
* for VC 103/099 01-25 V and VC 102/085 01-25 V only when used with edges protected against direct flame exposure	

3.2 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Resistance to tearing (nail shank)	See Annex 1.2.1
Water vapour transmission properties	See Annex 1.2.2
Durability of water vapour transmission properties – artificial ageing by long-term exposure to elevated temperature	See Annex 1.2.2
Tensile properties	See Annex 1.2.3
Durability of tensile properties – artificial ageing by long-term exposure to elevated temperature and exposure to UV and heat	See Annex 1.2.3
Air permeability	See Annex 1.2.4

¹ EN 13501-1:2018

Fire classification of construction products and building elements - Part 1:
Classification using data from reaction to fire tests

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

In accordance with EAD No.030271-00-0605, the applicable European legal act is: [1999/90/EC(EU)] amended by Commission decision [2001/596/EC].

The system to be applied is: 3

For reaction to fire 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 28 May 2026 by Deutsches Institut für Bautechnik

Anja Dewitt
Head of Section

beglaubigt:
Vössing

Annex 1.1 Specification of intended use

EN 1995-1-1¹ applies for the installation of the humidity-dependent vapour control layers VC 102/090 05-5, VC 102/085 01-25 V and VC 103/099 01-25 V.

Annex 1.2 Specification of essential characteristics

A.1.2.1 Resistance to tearing (nail shank)

The resistance to tearing in longitudinal and transverse direction of the humidity-dependent vapour control layers VC 102/090 05-5, VC 102/085 01-25 V and VC 103/099 01-25 V in accordance with EN 12310-1² fulfil the values with Table A.1.2.1.

Table A.1.2.1: Resistance to tearing of VC 102/090 05-5, VC 102/085 01-25 V and VC 103/099 01-25 V in [N]

Vapour control layer	Direction	Resistance to tearing [N]
VC 102/090 05-5	longitudinal	96
	transverse	93
VC 102/085 01-25 V	longitudinal	122
	transverse	116
VC 103/099 01-25 V	longitudinal	192
	transverse	151

A.1.2.2 Durability of water vapour transmission properties – ageing by long-term exposure to elevated temperature

The initial values of the s_d -values for the humidity-dependent vapour control layers VC 102/090 05-5, VC 102/085 01-25 V and VC 103/099 01-25 V tested in accordance with EN ISO 12572³ meet the values in Table A.1.2.2.

The values after artificial ageing of the s_d -values for the humidity-dependent vapour control layers VC 102/090 05-5, VC 102/085 01-25 V and VC 103/099 01-25 V tested in accordance with EN 1296⁴ and the test plan deposited with DIBt fulfil the values in accordance with Table A.1.2.2.

¹ EN 1995-1-1: 2004+AC:2006+A1:2008+A2:2014

² EN 12310-1:1999

³ EN ISO 12572:2017

⁴ EN 1296:2000

Eurocode 5: Design of timber structures – Part 1-1: General - Common rules and rules for buildings

Flexible sheets for waterproofing – Part 1: Bitumen sheets for roof waterproofing; determination of resistance to tearing (nail shank)

Hygrothermal performance of building materials and products - Determination of water vapour transmission properties - Cup method

Flexible sheets for waterproofing. Bitumen, plastic and rubber sheets for roofing. Method of artificial ageing by long term exposure to elevated temperature

VC 102/090 05-5, VC 102/085 01-25 V, VC 103/099 01-25 V	Annex 1
Specification of essential characteristics	

Table A.1.2.2: s_d -values for initial value and after storage at 80(±2) °C for 24 weeks of VC 102/090 05-5, VC 102/085 01-25 V and VC 103/099 01-25 V in [m]

Conditionings / Arithmetic average of dry point and wet point		23°C, 0/50% rel. hum. / 25 % rel. humidity [m]	23°C, 50/93% rel. hum. / 72 % rel. humidity [m]	23°C, 83/97% rel. hum. / 90 % rel. humidity [m]
VC 102/090 05-5	Initial value	3.340	0.722	0.550
	Aged value	3.941	0.833	0.563
VC 102/085 01-25 V	Initial value	51.749	0.919	0.526
	Aged value	61.574	1.964	0.553
VC 103/099 01-25 V	Initial value	51.644	0.654	0.135
	Aged value	54.040	1.522	0.189

A.1.2.3 Durability of tensile properties – artificial ageing by long-term exposure to elevated temperature and exposure to UV and heat

The initial values and the values after artificial ageing of the maximum tensile force and the maximum tensile force elongation for the humidity-dependent vapour control layers VC 102/090 05-5, VC 102/085 01-25 V and VC 103/099 01-25 V determined in accordance with EN 13984⁵ and EN 13859-1⁶ correspond to the values in Table A.1.2.3 for both the longitudinal and transversal directions of the sheet. The specifications of the test standard with regard to the number and selection of test specimens have been fully complied with.

⁵ EN 13984:2013

Flexible sheets for waterproofing – Plastic and rubber vapour control layers – Definitions and characteristics

⁶ EN 13859-1:2014

Flexible sheets for waterproofing - Definitions and characteristics of underlays - Part 1: Underlays for discontinuous roofing

VC 102/090 05-5, VC 102/085 01-25 V, VC 103/099 01-25 V	Annex 1
Specification of essential characteristics	

Table A.1.2.3: Values of tensile force and elongation at maximum force before and after exposure

Vapour control layer		longitudinal		transversal	
		Strength F_H [N / 50 mm]	Elongation ϵ_H [%]	Strength F_H [N / 50 mm]	Elongation ϵ_H [%]
VC 102/090 05-5	Initial value	212	90	150	92
	Aged value Heat resistance	202	49	137	34
	Aged value UV resistance	137	34	84	33
VC 102/085 01-25 V	Initial value	162	70.7	157	84.2
	Aged value Heat resistance	182	39.0	171	46.1
	Aged value UV resistance	122	6.4	107	8.8
VC 103/099 01-25 V	Initial value	299	20.8	310	18.8
	Aged value Heat resistance	350	23.1	347	19.4
	Aged value UV resistance	128	4.9	200	15.6

A.1.2.4 Air permeability

The maximum air permeability Q_{50} [$\text{m}^3/(\text{m}^2 \cdot \text{h} \cdot 50 \text{ Pa})$], tested in accordance with EN 13859-2⁷, clause 4.3.4 and EN 12114⁸ with edge gluing on steel frame with adhesive tape, expressed in maximum area-related reference permeability at 50 Pa see Table A.1.2.4.

Table A.1.2.4: Maximum air permeability of the humidity-dependent vapour control layers VC 102/090 05-5, VC 102/085 01-25 V and VC 103/099 01-25 V

Vapour control layer	Max. air permeability Q_{50} [$\text{m}^3/(\text{m}^2 \cdot \text{h} \cdot 50 \text{ Pa})$]
VC 102/090 05-5	0.009
VC 102/085 01-25 V	0.000
VC 103/099 01-25 V	0.000

⁷ EN 13859-2:2014

Flexible sheets for waterproofing – Definitions and characteristics of underlays – Part 2: Underlays for walls

⁸ EN 12114:2000

Thermal performance of buildings – Air permeability of building components and building elements

VC 102/090 05-5, VC 102/085 01-25 V, VC 103/099 01-25 V	Annex 1
Specification of essential characteristics	