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**European Technical Assessment Body
for construction products**



European Technical Assessment

**ETA-18/0618
of 5 August 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

URSA XPS D N-III TWINS,
URSA XPS D N-V TWINS

Product family
to which the construction product belongs

Extruded polystyrene foam boards as load bearing layer
and/or thermal insulation outside the waterproofing

Manufacturer

URSA Deutschland GmbH
Carl-Friedrich-Benz-Straße 46-48
04509 Delitzsch
DEUTSCHLAND

Manufacturing plant

Werk Queis
Uralitastraße 1
D-06188 Queis

This European Technical Assessment
contains

10 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) 2024/3110, on the basis of

EAD 040650-00-1201

This version replaces

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Specific Part

1 Technical description of the product

The multilayer extruded polystyrene foam boards are manufactured from up to four layers of extruded polystyrene foam boards (single boards). The single boards with thicknesses from 50 mm up to 100 mm are bonded together by full-surface thermal welding. The respective total thickness of the product is composed of single layer board thicknesses with a difference of 20 mm at most. The single boards are made of rigid cellular plastics material extruded from polystyrene or one of its copolymers and which have a closed cell structure. The blowing agent mixture is carbon dioxide (CO₂) and additives.

The multilayer extruded polystyrene foam boards have a foam skin on both surfaces and a special edge treatment (shiplap).

The multilayer extruded polystyrene foam boards do not contain Hexabromocyclododecane (HBCD).

The multilayer extruded polystyrene foam boards have the following designations:

"URSA XPS D N-III TWINS" and

"URSA XPS D N-V TWINS"

The multilayer extruded polystyrene foam boards are manufactured with the following dimensions:

Nominal thicknesses:	100 mm to 400 mm for "URSA XPS D N-III TWINS" 100 mm to 160 mm for "URSA XPS D N-V TWINS"
Nominal length:	1250 mm (primarily)
Nominal widths:	600 mm (primarily)

The European Technical Assessment has been issued for the product on the basis of agreed data/ information, deposited with Deutsches Institut für Bautechnik, which identifies the product that has been assessed. The European Technical Assessment applies only to products corresponding to this agreed data/information.

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

The multilayer extruded polystyrene foam boards are intended to be used as load bearing layer and/or thermal insulation outside the waterproofing. The boards are laid uniformly and even on the substrate to which they are applied. In particular the following applications are covered:

- Load bearing and thermal insulation underneath foundation slabs (with the boards "URSA XPS D N-V TWINS" and "URSA XPS D N-III TWINS" to a nominal thickness ≤ 300 mm)
- External horizontal and vertical thermal insulation of in-ground constructions in non-structural applications (also in case of groundwater)
- Inverted roof insulation (including park deck and green roof applications)

The performance according to section 3 only applies if the thermal insulation boards are installed according to the manufacture's installation instructions and if they are protected from precipitation, wetting or weathering during transport and storage before installation.

Concerning the application of the thermal insulation boards, also the respective national regulations shall be observed.

Where the thermal insulation boards are fixed by using adhesives, only such adhesions shall be used, which are suitable for this purpose. The assessment of these fixings is not subject of this European Technical Assessment.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the extruded polystyrene foam boards 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

For sampling, conditioning and testing the provisions of the EAD 040650-00-1201 "Extruded polystyrene foam boards as load bearing layer and/or thermal insulation outside the waterproofing" apply.

3.1 Mechanical resistance and stability (BWR 1)

Essential characteristic	Performance
Compressive stress at 10 % deformation or compressive strength test acc. to EN ISO 29469:2022 "URSA XPS D N-III TWINS" thickness $100 \text{ mm} \leq d \leq 300 \text{ mm}$ "URSA XPS D N-V TWINS" thickness $100 \text{ mm} \leq d \leq 160 \text{ mm}$	Level (individual values may fall below this level up to 10 %): $\geq 300 \text{ kPa}$ $\geq 500 \text{ kPa}$
Slip deformation	No performance assessed
Compressive stress or compressive strength in the transverse and longitudinal directions	No performance assessed
Characteristic value of compressive stress or compressive strength 5%-fractile value for a one-sided confidence level of 75 % under unknown or known variance using ISO 12491:1997 "URSA XPS D N-III TWINS" thickness $100 \text{ mm} \leq d \leq 300 \text{ mm}$ "URSA XPS D N-V TWINS" thickness $100 \text{ mm} \leq d \leq 160 \text{ mm}$	 $\sigma_{0,05} = 372 \text{ kPa}$ ($n > 50$; $\sigma_{\text{mean}} = 418 \text{ kPa}$; $s_{\sigma} = 30 \text{ kPa}$) $\sigma_{0,05} = 495 \text{ kPa}$ ($n = 20$; $\sigma_{\text{mean}} = 599 \text{ kPa}$; $s_{\sigma} = 47 \text{ kPa}$)
Compressive creep	See Annex A
Behaviour under shear load (large-sized specimen) test acc. to the EAD and the guidelines in EN 12090:2013 "URSA XPS D N-III TWINS" thickness $100 \text{ mm} \leq d \leq 300 \text{ mm}$	 $T_{\text{large}} = 136 \text{ kPa}$
Creep under shear load	See Annex A
Creep under combined compressive and shear load	See Annex A
Compressive modulus of elasticity	No performance assessed

Essential characteristic	Performance
Adhesion behaviour under compressive and shear load on large-sized samples	See Annex A
Shear strength test acc. to EN 12090:2013	≥ 200 kPa
Density test acc. to EN ISO 29470:2020 "URSA XPS D N-III TWINS" thickness $100 \text{ mm} \leq d \leq 300 \text{ mm}$ "URSA XPS D N-V TWINS" thickness $100 \text{ mm} \leq d \leq 160 \text{ mm}$	density range: $32 \text{ kg/m}^3 - 40 \text{ kg/m}^3$ $36 \text{ kg/m}^3 - 43 \text{ kg/m}^3$

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire test acc. to EN ISO 11925-2:2020	Class E acc. to EN 13501-1:2018

3.3 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Thermal conductivity at mean reference temperature of 10°C test acc. to EN 12667:2001 or EN 12939:2001 and aging procedure acc. EN 13164:2012+A1:2015, Annex C with deviating storage time period (sliced specimen) of $(90 \pm 2/-2)$ days prior to testing "URSA XPS D N-III TWINS" thickness $100 \text{ mm} \leq d \leq 180 \text{ mm}$ thickness $180 \text{ mm} < d \leq 240 \text{ mm}$ thickness $240 \text{ mm} < d \leq 400 \text{ mm}$ "URSA XPS D N-V TWINS" thickness $100 \text{ mm} \leq d \leq 160 \text{ mm}$ Moisture conversion coefficient	 $\lambda_{D(90d)} = 0.033 \text{ W/(m}\cdot\text{K)}$ $\lambda_{D(90d)} = 0.035 \text{ W/(m}\cdot\text{K)}$ $\lambda_{D(90d)} = 0.036 \text{ W/(m}\cdot\text{K)}$ $\lambda_{D(90d)} = 0.035 \text{ W/(m}\cdot\text{K)}$ No performance assessed
Water absorption Long term water absorption by total immersion test acc. to EN ISO 16535:2019 (method 2A) Long term water absorption by diffusion test acc. EN ISO 16536:2019	 WL(T)0.7 ($W_{lt} \leq 0.7 \text{ Vol.}\%$) WD(V)3 ($W_{dv} \leq 3.0 \text{ Vol.}\%$)

Essential characteristic	Performance
Tensile strength perpendicular to faces test acc. to EN 1607:2013	TR150 ($\sigma_{mt} \geq 150 \text{ kPa}$)
Density test acc. to EN ISO 29470:2020 "URSA XPS D N-III TWINS" Dicke $300 \text{ mm} < d \leq 400 \text{ mm}$	density range: $32 \text{ kg/m}^3 - 40 \text{ kg/m}^3$
Volume percentage of closed cells test acc. to EN ISO 4590:2003 (method 1 with correction)	$\geq 95\%$

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

In accordance with EAD 040650-00-1201, the applicable European legal acts are: 1995/467/EC and 1999/91/EC¹

The systems to be applied are:

System 1 for Essential characteristics concerning Mechanical resistance and stability (BWR 1)

System 3 all other Essential characteristics

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 5 August 2026 by Deutsches Institut für Bautechnik

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Head of Section

beglaubigt:
Meyer

¹ as amended

**URSA XPS D N-III TWINS,
URSA XPS D N-V TWINS**

Annex A

1. Compressive creep
acc. to EAD, chapter 2.2.3.1

URSA XPS D N-III TWINS	thickness 100 mm (2 x 50 mm)			thickness 160 mm (2 x 50 mm + 1 x 60 mm)		
density (kg/m ³)	34,9			34,6		
compressive stress / deformation acc. to EN ISO 29469:2022 (kPa / %)	422/3			430/2		
load stage (kPa)	100	130	185	100	130	185
X ₀ (mm)	0,42	0,52	0,73	0,62	0,77	1,15
X _{ct} (mm)	0,39	0,55	0,86	0,58	0,73	1,15
X _{ct50} (mm)	1,24	1,48	2,54	2,04	2,54	3,64
X_{t50}(mm)	1,66	2,00	3,27	2,66	3,31	4,79

URSA XPS D N-III TWINS	thickness 300 mm (3 x 100 mm)		
density (kg/m ³)	32,5		
compressive stress / deformation acc. to EN ISO 29469:2022 (kPa / %)	397/2		
load stage (kPa)	100	130	185
X ₀ (mm)	1,07	1,39	2,05
X _{ct} (mm)	0,83	1,10	1,97
X _{ct50} (mm)	3,50	4,16	6,32
X_{t50}(mm)	4,57	5,55	8,37

URSA XPS D N-III TWINS, URSA XPS D N-V TWINS	thickness 100 mm (2 x 50 mm)			thickness 160 mm (2 x 50 mm + 1 x 60 mm)		
density (kg/m ³)	38,6			38,1		
compressive stress / deformation acc. to EN ISO 29469:2022 (kPa / %)	602/2			594/2		
load stage (kPa)	150	180	250	150	180	250
X ₀ (mm)	0,38	0,45	0,67	0,65	0,77	1,08
X _{ct} (mm)	0,29	0,70	0,68	0,56	0,67	1,09
X _{ct50} (mm)	0,92	1,18	2,21	2,31	2,63	3,54
X_{t50}(mm)	1,30	1,63	2,88	2,96	3,40	4,62

2. **Creep under shear load**
acc. to EAD, chapter 2.2.5

URSA XPS D N-III TWINS	thickness 300 mm (3 x 100 mm)
Density (kg/m ³)	32,3
shear strength / deformation acc. to EN 12090 (kPa)	136/-
load stage (kPa)	47,8
X _{τ₀} (mm)	2,80
X _{τ_{ct}} (mm)	1,56
X _{τ_{ct50}} (mm)	4,42
X_{τ_{t50}}(mm)	7,22

3. **Creep under combined compressive and shear load**
acc. to EAD, chapter 2.2.6

URSA XPS D N-III TWINS	thickness 300 mm (3 x 100 mm)	
Density (kg/m ³)	32,3	
compressive stress / deformation acc. to EN 826 (kPa / %)	418/-	
shear strength / deformation acc. to EN 12090 (kPa)	136/-	
load stage (kPa)	47,8	130
deformation under	shear load	compressive load
X _{τ₀} / X ₀ (mm)	2,61	2,55
X _{τ_{ct}} / X _{ct} (mm)	1,63	1,99
X _{τ_{ct50}} / X _{ct50} (mm)	3,79	4,68
X_{τ_{t50}} / X_{t50}(mm)	6,40	7,23

4. **Adhesion behaviour under compressive and shear load on large-sized samples**
acc. to EAD, chapter 2.2.8

URSA XPS D N-III TWINS			
Adhesive friction coefficient between the extruded polystyrene foam boards and in-situ concrete as well as a concrete finished part with foil acc. to EAD chapter 2.2.8, Annex A, A.3.2			
density (kg/m³)	33		
Compression stress – load stage (kPa)	15	45	90
Adhesive friction coefficient regarding the compression stress – load stage	0,35	0,43	0,47
Adhesive friction coefficient	0,41		

5. Water vapour transmission
in accordance with EN 12086, clima condition A

URSA XPS D N-III TWINS	thickness 100 mm (2 x 50 mm)
density (kg/m ³)	32
sliced thickness of the specimens in mm	
Skin layer	20
Adhesion layer	20
Core layer	20
water vapour diffusion resistance factor (mean values for the sliced thickness)	
μ_{skin}	158
μ_{ad}	146
μ_{core}	130