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for construction products



European Technical Assessment

ETA-18/0267
of 10 June 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

Austrotherm XPS TOP 30 TB

Austrotherm XPS TOP 50 TB

Austrotherm XPS TOP 70 TB

Product family
to which the construction product belongs

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

Manufacturer

Austrotherm Österreich GmbH

Peter-Schmid-Gasse 1

7423 PINKAFELD

ÖSTERREICH

Manufacturing plant

Plant 1:

A-7083 Purbach

Plant 2:

DE-19322 Wittenberge

This European Technical Assessment
contains

12 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 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 five layers of extruded polystyrene foam boards (single boards). The single boards with thicknesses of 60 mm to 80 mm are bonded together by full-surface thermal welding. 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), isobutene 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:

"Austrotherm XPS TOP 30 TB",

"Austrotherm XPS TOP 50 TB" and

"Austrotherm XPS TOP 70 TB"

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

Nominal thicknesses:

"Austrotherm XPS TOP 30 TB" 140 mm to 340 mm

"Austrotherm XPS TOP 50 TB" 140 mm to 300 mm

"Austrotherm XPS TOP 70 TB" 140 mm to 300 mm

Nominal length: 1250 mm

Nominal widths: 600 mm

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 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 layer and thermal insulation underneath foundation slabs up to 300 mm thickness
- 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.

Essential characteristic	Performance
Behaviour under shear load (large-sized specimen) test acc. to the EAD and the guidelines in EN 12090:2013 "Austrotherm XPS TOP 30 TB", thickness 300 mm "Austrotherm XPS TOP 70 TB", thickness 300 mm	$\tau_{\text{large}} = 105 \text{ kPa}$ $\tau_{\text{large}} = 162 \text{ kPa}$
Creep under shear load	See Annex A
Creep under combined compressive and shear load	See Annex A
Compressive modulus of elasticity	No performance assessed
Adhesion behaviour under compressive and shear load on large-sized samples	See Annex A
Shear strength test acc. to EN 12090:2013	$\geq 200 \text{ kPa}$
Density test acc. to EN ISO 29470:2020 "Austrotherm XPS TOP 30 TB" "Austrotherm XPS TOP 50 TB" "Austrotherm XPS TOP 70 TB"	density range: 29 kg/m ³ - 33 kg/m ³ 32 kg/m ³ - 36 kg/m ³ 36 kg/m ³ - 41 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 +2/-2) days prior to testing "Austrotherm XPS TOP 30 TB" "Austrotherm XPS TOP 50 TB" "Austrotherm XPS TOP 70 TB" Moisture conversion coefficient	$\lambda_{D(90d)} = 0.035 \text{ W/(m} \cdot \text{K)}$ $\lambda_{D(90d)} = 0.035 \text{ W/(m} \cdot \text{K)}$ $\lambda_{D(90d)} = 0.035 \text{ W/(m} \cdot \text{K)}$ No performance assessed

Essential characteristic	Performance
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. to EN ISO 16536:2019	WL(T)0,7 ($W_{lt} \leq 0.7 \text{ Vol.}\%$) WD(V)3 ($W_{dv} \leq 3.0 \text{ Vol.}\%$)
Freeze-thaw resistance test acc. to EN ISO 16546:2020 using the wet test specimens from having done the water diffusion test in accordance with EN ISO 16536:2019 Reduction in compressive stress at 10 % deformation or in compressive strength of the re-dried specimens, when tested in accordance with EN ISO 29469:2022 Reduction in shear strength of the re-dried specimens, when tested in accordance with EN 12090:2013	FTCD2 ($W_v \leq 2.0 \text{ Vol.}\%$) $\leq 10 \%$ $\leq 10 \%$
Water vapour diffusion resistance factor test acc. to EN 12086 and EAD	See Annex A
Geometrical properties Thickness test acc. to EN ISO 29466:2022 (clause 7.2, figure 2, measuring set-up 3) Length, width test acc. to EN ISO 29465:2022 Squareness in direction of length and width; in direction of thickness test acc. to EN 824:2013 Flatness in direction of length and width test acc. to EN ISO 29468:2022	tolerance +4/-2 mm $\pm 8 \text{ mm}$ 5 mm/m 3 mm
Compressive stress at 10 % deformation or compressive strength test acc. to EN ISO 29469:2022 "Austrotherm XPS TOP 30 TB", thickness $300 \text{ mm} < d \leq 340 \text{ mm}$	$\geq 300 \text{ kPa}$

Essential characteristic	Performance
Density test acc. to EN ISO 29470:2020 "Austrotherm XPS TOP 30 TB" thickness 300 mm < d ≤ 340 mm	density range: 29 kg/m ³ - 33 kg/m ³
Deformation under specified compressive load and temperature conditions test acc. to EN 1605:2013	load: 40 kPa; temperature: (70 ± 1) °C; time: (168 ± 1) h ≤ 5 %
Dimensional stability under specified conditions test acc. to EN 1604:2013	temperature: 70 °C and 90% R.H. DS(70,90) (Δε _l ≤ 5 %, Δε _b ≤ 5 %, Δε _d ≤ 5 %)
Tensile strength perpendicular to faces test acc. to EN 1607:2013	TR150 (σ _{mt} ≥ 150 kPa)
Volume percentage of closed cells test acc. to EN ISO 4590:2003 (method 1 with correction)	≥ 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/EC

The system to be applied is:

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

System 3 for 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 10 June 2026 by Deutsches Institut für Bautechnik

Frank Iffländer
Head of Section

beglaubigt:
Meyer

Austrotherm XPS TOP 30 TB
Austrotherm XPS TOP 50 TB
Austrotherm XPS TOP 70 TB

Annex A

1. Compressive creep
acc. to EN 1606:2013 and EAD, chapter 2.2.3.1

Austrotherm XPS TOP 30 TB	thickness 140 mm			thickness 180 mm		
density (kg/m ³)	30.5			30.5		
compressive stress/ deformation acc. EN ISO 29469:2022 (kPa / %)	443/8			393/8		
load stage (kPa)	94	141	188	83	125	166
X ₀ (mm)	0.63	0.94	1.16	0.76	1.28	1.43
X _{ct} (mm)	0.53	1.01	3.37	0.87	1.33	2.15
X _{ct50} (mm)	1.39	2.32	9.63	1.48	2.32	4.92
X_{t50}(mm)	2.02	3.26	10.79	2.56	3.60	6.35

Austrotherm XPS TOP 30 TB	thickness 300 mm		
density (kg/m ³)	31		
compressive stress/ deformation acc. EN ISO 29469:2022 (kPa / %)	412/5		
load stage (kPa)	87	131	174
X ₀ (mm)	1.04	1.53	2.14
X _{ct} (mm)	0.69	1.18	2.55
X _{ct50} (mm)	1.48	2.58	6.35
X_{t50}(mm)	2.52	4.11	8.49

Austrotherm XPS TOP 50 TB	thickness 140 mm			thickness 180 mm		
density (kg/m ³)	33.5			33.5		
compressive stress/ deformation acc. EN ISO 29469:2022 (kPa / %)	635/9			614/10		
load stage (kPa)	134	202	269	130	195	260
X ₀ (mm)	0.67	0.83	1.26	0.60	1.27	1.26
X _{ct} (mm)	0.45	0.55	2.91	0.51	0.85	2.97
X _{ct50} (mm)	1.33	1.41	7.00	1.24	2.40	8.10
X_{t50}(mm)	2.00	2.24	8.26	1.84	3.67	9.36

Austrotherm XPS TOP 50 TB	thickness 300 mm		
density (kg/m ³)	33.5		
compressive stress/ deformation acc. EN ISO 29469:2022 (kPa / %)	606/8		
load stage (kPa)	128	192	257
X ₀ (mm)	1.17	1.41	1.75
X _{ct} (mm)	0.71	1.29	3.18
X _{ct50} (mm)	1.89	3.24	8.00
X_{t50}(mm)	3.06	4.65	9.75

Austrotherm XPS TOP 70 TB	thickness 140 mm			thickness 180 mm		
density (kg/m ³)	39			36		
compressive stress/ deformation acc. EN ISO 29469:2022 (kPa / %)	799/5			761/9		
load stage (kPa)	169	254	338	161	242	322
X ₀ (mm)	0.55	0.75	1.11	0.78	1.06	1.42
X _{ct} (mm)	0.37	0.82	1.98	0.44	0.83	2.26
X _{ct50} (mm)	1.21	2.27	5.71	1.02	2.02	6.88
X_{t50}(mm)	1.76	3.02	6.82	1.80	3.08	8.30

Austrotherm XPS TOP 70 TB	thickness 300 mm		
density (kg/m ³)	40		
compressive stress/ deformation acc. EN ISO 29469:2022 (kPa / %)	769/5		
load stage (kPa)	163	244	326
X ₀ (mm)	1.15	1.36	2.05
X _{ct} (mm)	0.57	0.83	2.70
X _{ct50} (mm)	1.49	2.12	6.71
X_{t50}(mm)	2.64	3.48	8.76

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

Austrotherm XPS TOP 30 TB	thickness 300 mm
density (kg/m ³)	31
shear strength/ deformation acc. EN 12090 (kPa)	105/2
load stage (kPa)	36.8
X _{τ0} (mm)	2.19
X _{τct} (mm)	1.07
X _{τct50} (mm)	2.11
X_{τt50}(mm)	4.30

Austrotherm XPS TOP 70 TB	thickness 300 mm
density (kg/m ³)	41
shear strength/ deformation acc. EN 12090 (kPa)	162/3
load stage (kPa)	56.8
X _{τ0} (mm)	3.38
X _{τct} (mm)	1.23
X _{τct50} (mm)	2.09
X_{τt50}(mm)	5.47

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

Austrotherm XPS TOP 30 TB		
thickness	300 mm	
density (kg/m ³)	31	
compressive stress/ deformation acc. EN ISO 29469:2022 (kPa / %)	436/-	
shear strength/ deformation acc. EN 12090 (kPa)	105/2	
load stage (kPa)	36.8	130.8
deformation under	shear load	compressive load
X_{t0} / X_0 (mm)	2.34	2.88
X_{tct} / X_{ct} (mm)	2.05	2.55
X_{tct50} / X_{ct50} (mm)	3.94	2.89
X_{t50} / X_{t50} (mm)	5.99	5.77

Austrotherm XPS TOP 70 TB		
thickness	300 mm	
density (kg/m ³)	41	
compressive stress/ deformation acc. EN ISO 29469:2022 (kPa / %)	813/-	
shear strength/ deformation acc. EN 12090 (kPa)	162/3	
load stage (kPa)	56.8	244.1
deformation under	shear load	compressive load
X_{t0} / X_0 (mm)	3.68	3.68
X_{tct} / X_{ct} (mm)	3.10	2.47
X_{tct50} / X_{ct50} (mm)	4.76	4.29
X_{t50} / X_{t50} (mm)	8.44	7.97

4. Water vapour transmission
in accordance with EN 12086

Austrotherm XPS TOP 30 TB	thickness 140 mm (60 + 80 mm)	thickness 240 mm (3x 80 mm)	thickness 400 mm (5x 80 mm)
density (kg/m ³)	30	29	30
sliced thickness of the specimens in mm			
Skin layer	20	29	20
Adhesion layer	30	37	40
Core layer	25	27	40
water vapour diffusion resistance factor (mean values for the sliced thickness)			
μ_{skin}	130	140	160
μ_{ad}	130	150	140
μ_{core}	85	120	105

Austrotherm XPS TOP 70 TB	thickness 180 mm (3x 60 mm)
density (kg/m ³)	36
sliced thickness of the specimens in mm	
Skin layer	20
Adhesion layer	20
Core layer	30
water vapour diffusion resistance factor (mean values for the sliced thickness)	
μ_{skin}	115
μ_{ad}	120
μ_{core}	65

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

Austrotherm XPS TOP 30 TB			
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			
thickness	140 mm (60 + 80 mm)		
density (kg/m ³)	29		
Compression stress – load stage (kPa)	15	45	90
Adhesive friction coefficient regarding the compression stress – load stage	0,45	0,50	0,49
Adhesive friction coefficient	0,48		

Austrotherm XPS TOP 70 TB			
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)	36		
Compression stress – load stage (kPa)	35	105	210
Adhesive friction coefficient regarding the compression stress – load stage	0,51	0,48	0,48
Adhesive friction coefficient	0,49		