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European Technical Assessment

ETA 24/0749
22/ 12/ 2025

English translation prepared by IETcc. Original version in Spanish language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Instituto de Ciencias de la Construcción Eduardo Torroja (IETcc)
Trade name of the construction product	**NEXALON TPO**
Product family to which the construction product belongs	Mechanically fastened flexible TPO roof waterproofing membranes Systems.
Manufacturer	DERIVADOS ASFALTICOS NORMALIZADOS (DANOSA GROUP), S.A c/ La Granja nº 3. 28108 ALCOBENDAS MADRID, España.
Manufacturing plant(s)	Sector 9, Polígono Industrial. 19290 – FONTANAR GUADALAJARA. Spain
This European Technical Assessment contains	10 pages Including annex 1-2, which form an integral part of this assessment. + Annex 3. Contain confidential information and is not included in the ETA when that assessment is publicly available
This European Technical Assessment is issued in accordance with Regulation (EU) No 2024/3110, on the basis of	EAD 030351-00-0402 Systems of mechanically fastened flexible roof waterproofing sheets
This ETA replace to	ETA 24/0749, issued on 15/02/2025

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Specific parts

1 Technical description of the product

NEXALON TPO is a waterproofing system for mechanically fixed flexible sheet roofs (MEFAWAS), consisting of a single layer of reinforced TPO (thermoplastic polyolefin) synthetic flexible sheets, which are mechanically fixed on roofs with slopes greater than 1%, with punctual fixings on the overlap area at the edge of the sheet, before it overlaps with the adjacent sheet.

NEXALON TPO is designed and installed in accordance with the technical information provided by the manufacturer. This MEFAWAS is composed of flexible TPO sheets manufactured by the beneficiary of the ETA and mechanical fasteners manufactured by other manufacturers, with the beneficiary of the ETA being the final responsible for its MEFAWAS:

Components	Trade name	Description
Waterproof membrane	NEXALON TPO	Available in a wide variety of thicknesses (1.2, 1.5, 1.8 and 2 mm), reinforced by a polyester scrim
Fasteners	EDS-B-48080*	TLK 45065 45 Ø washer (plastic) Axial load on Steel S320GD: 1180 N (on 0.7 mm steel deck)
	* Other fasteners can be used with CE marking (EAD 030351-00-0402) (Annex 1)	

This System does not include the evaluation of thermal insulation. The most commonly used thermal insulation for this application are: polyisocyanurate panels, polyurethane panels, extruded polystyrene panels, expanded polystyrene panels, cellulosic perlite panels, and mineral wool panels.

The usual supports on which the system can be installed are: corrugated sheet, perforated sheet, concrete, aerated concrete, timber and timber board.

2 Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)

2.1 Intended use(s)

The intended use of this system is the waterproofing of roofs, preventing the passage of water into the interior of the building, both in liquid and gaseous form. This MEFAWAS does not directly contribute to the stability of the roof on which it is installed.

This system can be used both on new roofs and in renovations. It can also be used on horizontal surfaces (singular points).

2.2 Relevant general conditions for the use of the kit

The provisions made in this European Technical Assessment are based on an assumed working life of 25 years from installation in the works, according to EAD 030351-00-0402, if the conditions lay down for the installation, packaging, transport and storage as well as appropriate use, maintenance and repair are met. In this respect.

The indications given on the working life cannot be interpreted as a guarantee given neither by the product manufacturer nor by EOTA nor by the Technical Assessment Body issuing this ETA, but are regarded only as a means for choosing the right product in relation to the expected economically reasonable working life of the works.

Installation (Annex 2). The suitability of use of this NEXALON TPO System can only be assumed if the installation of the same is carried out in accordance with the instructions given by the manufacturer. It is the manufacturer's responsibility to ensure that information about the application of their product is correctly communicated to their users. This information can be provided by reproducing the specific part of this ETA. In addition, all data regarding the system must be clearly indicated on the packaging and/or in the corresponding technical information.

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Overlap. The longitudinal overlap between membranes must be ≥ 10 cm and transversal one ≥5 cm (Fig. 1). Prior to welding, ensure thorough cleaning of the overlap areas. Utilize CLEANER TPO DANOSA for initial cleaning, in cases of dirt or contamination, and when overlapping a new membrane over an existing one. This product functions as a joint cleaning and preparation agent, facilitating the welding process. Welding may be performed using hot air. For optimal results, follow the manufacturer's instructions for the application of CLEANER TPO DANOSA.

Fasteners. Mechanical fastening of the Systems is carried out on the overlaps, using the mentioned fasteners, and where the washers must be applied at a distance from the edge of the membrane ≥1 cm.

Minimum distance between fasteners must be 12 cm, and maximum 1m. Maximum distance between rows of fasteners is the width of the membrane less the distance of the fastener to the edge of the membrane. The number of fasteners per square metre is determined by the varying air pressure on the roof, which depends on the geographic area, area of the roof and height of the building. For the number of fasteners/m^2 the wind uplift resistance of the fastener and the national regulations and administrative provisions of the member state of destination shall be taken into account.

*Intersection at protruding elements***.** At the intersections with protruding elements (duct for utility installations, etc.) the waterproofing is finished off on a smooth metal profile. This support/profile is anchored mechanically to the metal deck, installed to remain independent of the protruding element, which is mechanically fastened to the deck.

*Intersection at parapets and change of planes***.** Intersection at vertical facings is carried out by following the drawing in Fig.2.

Expasion joint. Prior to installation of the membrane and insulation, the expansion joint formation profiles must be made available according to the drawing (Fig 3), i.e. plate anchored on one side (flat metal sheet) over the fretwork sheet as carrier of the joint insulation, anchoring of the joint formation base profiles (the separation of which will depend on foreseen movement) and insulation of the joint centre, which must be installed prior to closing the second profile.

Outlets. Gutters and outlets must be made of TPO with rigid wing of a minimum width of 6 cm. The installation shall be performed according to Fig. 4.

Rooflights. The installation shall be performed according to Fig. 5.

Traffic areas. The traffic areas will be correctly protected (light tiles, etc..) to avoid damages in the waterproof membrane.

Other singular points. Detail of parapet gutter and outlet (Fig.6) and detail of side gutter (Fig.7).

Use, maintenance and repair of the works. Assessment of fitness for use is based on the assumption that periodical maintenance of the roof is carried out. Maintenance must include:

- Inspection of the roof at regular intervals.
- Cleaning of downpipes and outlets.
- Removal of stones, branches and leaves, etc.
- Inspection of flashing along the edges of the roof, chimneys, drainages, gutters, skylights, etc.

If the Waterproofing System has been damaged, and is causing leakage, qualified roofing contractors must repair it immediately. Maintenance, preservation or remedial work personnel must wear footwear with a suitable sole.

3 Performance of the product and references to the methods used for its assessment

The identification tests and the assessment for the intended use of this product according to the Basic Work Requirements (BWR) were carried out in compliance with EAD 030351-00-0402, The characteristics of each system shall correspond to the respective values laid down in following tables of this ETA, checked by IETcc.

Methods of verification and of assessing and judging are listed afterwards.

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System (MEFAWAS)		
Essential characteristic	**Assessment method**	**Type of expression of product performance**
Basic Works requirements 2: Safety in the case of fire		
External fire performance	2.2.1.1	Broof (t1). Slope ≤ 20º The thermal insulation used in the tests was mineral wool with A1 fire reaction of 100mm thickness, density 110 kg/m^3, XPS 100mm and density of 30 kg/m^2, PIR AL 100 mm and density 40 kg/m^3
Basic Works requirements 3: Hygiene, health and environment		
Content, emission and/or release of dangerous substances. Leachable substances	2.2.1.2	NPA
Basic Works requirements 4: Safety and accessibility in use		
Wind uplift resistance	2.2.1.3	EUROFAST EDS-B-48080 + TLK 45065 45 Ø (plastic) Axial load on Steel deck type: 1180 N Wadm= 614

Membrane					
Essential characteristic	**Assessment method**	**Type of expression of product performance**			
Basic Works requirements 2: Safety in the case of fire					
Reaction to fire	2.2.2	E			
Basic Works requirements 3: Hygiene, health and environment					
		Espesor lámina (mm)			
Resistance to peel (joint)	2.2.2.1		Initial	70 ºC, 28d	water 28d 60 ºC
			N/50 mm		
		1,2 / 1,5 / 1,8 / 2,0	no failure in the join	no failure in the join	No relevant
Resistance to shear (joint)	2.2.2.2		Initial	70 ºC, 28d	water 28d 60 ºC
			N/50 mm		
		1,5	1256 / 1301	1304 / 1257	No relevant
Resistance to tear (nail)	2.2.2	1,2	620 / 841 N (L/ T)		
		1,5	695 / 981 N (L/ T)		
		2,0	744 / 1071 N (L/ T)		
Resistance to tear		1,2	488 / 431 N (L/ T)		
		1,5	534 / 520 N (L/ T)		
		2,0	498 / 515 N (L/ T)		
Resistance to cold bending/folding	2.2.2		Initial	70 ºC, 28d	
		2,0	-30 ºC	-30 ºC	
Resistance to wáter pressure	2.2.2	1,2	Watertight		
Resistance to wáter wapour permeability	2.2.2	1,2	20564 (μ)		
Tensile properties	2.2.2	1,2	1200 / 1200 N/50 mm // 30/ 40 % (L/T)		
		1,5	1450 / 1200 N/50 mm // 30/ 35 % (L/T)		
		1,8	1450 / 1200 N/50 mm // 30/ 35 % (L/T)		
		2,0	1450 / 1400 N/50 mm // 30/ 35 % (L/T)		
Resistance to static loading	2.2.2	1,2	30 / 65 kg (método A/B)		
		1,5			
		1,8			
		2,0			
Resistance to impact loading	2.2.2	1,2	1300 mm (método A/B)		
		1,5			
		1,8			
		2,0			
Dimensional stability	2.2.2	2,0	0,5		
Thickness	2.2.2	1,2	1,2		
		1,5	1,5		
		1,8	1,8		
		2,0	2,0		
Resistance to ageing media	2.2.2.3				
- *Heat ageing*	*2.2.2.3.1*		Correct		
- *Water ageing*	*2.2.2.3.2*		No relevant		
- *UV radation ageing*	*2.2.2.3.3*		Correct		
Basic Works requirements 4: Safety and accessibility in use					
Silpperiness	*2.2.2.4*		NPA		

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Fasteners (ETA23/0651)			
Essential characteristic	**Assessment method**	**Type of expression of product performance**	
Fastener axial load	2.2.3.1	**Steel S320GD 0.75 mm**	**S320GD 0.7 mm**
		1500 N	1180 N
Resístanse to fastener unwinding	2.2.3.2	Resistant	
Mechanical resistance/brittleness of plastic fastener	2.2.3.3	No relevant	
Resistance to corrosion of metallic fastener	2.2.3.4	Resistant	
Mechanical resistance after heat ageing of plastic fasteners	2.2.3.5	No relevant (no exposed to UV neither water)	

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

According to Commission Decision 98/143/EC of 3 February 1998 (published in the Official Journal of the European Communities No. L 42 14.02.1998, p. 58), it is system 2+.

Product	Intended uses	Level or Classes	System
NEXALON TPO	Systems of mechanically fastened flexible TPO roof waterproofing membranes	Any	+2

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 which is deposited at IETcc[(1)].

Prepared by: PhD Julián Rivera (Innovative Products Assessment Unit IETcc-CSIC)

Issued in Madrid on 22 of December 2025

Director
on behalf of Instituto de Ciencias de la Construcción Eduardo Torroja (IETcc – CSIC)

[(1)] The Control Plan is a confidential part of the ETA and only handed over to the notified certification body involved in the assessment and verification of constancy of performance.

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Annex 1. Other fasteners can be used with CE marking (EAD 030351-00-0402)

Manufacturer	Fastner	Metalic Washer	Plastic Washer	ETA	S280GD EN 10346 Steel deck 0,7mm	S280GD EN 10346 Steel deck 0,5mm	EN 206-1 Concrete C25-30 100mm	EN 12602 Aereated Concrete	EN 300 OSB 18	EN 636 Plywood	EN 338 C24 Structural timber	N/Fstnr W_{adm}
EJOT	SW8-RT-4,8xL	HTV 82/40 SW8		07-0013	1200							614
	VHT-R-4,8xL	HTV 82/40 TK				940						490
	VHT-R-4,8xL		HTK 2G-50xL			940						
	FDD-Plus 50xL							1340				
	FBS-R-6,3xL	HTV 82/42 F					2880					
	FBS-R-6,3xL		EcoTek 50xL				2880					614
	TKR-4,8xL	HTV 82/40 TK			1200				1120	1870	1620	
	TKR-4,8xL		HTK 2G-50xL						1120	1870	1620	
EUROFAST Ref. value	**EDS-B**		**TLK-45**	23/0651	**1180**							614
EUROFAST	EDS-S		TLK-45		1440							
	EDS-B		TRP-45		1180							
	EDS-S		TRP-45		1440							
	EDS-BZT/BGT	DVP EFZK8240 D			1240							614
	EDS-BZTR/BGTR	DVP EFZK8240 D			1240							
	EDS-BZT/BGT	DVP EF 8040 D//N/H/XH			1240							
	EDS-BZTR/BGTR	DVP EF 8040 D//N/H/XH			1240							
	EFXHD		TLK-45			1100						572
	EFXHD		TRP-45			1100						
	EF ISPC						2610					
	GBS		TLK45				1680					
	EFHD		TLK45				1680					
	EFHD	DVP EF 8040 D//N/H/XH					2400					
	GBS/GBS A2		TLK45					1370				
	GBS/GBS A2	DVP EF 8040 D//N/H/XH						1370				614
	EDS-H		TLK45						1170	1180	2000	
	EDS-H	DVP EF 8040 D//N/H/XH							1170	1180	2000	
	EDS- B		TLK45						1120	1180	1780	
	EDS-B	DVP EF 8040 D//N/H/XH							1120	1180	1780	
	PS 4,8	SP(A) 8240			1310							614
	BS 4,8	SP(A) 8240			1170							609
	BS 6,1	SP(A) 8240			1780							614
	PS 4,8		R48		1310							
	BS 4,8		R48		1170							609
	BS 6,1		R48		1780							614
	PS 4,8		RB48		1310							
	BS 6,1		RB48		1780							
	BS 6,8		R48		1780	1060						
	BS 6,8	SP(A) 8240			1780	1060						
	DBT 4,8	SP(A) 8240			1170							609
SFS	IR2-4,8	IR 82x40		08/0262	1230							614
GUARDIAN	LBS 6,0 (600 Kg/m3)	SP(A) 8240		08/0285				2070				
	LBS 6,0 (600 Kg/m3)		R48					2070				
	LBS 6,0 (600 Kg/m3)		RB48					2070				
	LBS 6,0 (600 Kg/m3)	SP(A) 8240							1400	2920	2000	
	LBS 8,0 (450 Kg/m3)	SP(A) 8240						930				484
	LBS 8,0 (450 Kg/m3)		R48					930				
	LBS-S-6.0 (450 Kg/m3)	SP(A) 8240						1340				
	CS/ACS 6,1	SP(A) 8240					4280					614
	CS/ACS 6,1		R48				2920					
	CP (C25-30)						1570					
SFS	TI 6,3	IF/IG-C 82 x 40		08/0262			1830					
	TI 6,3	IRD 82 x 40					1830					614
	TI-T25-6,3		R48				1420					
SFS	DT-S-4,8		R48				2830					614

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GUARDIAN	TS 5,2	SP50		08/0285					1350		1280	614
	BS 4,8	SP(A) 8240							1050	1800		546
	DBTA 4,8	SP(A) 8240							1050	1800		
SFS	BS 4,8		R50	08/0262					1380	1380	1320	614
	BS 4,8		R48						1380	1380	1320	
	IWF 5,2	MW-40-FH							1350	1740	1740	

The Wadm determined with the full scale wind uplift with the fastener EUROFAST EDS-B + TLK-45 was 614 N/fastener. In order to determine the Wadm of systems with other fasteners (Rnc) on the basis of EAD, it is applied:
If Rnc ≥ Roc : Wadm(nc) = Wadm(oc)
If Rnc ≤ Roc : Wadm (nc) (Rnc/Roc)*Wadm(oc)

Screws	**Characteristics** (with a minimum corrosion resistance of 15 Kesternich cycles).
FPS-E-8,0xL(EJOT)	Self-drilling screw Ø8mm, lengths between 80-240mm and with Torx T30 cylindrical head. Made of stainless steel.
SW8-R-4,8xL (EJOT)	Self-drilling screw Ø4,8mm, lengths between 80-260mm and a 8,0mm hexagonal head. Made of case-hardened steel, treated with Climadur high quality coating.
FBS-R-6,3xL (EJOT)	Self-tapping screw Ø6,3mm, lengths between 35-220mm. Made of case-hardened steel, treated with Climadur high quality coating
FPS-E-8,0xL (EJOT)	Self-drilling screw, Ø8mm, lengths between 80-240mm and a cylindrical Torx T30 head. Made of stainless steel.
TKR-4,8xL (EJOT)	Self-drilling screw, Ø4,8mm, lengths between 35-300mm and cabeza avellenada. Made of case-hardened steel, with CLIMADUR high quality coating
VHT-R-4.8xL (EJOT)	Self-drilling screw, Ø4,8mm, lengths between 35-200mm y con cabeza avellenada. Made of case-hardened steel, with CLIMADUR high quality coating
FDD-Plus 50xL (EJOT)	Plastic anchors of Ø8.0mm equiped with zinc plated steel nail. Ø50,0mm washer. Length from 55mm to 300m.
EDS BZT/BGT (Eurofast)	Double threaded screw under the head for steel, diameter of 4.8 mm with L lengths and with hexagonal head of 8 mm.Carbon steel treated with Magni-silver
EF ISPC (Eurofast)	Pre-assembled concrete block fixing with flat head nail. Diameter of 45 mm. and length L. Polyamide distribution washer and steel nail with Crapal-Zinc treatment.
EFXHD (EUROFAST)	Steel screw with Torx T-25 bugle head Ø6,3 mm. and reduced self drilling point. Made of carbonsteel with Magnisilver coating.
EFHD (EUROFAST)	Ricoh-point screw Ø6,3 mm, lengths between 60-400 mm with a Torx T-25 RSD bugle head. Made of carbonsteel with Magnisilver coated.
EDS-H (EUROFAST)	Sharp-25º screw Ø5 mm, lengths between 20-200 mm with a PH 2 bugle head. Made of carbonsteel with Magnisilver coated.
EDS-BZTR/BGTR (EUROFAST)	Double threaded screw under the head for steel, diameter of 4.8 mm with L lengths and with hexagonal head of 8 mm.AISI 316 stainless steel.
EDS-B 5.8 (EUROFAST)	Steel screw with Torx T-25 bugle head Ø 5.8 mm. and reduced self drilling point. Made of carbonsteel with Magnisilver coating.
EDS-S (EUROFAST)	Steel screw with Phillips flat head Ø4,8 mm. and S point. Made of carbonsteel with Magnisilver coating.
GBS (EUROFAST)	Sharp-25º screw Ø6 mm, lengths between 60-200 mm with a Tx25 reduced bugle head. Made of carbonsteel with Magnisilver coated. For concrete and gas concrete
EDS B (EUROFAST)	Self-drilling screw for steel Ø4,8 mm, lengths between 35-300 mm with a Tx25 reduced bugle head. Made of carbonsteel with Magnisilver coated.
EDS SRB (EUROFAST)	Self-drilling screw for steel Ø4,8 mm, lengths between 60-300 mm with a Torx25 oval head. Made of AISI316 stainless steel
DFCF (EUROFAST)	Nail point screw Ø6,3mm, length L with a HWH 8 mm head. Made of carbonsteel with Magnisilver coated.
GBS A2 (EUROFAST)	Sharp-25º screw Ø8 mm, lengths between 65-190 mm with a Tx25 reduced bugle head. Made of RVS A2 passivated.
IR2 4.8 (SFS intec)	Steel screw double-thread, Ø4,8 mm, length L and a 8mm circular head. Made of hardened carbon steel with a Durocoat corrosion protection.
IFP2 6.7XL (SFS intec)	Steel screw double-thread, Ø6,7 mm, length L and a 11mm flat head. Made of hardened carbon steel with a Durocoat corrosion protection.
TI 6.3 (SFS intec)	Steel screw Ø6,3mm, length L and a 8mm hexagonal head. Made of hardened carbon steel with a Durocoat corrosion protection.
TI-T25 6,3 (SFS intec)	Steel screw Ø6,3mm, length L and a TORX T25 head. Made of hardened carbon steel with a Durocoat corrosion protection.
IGR-S 8 (SFS INTEC)	Steel screw Ø8mm, length L and a 12 mm countersunk head. Made of Austecnitic stainless steel
IG 6 (SFS INTEC)	Steel screw Ø6mm, length L and a Ø8mm flat head. Made of hardened carbon steel with a Durocoat corrosion protection.
DT-S-4,8 (SFS INTEC)	Stainless steel dowel Ø4,8mm and a 9,8mm circular head
IWF 5,2 (SFS INTEC)	Carbon steel fastener for waterproof membrane and insulation securement on timber and timber based boardss of 5.2 mm diameter and L length with PZ2 fastener drive
DBT 4,8 (GUARDIAN)	Double threaded steel screw under the head, diameter of 4.8 mm with L lengths and with a flat hexagonal head of 8 mm. Zinc plated steel treated with Enduroguard 15
PS 4.8 (GUARDIAN)	S-point screw for steel deck roofs, Ø4.8mm, length L and TORX T25 head. Made of coated carbon steel treated with Enduroguard 15â
BS 4.8 (GUARDIAN)	Drill point screw for steel deck roofs, Ø4.8mm, length L and TORX T25 head. Made of coated carbon steel treated with Enduroguard 15â
BS 6.1 (GUARDIAN)	Drill point screw for steel deck roofs, Ø6.1mm, length L and TORX T25 head. Made of coated carbon steel treated with Enduroguard 30â
BS 6.8 (GUARDIAN)	Drill point screw for steel deck roofs, Ø6.8mm, length L and TORX T25 head. Made of coated carbon steel treated with Enduroguard 30â
DBT(A) 4.8 (GUARDIAN)	Drill point screw for automatic tool for steel deck roofs, Ø4.8mm, lenght L and a 8mm hexagonal head. Made of coated carbon steel treated with Enduroguard 15â
CS/ACS 6.1 (GUARDIAN)	Concrete screw Ø6.1mm, length L and a TORX T25 head. Made of coated carbon steel treated with Enduroguard 15â
BN 5.6 (GUARDIAN)	Concrete nail Ø5.6mm, length L and a flat head. Made of coated carbon steel treated with Enduroguard 15â
LBS 6.0 (GUARDIAN)	Light weight concrete screw, Ø6.0mm, length L and a TORX T25 head. Made of coated carbon steel treated with Enduroguard 15â
LBS-S- 6.0 (GUARDIAN)	Stainless steel screw, Ø6.0mm, length L and a TORX T25 head. Made of coated carbon steel treated with Enduroguard 15â
LBS 8.0 (GUARDIAN)	Light weight concrete screw, Ø8.0mm, length L and a TORX T25 head. Made of coated carbon steel treated with Enduroguard 15â
CP (C25-30) (GUARDIAN)	Plug for concrete decks, Coated nail + plastic sleeve from 75 up to 215 mm leght and 50 mm diameter´s round plate
TS 5,2 (GUARDIAN)	Carbon steel fastener for waterproof membrane and insulation securement on timber and timber based boards, of 5.2 mm diameter x L length with TX25 fastener drive

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Washers	Characteristics
EcoTek 50xL (EJOT)	White circular Ø50mm washer, lengths between 35-335mm. Made of polyamide.
HTV 82/40 SW 8 (EJOT)	Alu-zinc coated steel plate, 82x42 mm,1.0mm thickness with an internal Ø4,90mm hole
HTV 82/40 F and TK (EJOT)	Alu-zinc coated steel plate, 82x42 mm,1.0mm thickness with an internal Ø4,90mm hole
EJOT HTK 2G 50 (EJOT)	Grey circular Ø50mm washer, lengths between 35-325mm. Made of polyamide.
DVP-EF 8240D (EUROFAST)	Oval steel plate 82x40x1 mm. thick. Inside diameter of 4.85 mm. with Aluzinc protection.
DVP-EF/DF 8240 D (EUROFAST)	
DVP-EF 8040 D/N/H/XH (EUROFAST)	
DVP-EFZK 8240D	
DVP-EF 50 10 ND (EUROFAST)	Round plate 50 mm. Inside diameter of 4,85 mm. with Aluzinc protection.
TLK-45 (EUROFAST)	Black round Ø45mm telescopic washer, lengths between 35-320mm. Made of polypropylene.
TRP-45 (EUROFAST)	Blue round Ø45mm telescopic washer, lengths between 30-285 mm. Made of polyamide
IR 82 x 40 mm (SFS intec)	Steel plate with aluzinc protection, 82x40mm,1.0mm thickness
IRP 82 x 40 mm (SFS intec)	
IF/GC 82 x 40 mm (SFS intec)	
IG C 82 X 40 mm (SFS intec)	
IRD 82 X 40 mm (SFS intec)	
IRC/W 82X40 mm (SFS intec)	
RP 48 (SFS intec)	Black circular Ø48mm sheath. Made of polypropylene.
R 50 (SFS intec)	Black circular Ø50mm sheath. Made of polypropylene.
RP 50 (SFS intec)	Black circular Ø50mm sheath. Made of polypropylene.

Annex 2

Fig. 1 Overlap

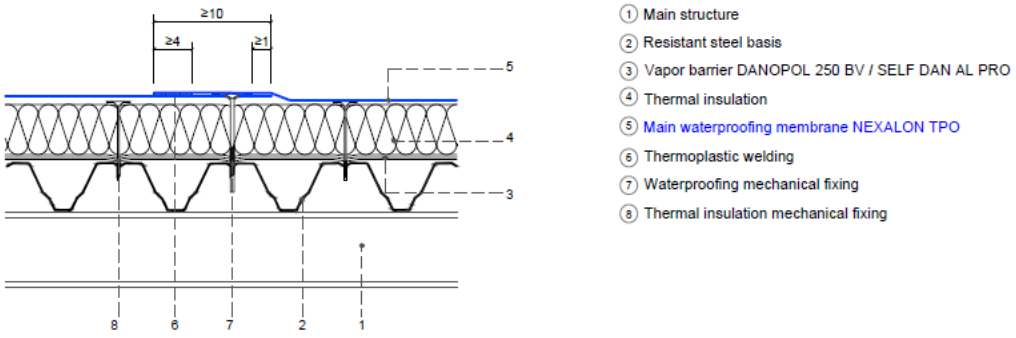

Fig. 2 Intersection at parapets and change of planes

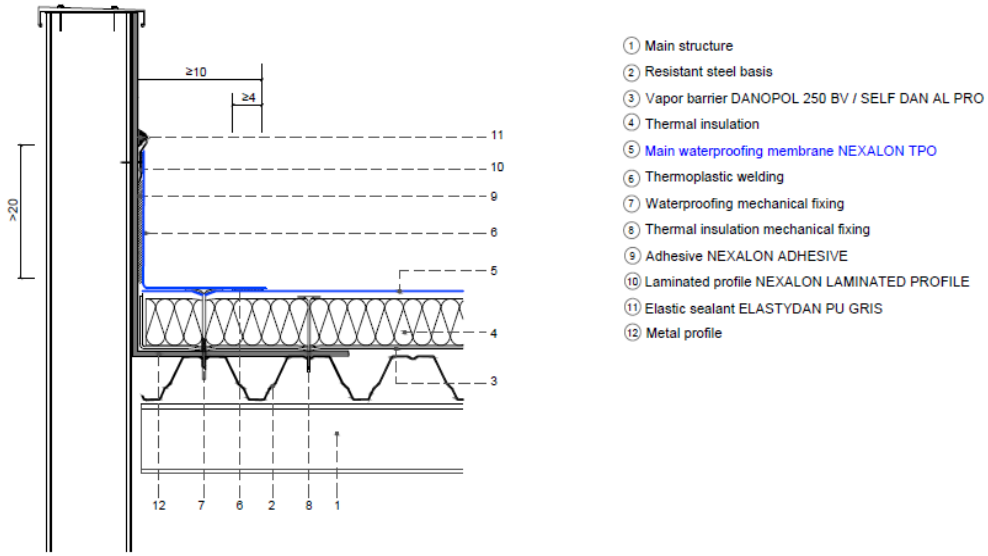

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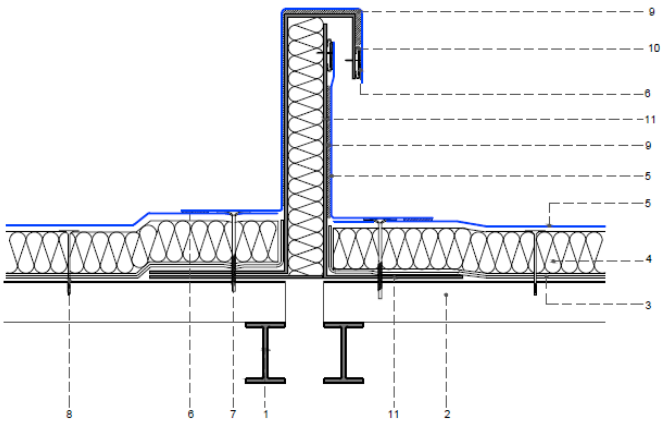
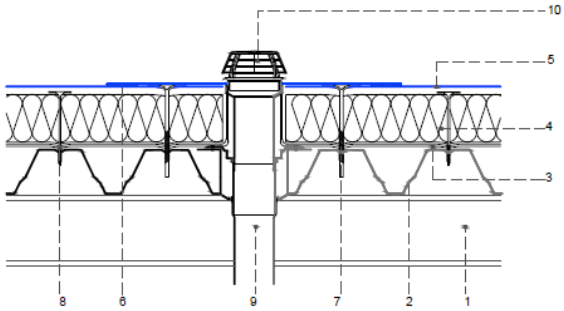
Fig. 3 Expansion joint



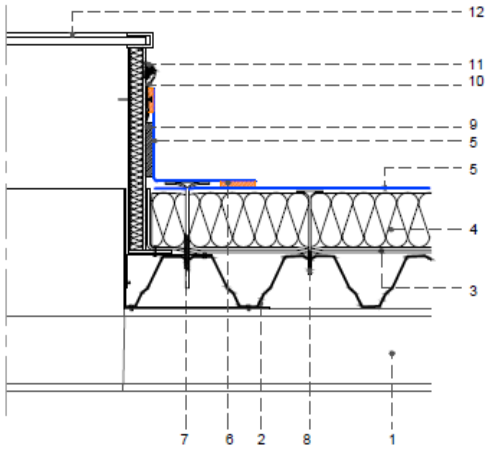
① Main structure
② Resistant steel basis
③ Vapor barrier DANOPOL 250 BV / SELF DAN AL PRO
④ Thermal insulation
⑤ Main waterproofing membrane NEXALON TPO
⑥ Thermoplastic welding
⑦ Waterproofing mechanical fixing
⑧ Thermal insulation mechanical fixing
⑨ Adhesive NEXALON ADHESIVE
⑩ Laminated profile NEXALON LAMINATED PROFILE
⑪ Metal profile

Fig. 4 Outlet



① Main structure
② Resistant steel basis
③ Vapor barrier DANOPOL 250 BV / SELF DAN AL PRO
④ Thermal insulation
⑤ Main waterproofing membrane NEXALON TPO
⑥ Thermoplastic welding
⑦ Waterproofing mechanical fixing
⑧ Thermal insulation mechanical fixing
⑨ Vertical outlet NEXALON OUTLET
⑩ Gravel stop DANOSA

Fig. 5 Rooflights



① Main structure
② Resistant steel basis
③ Vapor barrier DANOPOL 250 BV / SELF DAN AL PRO
④ Thermal insulation
⑤ Main waterproofing membrane NEXALON TPO
⑥ Thermoplastic welding
⑦ Waterproofing mechanical fixing
⑧ Thermal insulation mechanical fixing
⑨ Adhesive NEXALON ADHESIVE
⑩ Laminated profile NEXALON LAMINATED PROFILE
⑪ Elastic sealant ELASTYDAN PU GRIS
⑫ Insulated Rooflight DANOSA

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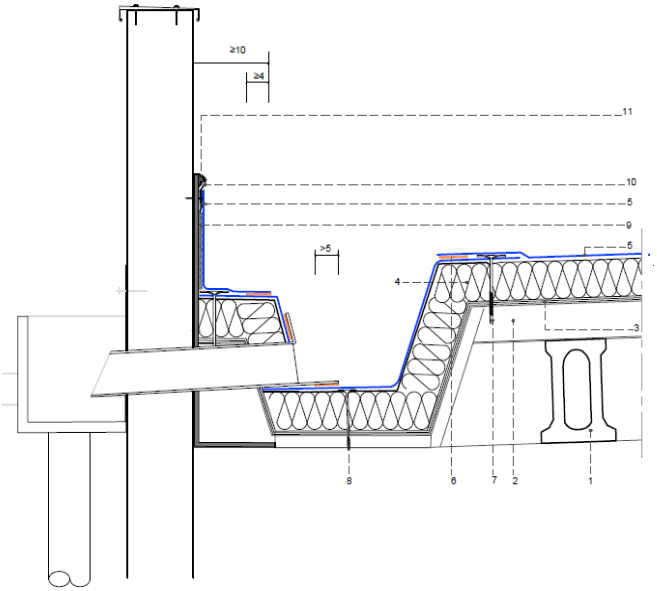
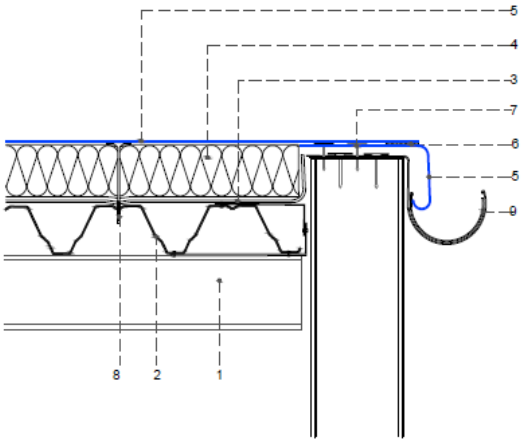
Fig. 6 Parapet gutter and outlet



1. Main structure
2. Resistant steel basis
3. Vapor barrier DANOPOL 250 BV / SELF DAN AL PRO
4. Thermal insulation
5. Main waterproofing membrane NEXALON TPO
6. Thermoplastic welding
7. Waterproofing mechanical fixing
8. Thermal insulation mechanical fixing
9. Adhesive NEXALON ADHESIVE
10. Laminated profile NEXALON LAMINATED PROFILE
11. Elastic sealant ELASTYDAN PU GRIS

Fig. 7 Side gutter



1. Main structure
2. Resistant steel basis
3. Vapor barrier DANOPOL 250 BV / SELF DAN AL PRO
4. Thermal insulation
5. Main waterproofing membrane NEXALON TPO
6. Thermoplastic welding
7. Waterproofing mechanical fixing
8. Thermal insulation mechanical fixing
9. Metallic Gutter

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