



ROOFING UNDERLAYS AND MEMBRANES

DOES YOUR ROOF BREATHE?

MEMBRANES – THE WAY TO A WARM AND DRY ROOF

H₂O

H₂O

STOP

WATERTIGHTNESS

H₂O

H₂O

VAPOUR - PERMEABILITY

The FAKRO Company offers a wide range of membranes and underlays designed to function as primary roofing and protection of insulation against moisture and dust.

In order to retain premium quality of offered products, the FAKRO Company is continuously verifying the key parameters of underlays and membranes such as: **tear resistance, nail shank tear resistance, watertightness, roll length and width, basis weight.**

This guarantees that the product distributed under FAKRO brand always retains its declared technical parameters.

Quality control system



Testing resistance to UV radiation



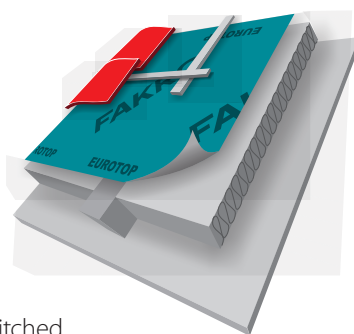
Testing resistance to tearing

working with
nature



ROOFING MEMBRANES

A roofing membrane acts as an initial roofing layer. It improves tightness of the roof, protects insulation against moisture and constitutes an important element of insulation systems used in pitched roofs. Application of the EUROTOP roofing membrane in the roof structure brings many advantages.



ENERGY EFFICIENCY

Roofing membranes do not require any air gaps between themselves and insulation. Insulation shifted towards membrane allows for thicker insulating layer of the roof along the whole rafter height which improves roof lagging and ensures energy savings. High vapour-permeability and watertightness of the EUROTOP membranes guarantee that the insulating material remains dry and only as such it can ensure high insulating properties. Windproofness and no ventilation gap between insulation and membrane prevents extraction of heat from the insulating material and penetration of moisture contained in the air.

EASE OF INSTALLATION

No need for any ventilation gap above insulation considerably facilitates installation work. Easier membrane installation translates into time savings, lower costs and reduced risk of workmanship error.

INCREASED ROOF LONGEVITY

Thanks to high vapour permeability of membranes, excessive moisture is evaporated from insulation.

HEALTHY MICROCLIMATE IN THE LOFT

Membranes form a secondary line of protection against rain, snow, moisture and dust which penetrate through the primary roofing. This gives a guarantee that potential leaks, water from melting snow or condensation are conveyed outside the roof and do not permeate the insulation layer.

WIDE APPLICATION RANGE

Roofing membranes offered by FAKRO are highly resistant to temperature, thus they can be installed in a number of roof structures, even those covered with metal sheeting.

ON THE ROOF AND WALLS



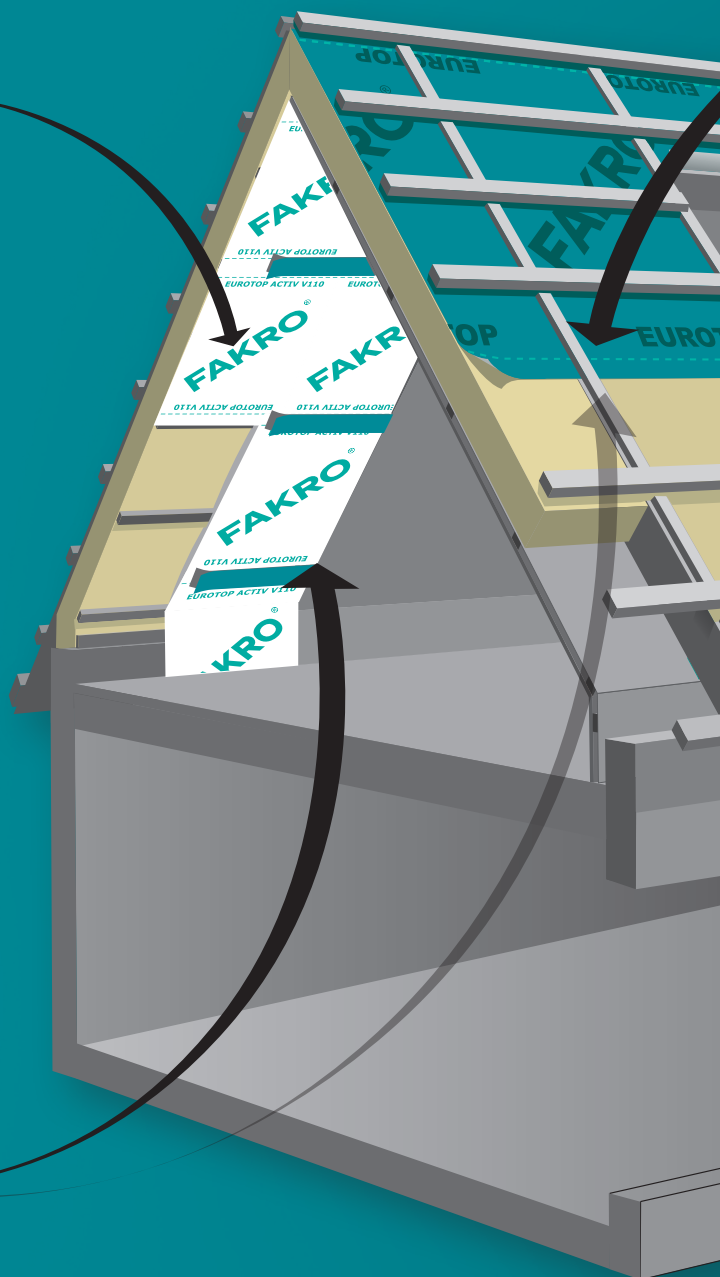
NON-PERMEABLE UNDERLAY

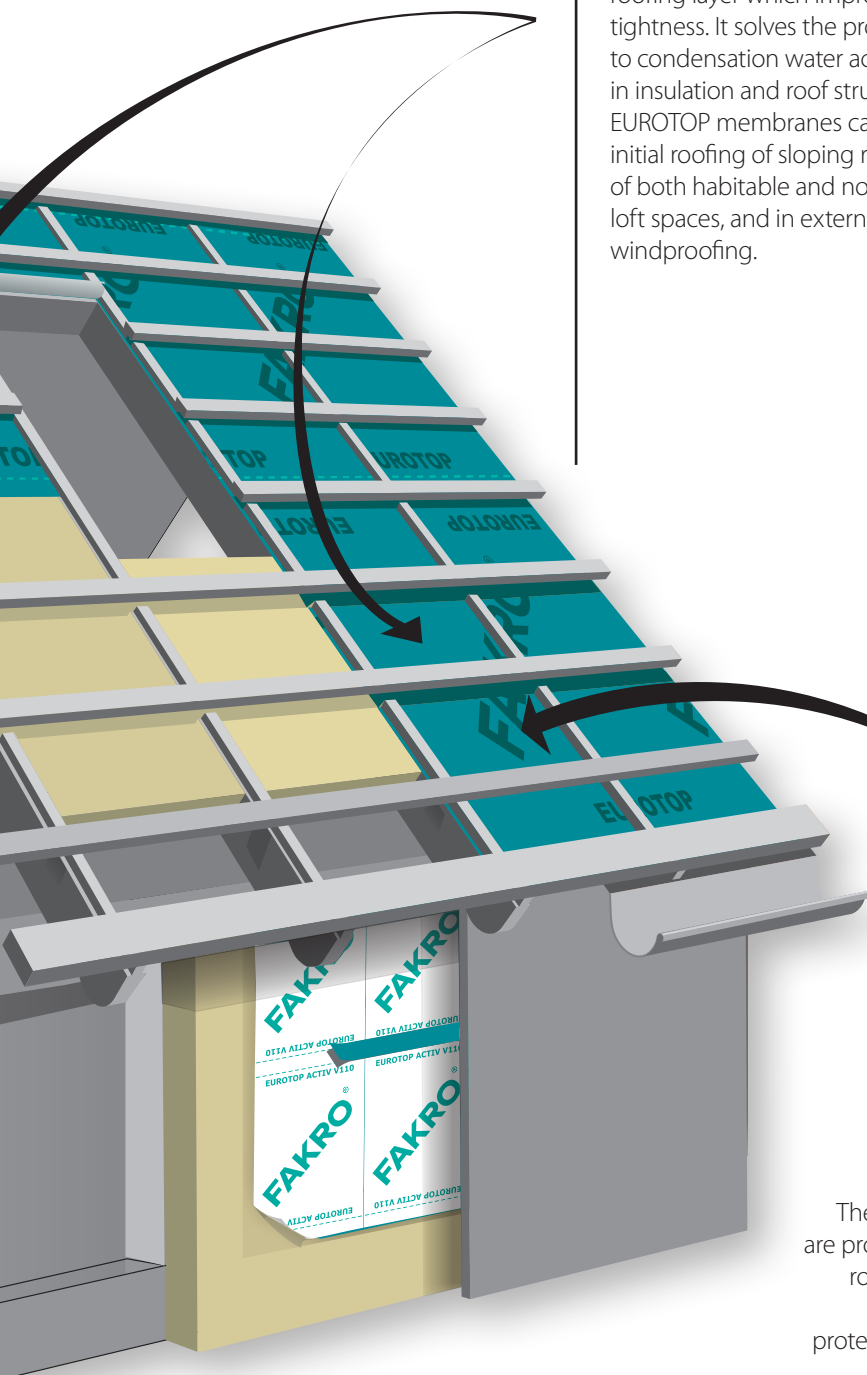
The non-permeable roofing underlay is a material shielding insulation and roof structure from water vapour penetration from habitable spaces. It is laid between insulation and finishing elements – most often gypsum cardboards. It constitutes a barrier for water vapour forming inside the building, protecting, at the same time, wooden elements of the roof structure and insulation against moisture. The non-permeable underlay fulfils the function of an additional windproofing – prevents heat losses as a result of free air circulation and roof draughts.



BANDS FOR ROOFING UNDERLAYS AND MEMBRANES

The correct installation of non-permeable roofing underlays requires application of proper joining bands. It ensures correct functioning of the initial roofing layer and non-permeable layer. Any sealing work and damage repair in membranes or underlays should be performed with the use of purpose-built bands.





HIGH VAPOUR PERMEABLE MEMBRANES

The **EUROTOP** membrane is a primary roofing layer which improves roofing tightness. It solves the problems related to condensation water accumulating in insulation and roof structure. The EUROTOP membranes can be used as initial roofing of sloping roofs – in case of both habitable and non-habitable loft spaces, and in external walls as windproofing.

WHAT AND WHERE

Pictogram description

- Application - internal
- Application - external (roof, walls)
- Application - external and internal (walls, roof)
- Vapour permeability
- Watertightness



LOW VAPOUR PERMEABILITY MEMBRANES

The low vapour permeability membranes are products used as initial roofing in sloping roofs. Their basic task as an initial roofing layer is to seal the primary roofing and protect insulation fitted in the roof structure from moisture. Application of the low vapour permeable membrane as an initial roofing in case of buildings with habitable loft spaces necessitates the use of lower ventilation gaps between the membrane and insulating material in the roof structure.



L2

L3

N15

N35

MEMBRANES

WITH HIGH VAPOUR PERMABILITY

The **EUROTOP** membranes are characterised by unique combination of such parameters as watertightness and water vapour diffusivity. High watertightness protects the roof structure from:

- ➔ seepage and water condensing under roofing
- ➔ wind driven precipitation

High water vapour permeability offered by the EUROTOP membrane allows moving insulation towards the membrane surface without the need for any ventilation gaps in the roof or wall structures. This makes it possible to apply thicker layer of insulation which translates into energy savings. The EUROTOP membrane is laid directly onto rafters, insulation or sarking with turquoise printed side facing outwards



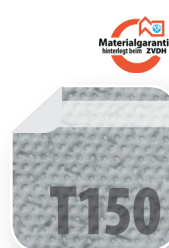
technical parameters	EUROTOP L2	EUROTOP L3	EUROTOP N15	EUROTOP N35
basis weight [g/m ²]	90	95	115	135
number of layers	3	3	3	3
vapour permeability [g/m ² /24h]	3100 g/m ² /24h 38°C/85%RH Lyssy	1500 g/m ² /24h 23°C/85%RH Lyssy	2800 g/m ² /24h 38°C/85%RH Lyssy	2900 g/m ² /24h 38°C/85%RH Lyssy
vapour permeability coefficient Sd [m]	0,008	0,020	0,004	0,007
water penetration resistance class before and after artificial ageing	CLASS W1	CLASS W1	CLASS W1	CLASS W1
resistance to tearing lengthwise [N/5cm] crosswise [N/5cm]	190 110	220 145	230 135	250 170
application temperature range [°C]	from -40 to +120	from -40 to +95	from -40 to +120	from -40 to +120
UV radiation resistance [month]	3			
material	polypropylene			
flammability class	E			
packing [roll/pallet]	36			
roll dimensions [m]	1,5 x 50			
possibility of use on full boarding	no	no	yes	yes
	CE	CE	CE	CE



18 order processing time – working days



S4
S65
T150
T180



technical parameters	EUROTOP S65	EUROTOP S4	EUROTOP T150	EUROTOP T180
basis weight [g/m ²]	165	155	150	180
number of layers	3	4	3 (with 1 or 2 adhesive strips)	3 (with 1 or 2 adhesive strips)
vapour permeability [g/m ² /24h]	2300 g/m ² /24h 38°C/85%RH Lyssy	3100 g/m ² /24h 38°C/85%RH Lyssy	1500 g/m ² /24h 23°C/85%RH Lyssy	1200 g/m ² /24h 23°C/85%RH Lyssy
vapour permeability coefficient Sd [m]	0,020	0,004	0,020	0,020
water penetration resistance class before and after artificial ageing	CLASS W1			
resistance to tearing lengthwise [N/5cm]	340	360	340	420
crosswise [N/5cm]	220	280	210	250
application temperature range [°C]	from -40 to +120		from -40 to +80	
UV radiation resistance [month]	4	3	3	3
material	polypropylene			
flammability class	E			
packing [roll/pallet]	25	25	27	27
roll dimensions [m]	1,5 x 50			
possibility of use on full boarding	yes			
	CE	CE	CE	CE



18 order processing time – working days

KF 96
SILVER

KF 110
STANDARD

► LOW VAPOUR PERMEABILITY MEMBRANES

The **KF** low permeability membrane has found its application as an initial roofing layer in building with habitable as well as non-habitable loft spaces. The low permeability membrane proves to be a very effective insulation of walls in buildings of skeleton structure (wooden or metal). In buildings in which function and simple roof shapes do not require application of membranes offering high vapour permeability and, at the same time, high strength and low material costs play major role, the low vapour permeability membrane can be used.



KF 96

KF 110

technical parameters	KF 96 SILVER	KF 110 STANDARD
basis weight [g/m ²]	98	110
vapour permeability [g/m ² /24h]	30	
head of water [mm]	130	
water penetration resistance before and after artificial ageing	CLASS W2	
tear resistance		
lengthwise [N/5cm]	400	240
crosswise [N/5cm]	430	350
UV radiation resistance [month]	2	
application temperature range [°C]	from -40°C to +80°C	
vapour permeability coefficient Sd [m]	1	
flammability class	F	
packing [roll/pallet]	50	
roll dimensions [m]	1,5 x 50	



18 order processing time – working days

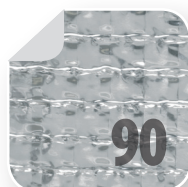
➔ NON-PERMEABLE ROOFING UNDERLAYS

The non-permeable underlay used in conjunction with EUROTOP high vapour permeability membranes makes it possible to retain proper climatic conditions within the habitable loft spaces. In offer there are two types of non-permeable underlays: **Termofol 90** and **Eurotop Activ V110**.

Termofol 90 provides very effective protection against moisture penetrating into insulation and, thanks to a thin layer of aluminium film used, it partially reflects the heat radiating from the loft.

Eurotop Activ V110 is an active non-permeable underlay allowing vapour to flow inside and outside the room in controlled volumes, resulting in better drying of the roof.

Eurotop Activ V110 can be also used as a wind insulation in ventilated walls when installed on the outer side of the wall.



technical parameters	TERMOFOL 90	EUROTOP ACTIV V 110
basis weight [g/m ²]	90	110
resistance to tearing lengthwise N/5cm	230	200
crosswise N/5cm	120	130
resistance to weather conditions (months)	3	3
application temperature range [°C]	from -40°C to +80°C	from -40°C to +120°C
vapour permeability coefficient Sd [m]	>70	2
flammability class	E	E
packing [roll/pallet]	50	36
roll dimensions [m]	1,50 x 50	1,5 x 50



TERMOFOL
90

EUROTOP
ACTIV
V 110

TERMOFOL 90



EUROTOP ACTIV
V 110



18 order processing time – working days

EUROBAND W

EUROBAND P

BUTYLBAND

EUROBAND

ALUFIX

➔ BANDS FOR ROOFING MEMBRANES AND UNDERLAYS

The bands offered by FAKRO are used for permanent joining, sealing and mending roofing membranes and non-permeable underlays. They are also recommended for attaching membranes and underlays to structural elements, e.g. wood, wall or metal.



EUROBAND W – one-sided adhesive band based on polypropylene cloth, 50mm wide.

Intended use:

- joining together successive layers of EUROTOP membranes,
- repairing EUROTOP membranes
- attaching EUROTOP membranes to wood, plastic or metals

EUROBAND P – one-sided adhesive band, 40mm wide.

Intended use:

- sealing and insulating connection points between roofing membranes or underlays and roof structure
 - eliminates the risk of water penetration to insulation and rafters through openings created by roofing nails or pliers

BUTYLBAND – butyl band with adhesive on both sides, 10mm wide.

Intended use:

- attaching EUROTOP membranes and Termofol 90 underlay to walls, around chimneys and flanges over gutters,
- joining overlaps of EUROTOP membranes, low vapour permeability or non-permeable underlays,
- joining materials where permanent connection flexibility and resistance to moisture and ageing is required.

EUROBAND – one-sided butyl band, coated with aluminium film, 50mm thick

Intended use:

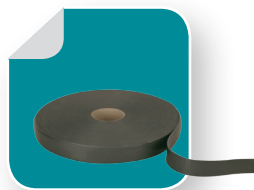
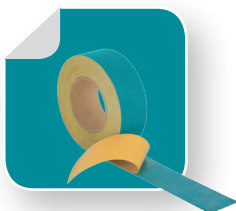
- mending roofing membranes and underlays,
- sealing skylights and windows,
- sealing around chimneys.

ALUFIX – one-sided butyl band, 75mm wide

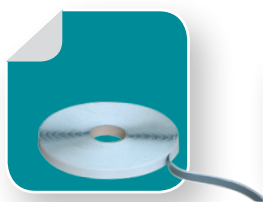
Intended use:

- sealing non-permeable underlays
- joining overlaps of non-permeable underlays
- mending non-permeable underlays

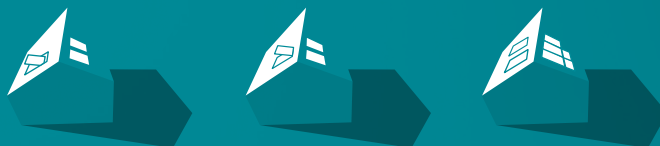
	EUROTOP L2	EUROTOP L3	EUROTOP N15	EUROTOP N35	EUROTOP S65	EUROTOP S4	EUROTOP T150	EUROTOP T180	TERMOFOL 90	EUROTOP ACTIV
EUROBAND P	+	+	+	+	+	+	+	+	-	-
EUROBAND W	+	+	+	+	+	+	+	+	-	+
EURBAND	+	+	+	+	+	+	+	+	+	+
BUTBAND	+	+	+	+	+	+	+	+	+	+
ALUFIX	-	-	-	-	-	-	-	-	+	-



technical parameters	EUROBAND W	EUROBAND P
band type	one-sided adhesive	one-sided adhesive
carrier type	polypropylene fibres	non-absorbent polyethylene foam
adhesive	acrylic	rubber-based
temperature resistance	from -40 to +120 °C	from -30 to +80 °C
installation temperature	from +18 to +35 °C	-
colour	turquoise	dark grey
roll dimensions	60 mm x 25 m	40 mm x 30 m
packing [roll/cardboard]	24 rolls	12 rolls



technical parameters	BUTYLBAND	EUROBAND	ALUFIX
band type	two-sided adhesive	one-sided adhesive	one-sided adhesive
carrier type	butyl	butyl coated with aluminium film	BOPP film coated with aluminium
adhesive	butyl	butyl	acrylic
temperature resistance	from -30 to +80 °C	from -30 to +80 °C	100 °C
application temperature	from +5 to +40 °C	from +5 to +40 °C	-
colour	grey	silver, grey	silver
roll dimensions	10 mm x 20 m	50 mm x 10 m	75 mm x 50 m
packing [roll/cardboard]	22 rolls	16 rolls	64 rolls



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FAKRO reserves the right to change specifications at any time.