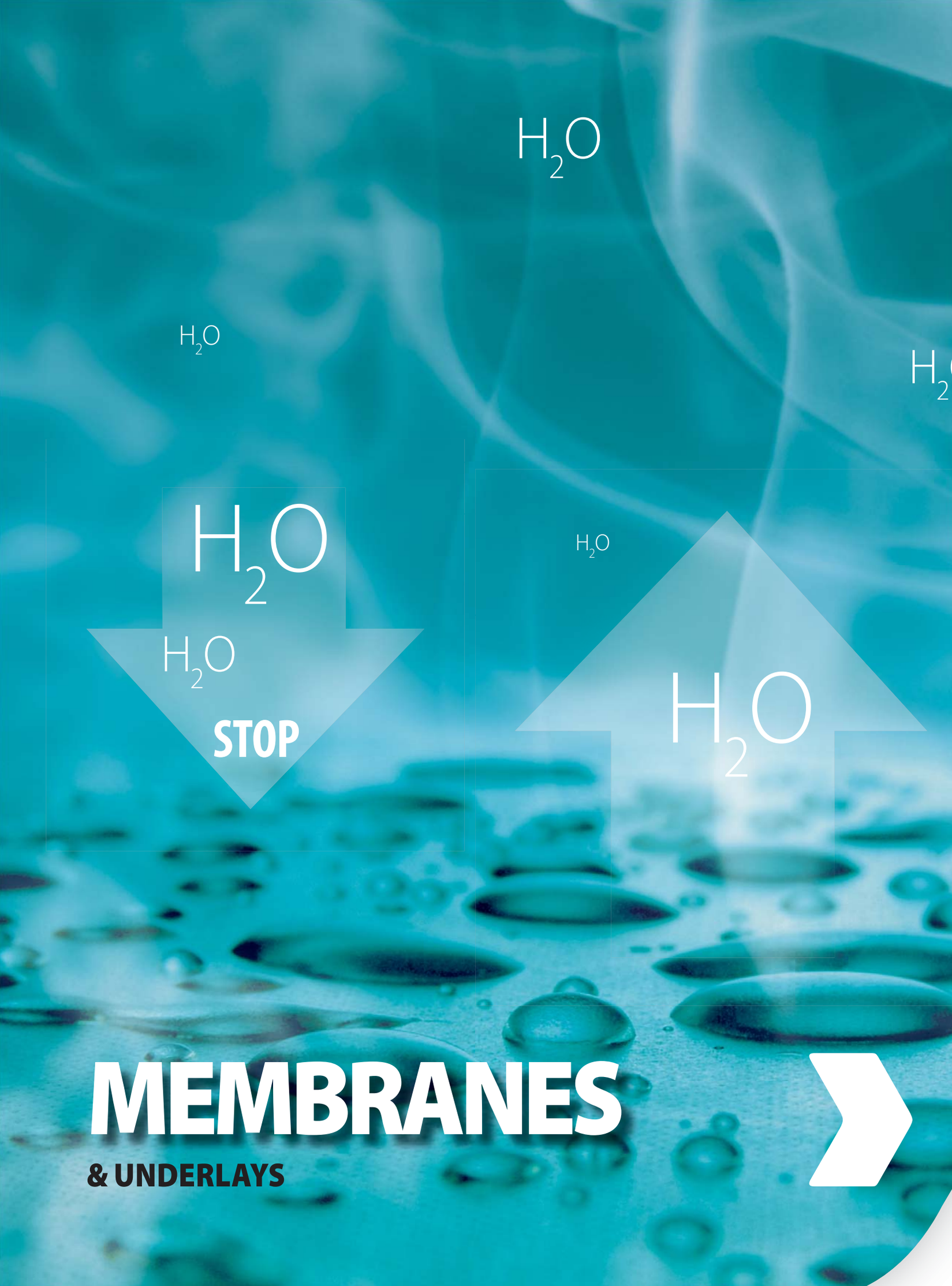


MEMBRANES

& UNDERLAYS

Introduction

FAKRO offers a wide range of membranes and underlays designed to function as primary roofing and protection of insulation against moisture and dust. Membranes available in FAKRO product range feature high resistance to temperature, therefore they are suitable for use in different roofing structures, even those covered with sheet metal.

In order to ensure the hiqhest quality of products, FAKRO is continuously verifying the key parameters of membranes and underlays such as their tear resistance, nail shank tear resistance, watertightness, roll length and width, basis weight. This guarantees that the product distributed under the FAKRO brand always retains its declared technical parameters.

MEMBRANES & UNDERLAYS

ADVANTAGES

Roofing membranes act as an initial roofing layer. They enhance tightness of the roof, protect insulation against moisture and constitute an important element of insulation systems used in pitched roofs. Application of the EUROTOP roofing membrane in the roof structure brings many advantages. The most important include:

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

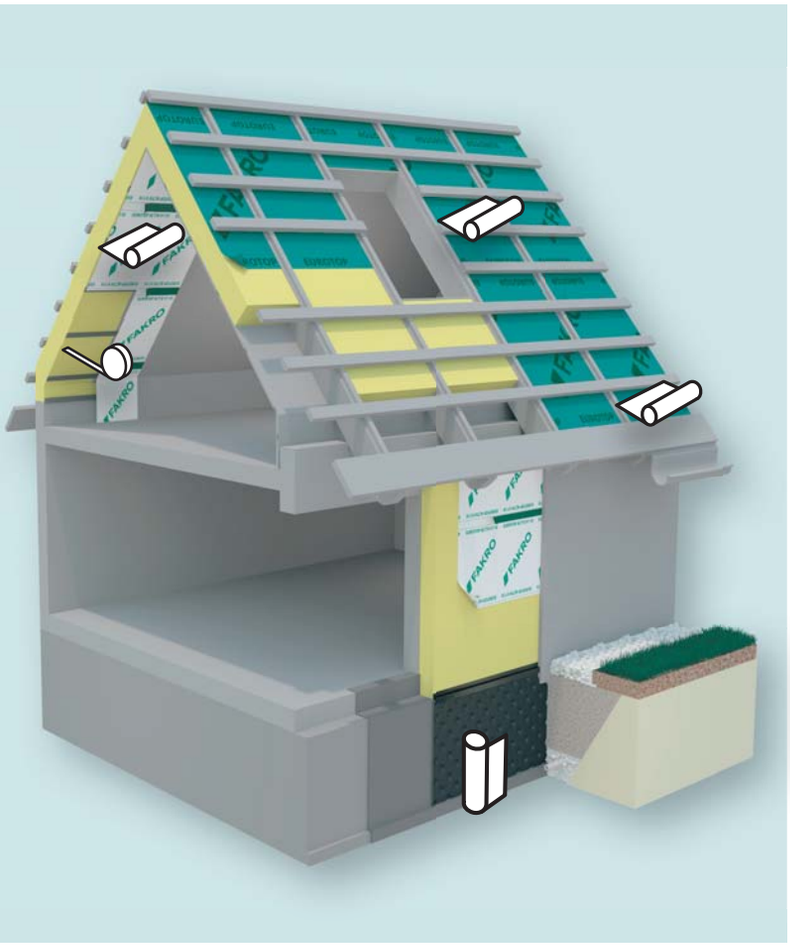
Ease of installation
No need for any ventilation gap above the insulation vastly enhances the installation process. Easier membrane installation translates into time savings, lower costs and reduced risk of workmanship errors.

Increased roof longevity
Excessive moisture is evaporated from insulation thanks to the high vapour permeability of membranes. This adds to increased roof longevity.

Healthy microclimate in the loft
Membranes provide 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 is emitted outside the roof and do not penetrate into the insulation layer. Membranes significantly influence a dry and pleasant climate in the roof space.

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 sheet metal.

ON THE ROOF AND WALLS



High vapour permeable membranes

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

Low vapour permeable membranes

The low vapour permeable membranes are products used as initial roofing in sloping roofs. Their basic task 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 requires the use of lower ventilation gaps between the membrane and insulation material in the roof structure.

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 membranes and underlays

The correct installation of non-permeable roofing underlays requires application of proper joining bands or tapes to ensure 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 or tapes..

Foundation membrane

Foundation membrane is a moisture resistant membrane (dimpled membrane) used for walls of foundations, building and underground structures. It can also be used on external and internal surfaces of new and old structures, thus constituting excellent protection against aggressive action of water vapour, ground water and soil.

HIGH VAPOUR PERMEABLE MEMBRANES EUROTOP

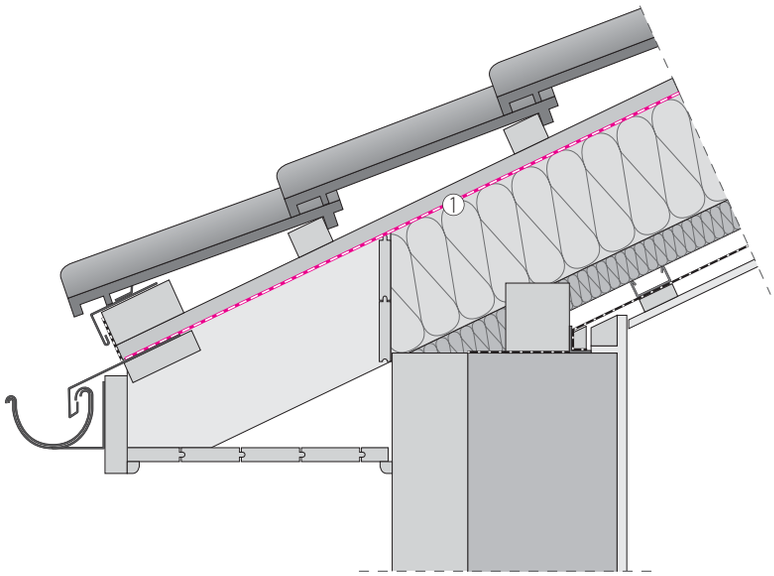
The EUROTOP membranes are characterised by a unique combination of such parameters as watertightness and water vapour diffusivity.
High watertightness protects the roof structure from:
- leakages and water condensation under the roofing
- precipitation which is wind-driven under the primary roofing

High water vapour permeability offered by the EUROTOP membrane enables 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 boarding with turquoise printed side facing outwards.

Technical Specification					
	EUROTOP N15	**EUROTOP N35**	**EUROTOP N50**	**EUROTOP T150**	**EUROTOP T180**
				1 adhesive strip / 2 adhesive strips	1 adhesive strip / 2 adhesive strips
basis weight [g/m²]	115	135	150	150	180
layers	3	3	3	3	3
vapour permeability coefficient Sd [m]	0.015	0.015	0.015	0.020	0.020
water penetration resistance class before and after artificial ageing	CLASS W1	CLASS W1	CLASS W1	CLASS W1	CLASS W1
resistance to tearing lengthwise [N/5cm] crosswise [N/5cm]	 230 150	 280 190	 320 210	 350 210	 420 250
application temperature range [°C]	from -40 to +120	from -40 to +120	from -40 to +120	from -40 to +80	from -40 to +80
UV radiation resistance [month]	3	3	3	3	3
material	polypropylene	polypropylene	polypropylene	polypropylene	polypropylene
flammability class	Ed-2	E	E	E	E
packing [roll/pallet]	36	36	36	27	27
roll dimensions [m]	1.5 x 50	1.5 x 50	1.5 x 50	1.5 x 50	1.5 x 50
use on full boarding	yes	yes	yes	yes	yes
	62038 +	62035 +	80A502 +	62048 + / 62054 +	62049 + / 62055 +

Cross-section of the roofing with membrane

1 – High vapour permeable membrane



Technical Specification					
	EUROTOP S4	**EUROTOP S65**	**EUROTOP S215**	**EUROTOP S265**	
basis weight [g/m²]	155	165	215	265	
layers	4	3	3	3	
vapour permeability coefficient Sd [m]	0.015	0.015	0.015	0.020	
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]	 360 280	 350 240	 420 250	 500 550	
application temperature range [°C]	from -40 to +120	from -40 to +120	from -40 to +120	from -40 to +120	
UV radiation resistance [month]	3	4	3	3	
material	polypropylene	polypropylene	polypropylene	polypropylene	
flammability class	E	E	E	F	
packing [roll/pallet]	25	25	25	25	
roll dimensions [m]	1.5 x 50	1.5 x 50	1.5 x 50	1.5 x 30	
use on full boarding	yes	yes	yes	yes	
	62036 +	62039 +	80AB44 +	80AB45 +	

LOW VAPOUR PERMEABLE MEMBRANES

The KF low vapour permeable membrane found its application as an initial roofing layer in buildings with habitable as well as non-habitable loft spaces. The low permeable membrane proves to be excellent insulation of walls in buildings featuring a skeleton structure of timber or metal.
In buildings in which functions 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 permeable membrane can be applied.

Technical Specification					
	KF 96 SILVER	**KF 110 STANDARD**			
basis weight [g/m²]	98	110			
vapour permeability coefficient Sd [m]	1	1			
water penetration resistance class before and after artificial ageing	CLASS W2	CLASS W2			
resistance to tearing lengthwise [N/5cm] crosswise [N/5cm]	 600 500	 430 350			
application temperature range [°C]	from -40°C to +80°C	from -40°C to +80°C			
UV radiation resistance [month]	2	2			
flammability class	F	F			
packing [roll/pallet]	50	50			
roll dimensions [m]	1.5 x 50	1.5 x 50			
	62002 +	62003 +			

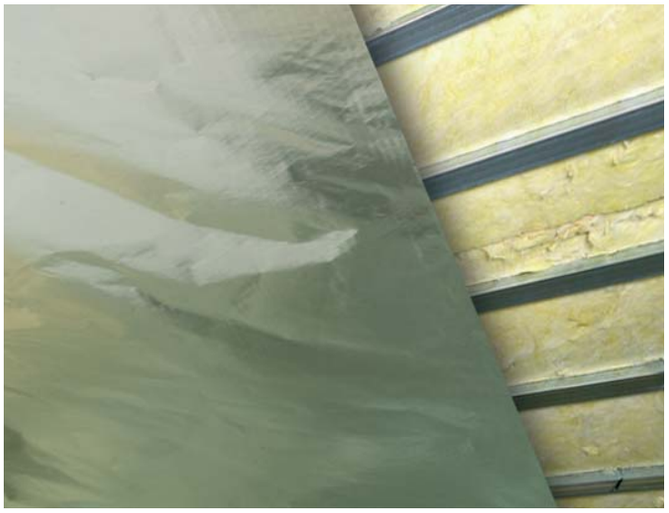
FOUNDATION INSULATION AND PROTECTION SYSTEM

EUROFLEX systems are used for anti-moisture insulation of foundations, terraces, ceilings, roofs and floors. With special embossed areas, it forms a gap to allow additional ventilation of insulated surfaces. The system consists of:
- EUROFLEX 400 foundation dimpled membrane
- EUROSLAT finishing slats
- EUROFIX mounting connectors

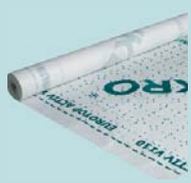
Technical Specification		
	EUROSLAT	**EUROFIX**
dimensions [mm]	70 x 2000	3.5 x 40
number of pieces in packaging [pcs]	20	100
	80AZ09 +	**80AZ08** +

Technical Specification						
	EUROFLEX 400					
basis weight [g/m^2]	400					
resistance to tearing lengthwise [N/5cm] crosswise [N/5cm]	250 200					
flammability class	20					
roll dimensions [m]	1.0 x 20		1.5 x 20		2.0 x 20	
	80AB24 +		**80AB25** +		**80AB26** +	

NON-PERMEABLE UNDERLAYS

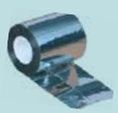


The non-permeable underlay used in conjunction with EUROTOP high vapour permeable membranes makes it possible to retain proper climatic conditions within the habitable loft spaces. This product range includes two types of non-permeable underlays: Termofol 90, 115 and Eurotop Activ V110. Termofol 90, 115 non-permeable underlay with a reflective layer provides very effective protection against water vapour penetration 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 also be used as a wind insulation in ventilated walls when installed on the outer side of the partition.

Technical Specification					
	TERMOFOL 90	**TERMOFOL 115 Top**	**EUROTOP ACTIV V 110**		
basis weight [g/m²]	90	115	110		
vapour permeability coefficient Sd [m]	>70	>80	>70		
water penetration resistance class before and after artificial ageing	3	3	3		
resistance to tearing lengthwise [N/5cm] crosswise [N/5cm]	 230 120	 650 600	 200 130		
application temperature range [°C]	from -40°C to +80°C	from -40°C to +80°C	from -40°C to +120°C		
flammability class	E	F	E		
packing [roll/pallet]	50	50	36		
roll dimensions [m]	1.5 x 50	1.5 x 50	1.5 x 50		
	62042 +	80AB20 +	80AB07		

BANDS FOR ROOFING MEMBRANES AND UNDERLAYS

Bands or tapes offered by FAKRO are used for durable joining, sealing and repairing roofing membranes and non-permeable underlays. They eliminate the risk of water penetration into the insulation and rafters through holes formed as a result of puncturing the membrane with pliers and roofing nails. They are also recommended for attaching membranes and underlays to structural elements such as wood, wall or metal. They seal gaps around windows, light tunnels and chimneys.

Technical Specification						
	EUROBAND W	**EUROBAND S**	**EUROBAND P**	**BUTYLBAND**	**EUROBAND**	**ALUFIX**
band type	one-sided adhesive	one-sided adhesive	one-sided adhesive	double-sided adhesive	one-sided adhesive	one-sided adhesive
carrier type	polypropylene fibre	polyethylene film, PET net	non-absorbent polyethylene foam	butyl	butyl coated with aluminium film	BOPP film coated with aluminium
adhesive	acrylic	acrylic	rubber-based	butyl	butyl	acrylic
temperature resistance	from -40 to +120 °C	from -30 to +100 °C	from -30 to +80 °C	from -30 to +80 °C	from -30 to +80 °C	100 °C
installation temperature	from +18 to +35 °C	from +18 to +35 °C	from +5 to +40 °C	from +5 to +40 °C	from +5 to +40 °C	from +5 to +40 °C
colour	turquoise	green	dark grey	grey	silver, grey	grey
roll dimensions	60 mm x 25m (200 mm x 25m)	60 mm x 25m (120 mm x 25m) (180 mm x 25m)	40 mm x 30 m	10 mm x 20 m	50 mm x 10 m	75 mm x 50 m
packing [roll/cardboard]	24 rolls	20 rolls	12 rolls	24 rolls	12 rolls	64 rolls
	80AB43 +	**80AB40** +	**62071** +	**62029** +	**62019** +	**62018** +