

Kalzip® Vapour barrier FR-X

Product information 09/25

The Kalzip FR-X vapour barrier is a flexible, low fire load, single-sided self-adhesive bitumen vapour barrier made from tear-resistant, fabric-reinforced aluminium composite foil in accordance with DIN EN 13970.

Product design:

Upper layer:	fabric-reinforced laminated aluminium foil
Lower layer:	Self-adhesive coating (special bitumen) with film covering

Product advantages:

- Self-adhesive coating (special bitumen) with film covering
- Meets the requirements of DIN 13970
- Very high vapour resistance (SD value: ≥ 1.500 m)
- Quick and easy installation
- High penetration resistance
- Fire behaviour: Class E
- Calorific value: > 10.500 kJ
- Suitable as temporary sealing for roofs with gradients of more than 2° - max. 14 days.
- Very high tear resistance

Area of application

The Kalzip vapour barrier FR-X is used as a low fire load vapour barrier membrane for roofs with increased fire protection requirements in accordance with legal regulations. This is preferably the case on substructures made of trapezoidal steel profile liners.

Application notes

The surfaces to be bonded must be dry and free of dust, grease and oil. No primer is required on organic-coated trapezoidal steel profiles. The Kalzip vapour barrier FR-X must be applied parallel to the trapezoidal liner by peeling off the protective film on the back of the vapour barrier

Side lap joints in the Kalzip vapour barrier FR-X layer should be in the same direction as the roof slope and coincide with a „crown“ of the trapezoidal liner or liner-deck sheet in order to offer a continuous bearing surface to maintain the integrity of the joint. Longitudinal and transverse seams must be bonded tightly with a width of at least 7.5 cm by pressing or rolling. To stabilise the endlap joints of the vapour barrier of the sheet, apply an approx. 20 cm wide strip of FR-X vapour barrier tightly under the endlap position. Laying of the vapour control layer should commence at the eaves working up to the ridge to ensure that the over-lap is pointing down-slope. The vapour control layer should preferably be laid into the prevailing wind. When installing at ambient temperatures below $+10^\circ\text{C}$, all adhesive joints must be heated from above with a hot air blower before rolling up.

The vapour barrier can be stored in original packaging in dry, well-ventilated, protected from ultra-violet light for approx. 12 months. On the construction site, opened pallets and rolls must be protected from moisture and rain with suitable measures. The rolls must be stored upright.

Temporary sealing

Temporary sealing with vapour barriers is not permitted according to the current flat roof guideline. Therefore, the Kalzip vapour barrier FR-X should be applied as soon as possible before subsequent layers. If an interruption of work is necessary and cannot be avoided, a vapour barrier in accordance with DIN 18531 can be exposed to the elements for up to 14 days with a minimum slope of at least 2 %. No standing water may remain on the roof surface.

Technical data:

Packaging unit	
Roll width	1.08 m
Roll length	40 m
Weight approx	380 g/ m ²
Pallet unit	20 rolls per pallet

Property according to DIN EN 13970	Test procedure	Product performance
Watertightness	DIN EN 1928	passed
Water vapour permeability	DIN EN 1931	S _d -value ≥ 1.500 m
Behaviour in case of fire	DIN EN 13501-1	Class E
Tear resistance	DIN EN 12310-1	longitudinal: ≥ 200 N transverse: ≥ 200 N
Joint shear resistance (bond seam)	DIN EN 12317-2	≥ 550 N/ 50 mm
Tensile strength	DIN EN 12311-1	Maximum tensile strength longitudinal: ≥ 700 N/50 mm transverse: ≥ 700 N/50 mm Elongation at maximum tensile strength longitudinal: ≥ 3 % transverse: ≥ 3 %
Durability after artificial ageing	DIN EN 1296 DIN EN 1931	passed
Durability of waterproofing against chemicals (alkali resistance)	DIN EN 1847 DIN EN 1931	passed
Thickness	DIN EN 1849-2	0,31 mm +0,2 mm/-0,05 mm
Width	DIN EN 1848-2	1,08 m ± 2 %
Area-related weight	DIN EN 1849-2	315 g -20 % + 10 %
Cold bending behaviour	DIN EN 1109	≤ 20 °C, passed
Resistance to shock load	DIN EN 12691	Procedure A/B Drop height 300 mm, tight

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