Technical Information Sheet

Rhepanol® hfk

Delivery form	Item Number
Thickness 1.5 mm, 15.00 m x 1.50 m per roll	17 04 100
Thickness 1.5 mm, 15.00 m x 1.50 m per roll	17 04 110

Note: For other colors, see price list

Description

Rhepanol hfk is a grey roofing membrane made of polyisobutylene (PIB) according to EN 13956 and EN 13967, bitumen-compatible and with a lamination of polyester fleece. Rhepanol hfk is laminated with a 1.0 mm thick plastic fleece and has a fleece-free welding edge on one side. The roofing membranes are homogeneously joined in the seam area by hot air welding. The fleece also protects against stress from the substrate. In addition, the fleece is vapour-permeable and enables secure fixing to the substrate. Rhepanol hfk roofing membranes are ideal for all types of installation (mechanically fastened, bonded, under ballast or with green roofs) as well as for structural waterproofing applications. In combination with our Rhepanol Roof Paint and the Rhepanol h Standing Seam Profile, the look of metal roofs can be realistically reproduced (e.g. copper roof), but company logos and colored roofs are also possible in the color of your choice. Rhepanol hfk is one of the first roofing membranes to bear the prestigious Blue Angel eco-label, which stands for outstanding sustainability.

Preparation

Roofing structures need to provide sufficient stability to accommodate the total weight of the roofing system, including live loads and temporary loads during installation. Substrates need to be clean, smooth, dry, and free of sharp edges, loose or foreign materials, oil, grease, or other elements that may damage the membrane.

Application and processing

Install the roofing membrane in accordance with the current Rhepanol hfk installation guidelines, details and execution requirements. Rhepanol hfk roofing membranes can be mechanically fastened in the seam overlap or the innovative Velcro system. With our system adhesives, roofing membranes can be bonded to various substrates either in strips or over the entire surface. Of course, Rhepanol hfk can also be used under ballast or under extensive and intensive greening, as well as under used roof areas. All seams are joined using hot air welding. Allow sufficient cooling of all welded seams before probing. Please observe the Rhepanol hfk installation guidelines and the Rhepanol hfk technical manual. The installation of the roof waterproofing should be carried out by trained installers.

Consumption

To determine the quantity of membrane required, the complete installation of the horizontal surface must be taken into account, including seam overlap (50 mm for seams in the welding paste system and at least 100 mm for seams with mechanical fastening), as well as raising the surface membrane on the rising component by approx. 50-100 mm.

FDT Flachdach Technologie GmbH
Eisenbahnstr. 6-8 | 68199 Mannheim | Germany
Tel. +49 (0)621 / 8504-0 | www.fdt.de

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Properties

Physical

- Roofing membrane according to EN 13956 / EN 13967
- Awarded the Blue Angel eco-label
- Root and rhizome resistant according to the FLL method without the use of herbicides
- Weather-resistant, even without additional surface protection
- Resistant to atmospheric influences, e.g. UV rays and industrial and heating exhaust gases
- Remains flexible, even at temperatures of - 50 °C
- Outstanding resistance to natural ageing
- Bitumen compatible
- Highly resistant to perforations
- Plasticizer-, chlorine-, halogen-, bitumen- and PVC-free, rot-proof, non-porous
- Resistant to flying sparks and radiant heat according to CEN/TS 1187, confirmed by official test certificates, for roof pitches < 20° Rhepanol hfk-bs must be used for roof pitches ≥ 20°
- Reaction to fire: class E, EN 13501-1
- Hail resistance is tested according to EN 13583
- Also suitable for slopeless surfaces
- Good resistance against red algae
- Suitable for rainwater retention (retention roof)
- No shattering
- Meets the requirements for green roof subsidies (Hamburg, Berlin)
- Can be joined to the Rhepanol fk roofing membrane using hot air welding
- Thermal conductivity according to DIN 52612: 0.16 W/(m*K)
- Certified with an Environmental Product Declaration (EPD) according to ISO 14025 and EN 15804 (www.ibu-epd.com)
- Listed in the DGNB Navigator (code 5NUPUE)
- Not a substance within the meaning of the EU Hazardous Substances Regulation
- High repairability over the entire life cycle
- Further information on sustainability can be found on the Rhepanol hfk sustainability data sheet
- Rhepanol hfk is highly resistant to the substances commonly found in roof areas. In addition, we confirm resistance to other materials/substances at all times. In case of prolonged exposure to organic solvents, paints, greases and oils, clarification is required on a case-by-case basis.
- Quality assurance: Rhepanol hfk is subject to constant quality control through internal and external monitoring. The internal quality assurance system of the entire company is certified according to EN ISO 9001, the world's stringent quality standard, and is regularly audited by TÜV SÜD Management Service GmbH. It also has certification in accordance with the EN ISO 14001 environmental management system.
- FPC certificate no.: 0761-CPR-1068 / 0761-CPR-1069

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Technical	Test method	Thickness 1.5 mm
Visible defects	EN 1850-2	None
Length	EN 1848-2	15 m (-0 % / +5 %)
width	EN 1848-2	1.50 and 1.00 m (-0.5 % / +1 %)
Effective thickness	EN 1849-2	1.5 mm (-5 % / +10 %)
Straightness	EN 1848-2	< 50 mm
Flatness	EN 1848-2	< 10 mm
Basis weight	EN 1849-2	1.92 kg/m² (-5 % / +10 %)
Watertightness	EN 1928 (B)	≥ 400 kPa/72 h
Tensile strength	EN 12311-2 (A)	≥ 400 N/50mm
Elongation	EN 12311-2 (A)	≥ 50 %
Resistance to static load	EN 12730 (A/B)	≥ 20 kg
Resistance to impact	EN 12691 (A/B)	≥ 700 mm ≥ 3,500 mm
Tear resistance	EN 12310-2	≥ 150 N
Nail shank tear resistance	EN 12310-1	≥ 300 N
Joint peel resistance	EN 12316-2	≥ 150 N/50 mm
Joint shear resistance	EN 12317-2	≥ 200 N/50 mm, tear-off outside the joint seam
UV exposure	EN 1297	Class 0 (10,000 h)
Resistance to root penetration	FLL/EN 13948	Root and rhizome resistant
Folding at low temperatures	EN 495-5	≤ -50 °C
Dimensional stability	EN 1107-2	≤ 1.0 %
Reaction to fire	EN 13501-1	Class E
External fire impact (in use)	EN 13501-5	Broof (t1)*
Behavior when exposed to bitumen	EN 1548	passed
Water vapour property μ	EN 1931(B)	≥ 160,000 +/- 30 %
Hail resistance	EN 13583	≥ 25 m/s ≥ 35 m/s
Chemical resistance	EN 1847	passed
Durability of water tightness against ageing	EN 1296 (12 w) EN 1928 (B) (24h/60kPa)	passed
Durability of water tightness against chemicals	EN 1847 (28d/+23 °C) EN 1928 (B) (24h/60kPa)	passed
Dangerous substances	See footnote [1)]	

Note: As European standards are constantly evolving, please contact our technical department or visit www.fdt.de for the latest information on physical properties.

** Various BROOF(t1)-classified superstructures are available with this roofing membrane. For further information, please contact our technical department.*

1) European harmonized standards for testing methods do not exist, therefore the testing and declaration for the release of substances must be obtained in regards of national regulations/requirements.

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Storage

- The roofing membranes retain their product properties in unopened and undamaged original packaging
- Store material in the original packaging until processing
- Carefully reseal opened packaging units when outdoor storage
- Store rolls horizontally only
- Protect rolls from direct sunlight, rain and snow

Shelf life

The roofing membranes do not have a best-before date. When stored properly in their unopened and undamaged original packaging, they retain their product properties over a long period of time.

Packaging and disposal

Waste from this product does not constitute hazardous material. National regulations must be observed.
Waste-Key numbers (AVV) for the Rhepanol hfk synthetic waterproofing membrane:
• 170904 (Mixed construction- and demolition waste)
• 200139 (Plastics)

Precautions and occupational safety

Take care when moving, transporting and handling to avoid sources of punctures and physical damage. A safety data sheet is not required for this product.

Transport

The roofing membranes are usually transported on wooden pallets.

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