

Technical Information Sheet

Rhepanol® hfk-bs

Delivery form	Item Number
Thickness 1.5 mm, 15.00 m x 1.50 m per roll	17 04 520

Description

Rhepanol hfk-bs is a grey roofing membrane made of polyisobutylene (PIB) according to EN 13956 /EN 13967, bitumen-compatible, with a lamination of polyester fleece and glass fleece. Rhepanol hfk-bs 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-bs roofing membranes are ideal for all types of installation (mechanically fastened, bonded, under ballast with the exception of green roofs) with any roof pitch. The roofing membranes can be laid directly on unbacked polystyrene insulation without a fire protection layer.

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-bs roofing membranes can be mechanically fastened in the seam overlap. **Mechanical fastening in the Velcro system is not possible due to the combination lamination.** With our system adhesives, roofing membranes can be bonded to various substrates either in strips or over the entire surface. Of course, Rhepanol hfk-bs can also be used under gravel ballast (no green roofs) 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-bs 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.

Properties

Physical

- Roofing membrane according to EN 13956 / EN 13967
- Direct installation on unlaminated polystyrene without fire protection layer
- 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 - 40 °C
- Good resistance against red algae
- Outstanding resistance to natural ageing
- 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° and ≥ 20°
- Reaction to fire: class E, EN 13501-1
- Hail resistance is tested according to EN 13583
- Also suitable for slopeless surfaces
- No shattering
- 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)
- Not a substance within the meaning of the EU Hazardous Substances Regulation
- High repairability over the entire life cycle
- Rhepanol hfk-bs 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-bs 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

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 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	2.00 kg/m ² (-5 % / +10 %)
Watertightness	EN 1928 (B)	≥ 400 kPa/72 h
Tensile strength	EN 12311-2 (A)	≥ 400 N/50mm
Elongation	EN 12311-2 (A)	≥ 20 %
Resistance to static load	EN 12730 (A/B)	≥ 20 kg
Resistance to impact	EN 12691 (A/B)	≥ 1,000 mm ≥ 2,000 mm
Tear resistance	EN 12310-2	≥ 150 N
Nail shank tear resistance	EN 12310-1	≥ 400 N
Joint peel resistance	EN 12316-2	≥ 180 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 (5,000 h)
Folding at low temperatures	EN 495-5	≤ -40 °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 (96 d)	passed
Durability of water tightness against chemicals	EN 1928 (B) (24h/60kPa) 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.

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-bs 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 the product.

Transport

The roofing membranes are usually transported on wooden pallets.

Legal Notice:

We refer emphatically to the fact, that all details mentioned, especially the application and utilization recommendation for the products and their system accessories, have been developed under normal conditions, and based on our knowledge and experience. Appropriate storage and usage of the products are assumed. A warranty or reliability of a finished project cannot be deduced because of varying materials, substrates and differing work conditions, neither by any indications nor from verbal statements, irrespective of any legal positions. For the possible accusation that FDT acted intentionally or grossly negligent, the user has to supply evidence that they provided FDT with all information and details necessary for an appropriate and correct evaluation through FDT in written form, immediately available and complete. The user is responsible for ensuring that the products are suitable for the given application. It is FDT's right to change product specifications without notice. Property rights of third parties are to be considered. In addition, our particular sales and delivery terms are valid. The latest version of our product data sheet is obligatory, which can be requested directly through FDT. All information as well as all technical and drawing data comply with current technical standards and are based on our experience. National standards and regulations must be observed.

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