

## Fatra Hot-applied Waterproofing Membrane System

### Product Description

The Fatra Hot-applied Waterproofing Membrane System comprises of a hot applied liquid membrane waterproofing compound, which is a specifically formulated combination of bitumen, synthetic rubbers, fillers and other additives, hot applied in conjunction with carefully selected reinforcement / detailing fabrics and protection layers to give the ultimate protection in waterproofing performance.

Used in conjunction with the FHM 906 anti-root capsheet, the Fatra Hot-applied Waterproofing Membrane System can also be used on extensive and intensive green roofs and biodiverse roof systems.

Installed by a nationwide network of registered installers, the Fatra Hot-applied Waterproofing Membrane System provides a fully bonded, tough, flexible, waterproof membrane for use on inverted, green, flat and protected roofs.

### Features and Benefits

- Hot applied system
- Suitable for completely flat (zero fall) decks
- BBA certified
- Outstanding durability: lasts the lifetime of the building
- Nominal thickness of 6mm
- Tough and resistant to impact damage
- Excellent low temperature flexibility
- High bond strength to substrate
- High tensile strength
- Homogenous and seamless
- Resistant to rain, snow and frost immediately after application
- Virtually no packaging to be disposed of (zero wrapper waste)

### System components

#### Primer

A bituminous primer for use on concrete and other similar substrates prior to the installation of the FHM Hot-applied Waterproofing Membrane System.

Code	Tin size	Consumption	Coverage
FHM 901 Primer	25 litres	6 to 8 litres per m <sup>2</sup>	150 to 200 m <sup>2</sup>

#### Hot-applied liquid membrane

A hot applied specially formulated combination of refined bitumen, synthetic rubbers, fillers and other additives.

Code	Block weight	Blocks per pallet	Pallet weight
FHM 902 Hot-applied liquid membrane	12 kg	80	960 kg

### Reinforcement fabric

A 55g/m<sup>2</sup> polyester reinforcement layer, installed between the two applications of FHM 902

Code	Roll weight	Roll width	Roll length
FHM 903 Reinforcement fabric	11 kg	1 m	200 m

### Sand-faced bitumen cap sheet

A sand-faced 180g/m<sup>2</sup> polyester based bitumen membrane, installed as a protection layer in the FHM Hot-applied Waterproofing Membrane System. (Suitable for inverted roof applications.)

Code	Unit weight	Roll weight	Roll width	Roll length
FHM 904 Sand-faced SBS bitumen cap sheet	1.95 kg/m <sup>2</sup>	39 kg	1 m	20 m

### Mineral-faced bitumen cap sheet

A mineral-faced 180g/m<sup>2</sup> polyester based bitumen membrane, installed as a protection layer in the FHM Hot-applied Waterproofing Membrane System. (Suitable for exposed roof applications.)

Code	Unit weight	Roll weight	Roll width	Roll length
FHM 905 Mineral-faced SBS bitumen cap sheet	5.0 kg/m <sup>2</sup>	40 kg	1 m	8 m

### Anti-root bitumen cap sheet

A 180g/m<sup>2</sup> polyester based bitumen membrane, installed as an anti-root protection layer in the FHM Hot-applied Waterproofing Membrane System. (Suitable for sedum roof applications.)

Code	Unit weight	Roll weight	Roll width	Roll length
FHM 906 Anti-root SBS bitumen cap sheet	5.0 kg/m <sup>2</sup>	50 kg	1 m	10 m

### Bitumen detailing strip

A nominal 1.25mm thick flexible bitumen EPDM polymer detailing sheet which is installed as a reinforcement layer over cracks, construction joints, changes in materials and where minor movement may occur.

Code	Roll weight	Roll width	Roll length
FHM 907 Bitumen detailing strip	4.8 kg	150 mm	20 m
FHM 908 Bitumen detailing strip	16 kg	500 mm	20 m

### Termination bar

A galvanised steel termination bar.

Code	Profile	Hole sizes	Length
FHM 909 Termination bar	30 mm wide, 1.2 mm thick, 4.5 mm leg height	6.5 mm / 15 mm	2.1 m

### FatraTherm EPS Insulation

An Expanded Polystyrene (EPS) insulation board. The material comprises expandable beads of polystyrene pre-foamed and fused together in a steam-heated mould under pressure. This produces a block of material, up to 7314mm long, which is then cut to size and / or shape.

Code	Size	Coverage	Thickness
<b>FHM 910</b> Fatratherm EPS Insulation	1 m x 1 m x thickness	1 m <sup>3</sup>	Cut to suit

### Rainwater management layer

A filter membrane designed to prevent rainwater ingress and reduce the rainwater cooling effect. FHM 911 Rainwater management layer should be loose laid, with 300mm overlaps, at right angles to the slope. Arrange laps to ensure rainwater runs down slope. At upstands and roof projections the membrane must be turned up to finish above the surface of the ballast and turned down at drainage outlets.

Code	Roll size	Coverage	Thickness
<b>FHM 911</b> Rainwater management layer	3 m x 100 m	300 m <sup>2</sup>	0.45 mm

## Application

The Fatra Hot-applied Waterproofing Membrane System must be installed in accordance with the Fatra installation Guidelines and Fatra specification by a Fatra approved installer on a dry and frost-free substrate.

After rain or snow, the substrate must be allowed to dry before installation can commence.

Prior to commencement, bond tests must be carried out to ensure that adequate adhesion can be achieved. If bonding problems occur, advice must be sought from Fatra UK Ltd.

Prior to application of the Fatra Hot-applied Waterproofing Membrane System, any defects in the substrate must be identified and repaired in accordance with Fatra's instructions.

## Installation Procedure

1. The surface is primed using FHM 901 Primer applied with a brush or roller at a rate of 6m<sup>2</sup> to 8m<sup>2</sup> per litre and allowed to dry. Typical curing time is 4 hours, depending on ambient temperatures. Allow the primer to cure naturally: do not use gas torches to cure the primer. Once cured, the normal use of a gas torch to dry moisture from the surface is acceptable. Apply FHM 901 Primer to all surfaces to receive FHM 902 waterproofing membrane, including all vertical upstands, columns and all penetrations through the deck. Minimum recommended upstand height is 150mm above the finished roof surface.
2. Heat FHM 902 blocks in an agitated melter, which must be fitted with a thermostat to regulate the compound temperature, at a temperature between 160°C and 180°C (do not exceed maximum safe working temperature of 190°C). Apply FHM 902 to the primed area and any pre-installed flashings to obtain a thickness of 3mm.

3. The molten membrane is discharged from the melter into a suitable container and applied to the surfaces using a long-handled squeegee for horizontal surfaces and suitable spreader for vertical surfaces.
4. At structural movement joints between 12mm and 50mm (maximum 50% total movement), a proprietary joint system must be installed. Fatra should be consulted for suitable products.
5. At non-monolithic changes in substrate materials, at structural / shrinkage cracks between 3mm and 6mm wide, at structural joints between 6mm and 12mm wide and where minor movement may occur, a reinforcement layer of FHM 907 bitumen detailing strip should be applied by embedding the FHM 907 detailing strip into a layer of FHM 902 prior to applying the Fatra Hot-applied Waterproofing Membrane System.
6. At all board joints in plywood, calcium silicate board and composite metal decks, a reinforcement layer of FHM 907 bitumen detailing strip should be applied, embedding the FHM 907 detailing strip into a layer of FHM 902 prior to applying the Fatra Hot-applied Waterproofing Membrane System.
7. Work consistently in one direction in strips approximately 1m wide. Pour the hot liquid in a line along the top / bottom edge of the strip. Applying little downward pressure and using a rubber edged, long handle squeegee, pull approximately two thirds of the liquid towards you. Continue the process along the strip. Returning to the beginning, push the remaining liquid working in one direction. Finally, return to the beginning for a third pass and pull all remaining liquid across the surface. Check the depth using a thickness gauge. Repeat for additional passes if required.
8. Apply FHM 903 Reinforcement Fabric and any required flashings while the membrane is still warm and tacky. Cut and trim off any wrinkles. Brush the fabric into the FHM 902 Hot-applied liquid membrane as it is rolled out. Overlap the reinforcing fabric onto the adjoining layer by a minimum of 75mm.
9. Apply a second coat of FHM 902 Hot-applied liquid membrane using the same procedure as described in section 7, or as required to achieve a thickness of 3mm. The total thickness of the Fatra Hot-applied Waterproofing Membrane System shall be 6mm.
10. Apply the appropriate protection layer into the last course of FHM 902 and splice the end and side laps together with FHM 902 Hot-applied liquid membrane. The choice of protection layer will depend on the intended use of the roof. (Refer to the System Components list on page 2.)
11. Upon completion of the Fatra Hot-applied Waterproofing Membrane System, the membrane must be electronically tested to ensure that the system is free from punctures or penetrations that may affect its watertight integrity.