



## POLYMAT® Base HM FBT140/200 (topside)

Polymeric Waterproofing membranes of PVC compound (homogenous)

Complies with EN 13967 and EN 13491.

Synthetic fully-bonded waterproof sheet membrane, laminated with non-woven fabric for waterproofing underground structures:

Car parks and garages, underground areas in general, swimming pools, basins and storage tanks, underpasses.

### POLYMAT Base HM FBT140/200: Description

**POLYMAT Base HM FBT140/200** may be applied underneath foundation slabs and against diaphragms, pile wall, sheet piling and other retaining structures for excavation work.

Thickness (mm)	1.00	1.20	1.50
Width (m)	2.10	2.10	2.10
Length (m)	25	20	20
Colour	RAL 9004 signal black – dark grey		

### POLYMAT Base HM FBT140/200: Applications

**POLYMAT Base HM FBT140/200** as a single-layer basement liner for below-foundation-slab waterproofing application where high tensile and tear strength, puncture resistance are required:

### POLYMAT Base HM FBT140/200: Advantages

- **POLYMAT Base HM FBT140/200** is made up of synthetic PVC membrane, laminated with non-woven polypropylene fabric which, once concrete has been poured, forms a monolithic bond with the concrete and remains perfectly bonded over time.
- **POLYMAT Base HM FBT140/200** is a waterproofing system that becomes fully bonded to poured concrete and prevents water from migrating laterally between foundation structure and the membrane.
- Completely watertight overlaps.
- **POLYMAT Base HM FBT140/200** is cold-applied and no heat and/or naked flames are required. It is positioned before placing the steel reinforcement and pouring the concrete.
- Easy to install: **POLYMAT Base HM FBT140/200** is extremely flexible and is easy to shape during installation so that it follows the form and geometry of the substrate.

### POLYMAT Base HM FBT140/200: Installation

Pour a poor concrete on the ground to create an even layer on which to apply the membrane. Place **POLYMAT Base HM FBT140/200** over the horizontal surface and run it up along the side walls to form a strip wider than the thickness of the foundation slab. Then waterproof the side walls by applying **POLYMAT Base HM FBT140/200**, starting from the top of the walls and working downwards until it joints with the upstand at the bottom of the walls, applied before pouring the foundation slab. Once the waterproofing system has been installed, check the overlaps and joints before pouring the concrete to make sure they are well bonded. Concrete must be poured over **POLYMAT Base HM FBT140/200** within 5 weeks of application.

### POLYMAT PVC Membrane Range

The following ranges of PVC-P system membranes (all range as customized sheets as well) are available:

- **POLYMAT Roof UV-R:** High UV resistant & fire-retardant membrane for exposed roofing system
- **POLYMAT Roof -R + HM:** System membrane for inverted & ballasted roofs, roof gardens
- **POLYMAT Base HM + -R:** WP membrane for Civil engineering & Building structures below ground, high performance Geo-membrane applications, homogenous and reinforced
- **POLYMAT TN (Tunnel):** Membrane for Tunnels and covered vaults (with yellow Signal layer)
- **POLYMAT Pool:** Classic Swimming Pool membranes and Pond Liners in various RAL colors
- **POLYMAT Pota:** Membrane certified for potable Water tanks, Reservoirs and Containers for var. liquids



## POLYMAT® Base HM FBT140/200:

### Specification & Properties (EN 13967 and EN 13491)

Technical Data		
Thickness/ Mas per unit area	1,00 (-5/+10%) mm / 1.30 kg/m <sup>2</sup> (-5/+10%) 1,20 (-5/+10%) mm / 1.58 kg/m <sup>2</sup> (-5/+10%) 1,50 (-5/+10%) mm / 1.96 kg/m <sup>2</sup> (-5/+10%)	EN 1849-2
Tensile strength	Machine: ≥ 14 (+/-2.0) N/mm <sup>2</sup> Cross: ≥ 14 (+/-2.0) N/mm <sup>2</sup>	ISO R 527 – 1/3/5
Elongation	Machine: ≥ 250 % (tolerance +/-10%) Cross: ≥ 250 % (tolerance +/-10%)	ISO R 527 – 1/3/5 ISO R 527 – 1/3/5
Straightness	≤ 75 mm / 10 m	EN 1848 – 2
Visible defects	Pass	EN 1850 – 2
Joint strength: 1,20 + 1,50 mm	≥ 880 N / 50mm	EN 12317 – 2
Retention of properties after heat aging Tensile strength (% of original) Elongation (% of original)	>90 >90	ASTM D4434
Resistance to tear (nail shank)	≥ 400 N (1.20 +1.50 mm)	EN 12310 – 1
Tear strength	Machine: ≥ 42 kN/m Cross: ≥ 42 kN/m	ISO 34 Method B; V=50 mm/min ISO 34 Method B; V=50 mm/min
Low temperature behaviour	≤ - 20°C	ASTM D 696-91
Change in weight after immersion in water %	<0.5	
Resistance to impact : 1.20 + 1.50 mm	≥ 450 mm	EN 12691 : 2005
Resistance to root penetration	Pass	EN 144 16:2002
Artificial aging	Pass	EN 1297:2002-12 (1000 h)
Elastic Modulus E <sub>1-2</sub> (N/mm <sup>2</sup> ) MD (N/mm <sup>2</sup> ) CD (N/mm <sup>2</sup> )	≤ 20 ≤ 20	ISO 527-1/3
Behaviour under Hydrostatic Pressure 5 bar/72 hr (10 bar/24 hr)	No Leaking	EN 1928 (DIN 16726-5.11)
Static puncture: 1.20 + 1.50 mm thickness	1.75 (± 0.25) kN	EN ISO 12236
Burst strength	≥ 50 %	EN 14151 D=1,0 m
Thermal expansion	190x10 <sup>-6</sup> (±50x10 <sup>-6</sup> ) 1/K	EN 14151 D=1,0 m
Chemical resistance	A (hydrolyses under acid conditions): Change in elongation: ≤ 10 % B (hydrolyses under alkaline conditions): Change in elongation: ≤ 10 % D (artificial disposal water): Change in elongation: ≤ 10 %	EN 14414: 2004-08; ISO 527-3/5 EN 14414: 2004-08; ISO 527-3/5 EN 14414: 2004-08; ISO 527-3/5
Water tightness to liquid water	Pass	EN 1928 B (24h / 60kPa)
Durability of water tightness against ageing	Pass	EN1296(12 weeks) EN 1928 B (24h / 60kPa)
Durability of water tightness against chemicals	Pass	EN 1847 (28d/+23°C) EN 1928 B (24h / 60kPa)
Accelerated ageing in an alkaline environment, tensile strength	Pass	( 24 weeks / +90°C) EN 12311 – 2
Water vapour transmission	18 000 μ ( + / - 5000)	EN 1931 (+ 23°C / 75% r. h)
Reaction to fire	Class E	EN ISO 11925-2

### Storing

Bitumat Co. Ltd.  
P.O. Box 7487, 65th Street, Second Industrial City  
Dammam-31462, Tel: +966 13 8121210



**POLYMAT Base HM FBT140/200** membranes are recommended to be stored out of direct sunlight and on pallets.

### Quality assurance

The products originating from **BITUMAT COMPANY LIMITED** facility are manufactured under a management system independently certified to conform to the requirements of **ISO 9001:2015**, specified to EN 13956.

### Safety

**BITUMAT** products are compliant to the European REACH regulations, contain no heavy metals, lead stabilizers and DOP plasticizers as well as asbestos, tar or any other dangerous substances. When adhering to **BITUMAT** installation manuals, **POLYMAT Base HM FBT140/200** membranes do not damage the environment are not classified as hazardous goods for all transports.

### Note

Advisory service, where provided, does not constitute supervisory responsibility.

For additional information contact the **BITUMAT COMPANY LIMITED** Sales & Application Department.