POLYMAT® Roof UV-R

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ASTM D4434

Polymeric Waterproofing membranes of PVC-P compound
High UV-resistant & fire retardant polymeric PVC waterproofing membrane with a PVC-coated Polyester scrim reinforced, complies with ASTM D 4434 & the European harmonized Standard EN-DIN 13956 (flexible sheets for waterproofing).

POLYMAT Roof UV-R Description

POLYMAT Roof UV-R is a polymeric membrane made from a long-term proven PVC-P compound in a most modern Co-Extrusion process, reinforced by a 110g/sqm PY scrim for absorbing high tensile strengths and enduring dimensional stability.

Thickness (mm)	1.20	1.50	2.00
Width (m)	2.10	2.10	2.10
Length (m)	25	20	20
Colour (*)	Top: Traffic white RAL 9016, Bottom: stone grey		

(*) Other top side colours available on demand. **(**)** other thicknesses on demand (e.g. 1.60 – 2.20 mm)

POLYMAT Roof UV-R Applications

POLYMAT Roof UV-R as a single-ply membrane for:

- Exposed roofing systems (i.e. mechanically fastened industrial roofs)
- Ballasted roofing systems and Roof Gardens (Green Roofs)
- Single-ply refurbishment on roofs with existing bituminous waterproofing, using a separation layer of 300 g/m² polypropylene fleece or **POLYMAT Roof UV-R FB 300** (fleece back on bottom side, 300 g/m² non-woven) as a fully on bonded membrane in architectonic roof designs.
- For ease of detail works (i.e. flashings, joints) use high UV resistant & fire retardant **POLYMAT Roof UV-HM** (homogenous)

POLYMAT Roof -R Advantages

- High mechanical & thermal resistance
- Resistance to UV rays & Weathering
- High resistance to puncturing
- Resistant to root penetration
- Fulfils European Fire protection standards Broof (t1)=hard roof on XPS/EPS with 120 g/m² separation layer (and on mineral wool boards)
- High resistance to hot-cold temperature cycles
- Various RAL colors available on demand to aid architectural designs
- High aging resistance, well proven formula, developed for 40 years
- Fast application: Roll Lengths of 20-25 m1 and 2,10 – 2.15 m1 widths, up to 60 m1 on demand
- Specific thicknesses: on demand
- Full range of complimentary accessories available
- Customized sheet sizes of up to 1000 m² available for any project

POLYMAT Roof UV-R Installation

POLYMAT Roof UV-R membranes are seam welded with hot air automatic and hand-held machines by trained applicators. For detail solutions and the best application methods for all designs, consult the application technicians of **BITUMAT** or **BITUMAT** distributors for field assistance.
BITUMAT provides system membranes for all waterproofing requirements, to guarantee the best and most proven solution for all constructions, buildings and civil engineering projects.
The following ranges of PVC-P system membranes (all range as customized sheets as well) are available:

- **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 Signal layer)
- **POLYMAT Pool:** Classic Swimming Pool membranes and Pond Liners in **sky-blue** and various RAL colors
- **POLYMAT Pota:** Membrane certified for potable Water tanks, Reservoirs and Containers for var. liquids

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BITUMAT

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Specification & Properties

ASTM D4434

Technical Properties	ASTM Test Method	ASTM Standard Minimum Value	POLYMAT UV-R 12	POLYMAT UV-R 15	POLYMAT UV-R 20
Overall thickness of PVC sheet	ASTM D 751 Type III	1.20, 1.50, 1.80, 2.0 mm (±10%)	1.20 mm (±3%)	1.50 mm (±3%)	2.0 mm (±3%)
Thickness over scrim	ASTM D4434 Type III Optical ASTM D 7635	1.2, 1.5 – mm (in) 0.406 (0.016) ± 10%	mm 0.600 ± 3%	mm 0.600 ±3%	mm 0.600 ±3%
		1.8, 2.0 – mm (in) 0.635 (0.025) ± 10%			
Mass per Unit Area		(kg/m2)	1.58kg/m2	1.98kg/m2	2.64kg/m2
Tensile Strength at break	ASTM D 638 Type II, Grade 1	min, Mpa (psi)		EN 1848 – 2	EN 1848 – 2
Machine Direction		MD 10.3 (1500)	13 (1875)	13 (1875)	13 (1875)
Cross-Machine Direction		CD 10.4 (1500)	13 (1875)	13 (1875)	13 (1875)
Breaking Strength	ASTM D 751 Type III, Procedure A	min. (MD x CD) KN/m (lbf/in.) 35 (200)	39 x 37 (223 x 211)	39 x 37 (223 x 211)	40 x 38 (228 x 217)
Elongation at Break	ASTM D 751 Type II, Procedure B-1	min. %			
Machine Direction		MD 250	270	270	270
Cross-Machine Direction		CD 220	250	250	250
Machine Direction	ASTM D 751 Type III, Procedure A	MD 15%	≥16	≥16	≥16
Cross-Machine Direction		CD 15%	≥16	≥16	≥16
Seam Strength	ASTM D 751 A-Grab Method Type III, min, % of tensile or breaking strength	min, %>75	≫85	≫85	≫85
Retention of properties after heat aging	ASTM D 3045 Type III @ 80 ± 1˚C (176 ± 2˚F) for 56 days ± 1h.	min. %			
Breaking Strength, min, % of original		90	>90	>90	>90
Elongation, min, % of original		90	>90	>90	>90
Tear resistance	ASTM D 1004 Type II,	N (lbf) 45 (10.0)	>90 (20.0)	>90 (20.0)	>90 (20.0)
Tearing strength	ASTM D 751 Type III B-Tongue Tear Method 8”x8” sample				
Machine Direction		min, N (lbf) 200 (45)	220 (49.5)	220 (49.5)	220 (49.5)
Cross-Machine Direction		min, N (lbf) 200 (45)	220 (49.5)	220 (49.5)	220 (49.5)
Resistance to UV radiation + artificial weathering	ASTM 4434-15 G 154 & G 155	5000 hrs	No visible deterioration @ 7 x magnification	No visible deterioration @ 7 x magnification	No visible deterioration @ 7 x magnification
Linear Dimensional Change	ASTM D 1204 Type III 6h at 80 ± 1˚C (176 ± 2˚F)	0.5 max%	0.4%	0.4%	0.4%
	ASTM D 1204 Type II 6h at 80 ± 1˚C (176 ± 2˚F)	0.1 max%	<0.05%	<0.05%	<0.05%
Change in Weight after immersion in water	ASTM D 570 except for 168 ± 1h at 70 ± 1˚C (158 ± 2˚F)	±3.0 max%	<1.00%	<1.00%	<1.00%
Static Puncture Resistance	ASTM D 5602 lbf min at 23 ± 1˚C (73 ± 2˚F)	33lbf min at 23 ± 1˚C (73 ± 2˚F)	Pass	Pass	Pass
Dynamic Puncture Resistance	ASTM 5635 Type II, III, IV at energy of 20 J	20 J min at 23 ± 1˚C (73 ± 2˚F)	Pass	Pass	Pass
Fire Class	ASTM E108-2010 UL94-2006	ASTM E108	Pass, Class B	Pass, Class B	Pass, Class B
Cold Flexibility	ASTM D 2136	No cracks at -30˚C	No cracks at -30˚C	No cracks at -30˚C	No cracks at -30˚C

POLYMAT® Roof UV-R

Storing

POLYMAT membranes are recommended to be stored out of direct sunlight and on pallets.

Quality Assurance

The products originating from the **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 contain no asbestos, tar or any other dangerous substances. When adhering to **BITUMAT** installations manuals, **POLYMAT** 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.








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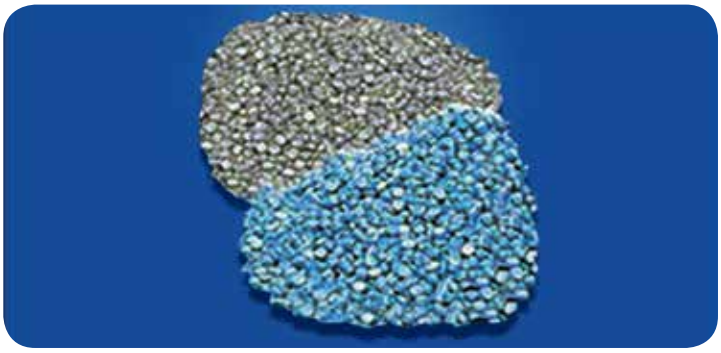
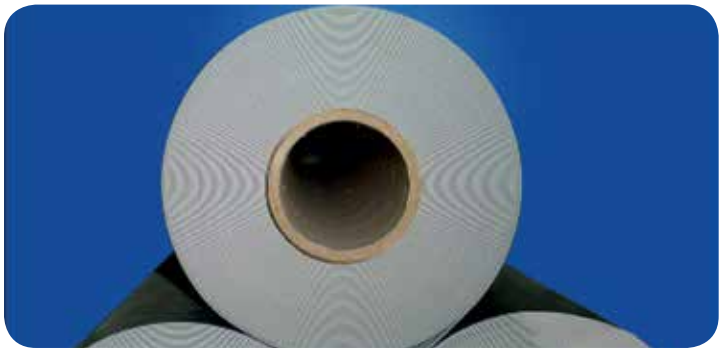


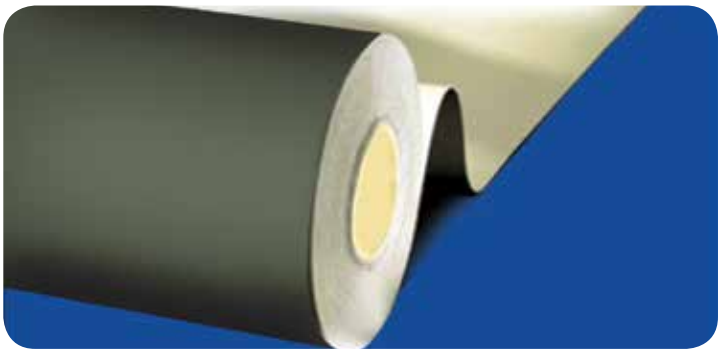


Roofing (Low slope - Flat roofs) MS1

- MS 1.1. Exposed roofs
- MS 1.2. Inverted roofs
- MS 1.3. Reflective roofs
- MS 1.4. Solar roofs
- MS 1.5. Vegetated roofs (Green roofs)
- MS 1.6. Roof refurbishments

Waterproofing (Subsoil, Covered) MS2

- MS 2.1. Basements, Civil Engineering Structures below ground, Motorway Underpasses, etc.
- MS 2.2. Tunnels and Vaults
- MS 2.3. Water-tanks



Geo-Membranes (Water-world & Landscaping) MS3

- MS 3.1. Containment & irrigation ponds
- MS 3.2. Artificial Lakes & Lagoons; Aquaculture ponds
- MS 3.3. Dam protection liners
- MS 3.4. Canals, Waterways
- MS 3.5. Specialty Containment Applications
- MS 3.6. Oil field & Mining leach reserve pads & storage pits
- MS 3.7. Landfills & Ground water protective linings
- MS 3.8. Gulf course ponds
- MS 3.9. Swimming pools

Special applications (New developments, R & D) MS4

- MS 4.1. Solar PV integrated Roofs
- MS 4.2. Nanotechnologies for enhancing polymer properties (R&D)
- MS 4.3. Geo-engineering developments
- MS 4.4. Compounded membranes

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