

POLYFLAME

APP Modified Waterproofing Membrane

DESCRIPTION

BITUMAT POLYFLAME is a superior, high performance, prefabricated, modified bitumen membrane consisting of proprietary waterproofing compound, reinforced with spun bonded non-woven polyester mat.

The BITUMAT proprietary waterproofing compound is formulated with select bitumen modified with Atactic Polypropylene (APP) for greater elasticity, flexibility, and further enhanced with a blend of Thermoplastic Polymer (TP) and Elastoplastic Copolymer (EPC) for high heat resistance, greater elongation and low temperature flexibility. The compound is then stabilized with opaque Mineral Stabilizers (MS) for impact resistance, UV resistance and durability.

The superior waterproofing compound is reinforced with a robust, isotropic, spunbonded, non-woven polyester mat for increased strength, toughness and dimensional stability.

The proprietary compound, the unique reinforcement, combined with the famous BITUMAT process technology and rigid quality assurance procedures, yield the most reliable and dependable waterproofing membrane.

USES

BITUMAT POLYFLAME is a universal, all purpose membrane, excellent in a single layer or multi layer roofing systems, underground waterproofing, multi-story car parks, pond lining, irrigation canals lining, swimming pools or any structure that requires high performance waterproofing.

OUTSTANDING FEATURES

- Total impermeability for total waterproofing.
- Excellent resistance to aging and weathering.
- Outstanding bondability and seam integrity.
- Flexibility at low temperature.
- Stability at high temperature.
- Very high resistance to impact & puncture.
- Application friendly (labour cost savings)
- Variety of finishes for exposed and covered applications.
- High tensile strength and tear resistance.
- Excellent for mechanical anchorage.
- Isotropic properties.

GENERAL DATA

Nominal Roll length : 10 M
Nominal Roll width : 1 M
Nominal Thickness : 3, 4, 5, MM

Reinforcement

Robust, isotropic, spunbonded non-woven polyester core, 200/180 gms/m² depending on thickness. Other weights available on request.

FINISHES

BITUMAT POLYFLAME is available in three basic finishes:

- Black smooth finish with polyethylene surfaces for covered applications.
- Granule surfacing for exposed applications.
- Fine sanded upper surface for coated systems.

QUALITY CONTROL

In addition to stringent regular tests by BITUMAT laboratory, our products are tested periodically by Independent Laboratories.

STANDARDS

BITUMAT POLYFLAME complies with the performance requirements and tolerance levels of the listed standards. Some of which modified to better suit the various climatic conditions around the world.

1. American Society for Testing and Materials, ASTM-D-6222 Type II.
2. European Union of Technical Agreement (UEAtc)
3. Canadian General Standard Board (CGSB 37-GP 56M - July 1980).
4. German Standard DIN 52133.

INSTALLATION TOOLS REQUIRED:

Gas torch, Knife, Trowel, Measuring tape, Marking string, Gloves.

APPLICATION

BITUMAT POLYFLAME is installed by torch welding method, loose-laid or fully bonded to substrate. When loose-laid, only overlaps are bonded together. Peripheres, protrusions and other flashing details are installed according to specifications.

COVERAGE RATE (Approx.)

(Rate may vary as per site requirement)

Flat areas : 1.15 M²/M² per layer with 10 cms. side laps and 15 cms. end laps.

Base flashing : 100x35 cms. with 15 cm. end laps, 0.40 M²/ linear Mtr.

Average wastage : 3 - 5 %

TORCHING GUIDELINES

The underside of the membrane should be torched just enough to superficially melt the bitumen. Excessive heating may damage the reinforcement. Overlaps should be re-heated from the top and resealed with a trowel to ensure seam integrity.

For details of installation methods and flashing requirements, consult the relevant *BITUMAT Systems Design and Installation Manual*.

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TECHNICAL DATA

MBM01	MAY04	R-00	00
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	Property	Typical Value	Test Method
1.	Softening point, °C	155	ASTM-D-36
2.	Penetration, @ 25 °C, dmm	20	ASTM-D-5
3.	Low temperature flexibility, °C	-6 to -10	ASTM-D-5147
4.	Heat resistance, compound stability @ 120 °C for 2 hours & 15 minutes	No flow - Pass	ASTM-D-5147
5.	Tensile strength, N/5 cm @ 23+2 °C Longitudinal Transverse	950 (19 KN/m) 800 (16 KN/m)	ASTM-D-5147
6.	Tensile strength, N/5 cm @ -18+2 °C Longitudinal Transverse	1200 (24 KN/m) 950 (19 KN/m)	ASTM-D-5147
7.	Elongation, % @ 23 + 2°C Longitudinal Transverse	45 50	ASTM-D-5147
8.	Elongation, % @ -18 + 2°C Longitudinal Transverse	24 26	ASTM-D-5147
9.	Load strain product, @ 23 + 2°C Longitudinal Transverse	42,750 40,000	CGSB-37-GP-56M
10.	Load strain product, @ -18 + 2°C Longitudinal Transverse	28,000 24,700	CGSB-37-GP-56M
11.	Lap joint strength, N/5 cm Longitudinal Transverse	Same as membrane	CGSB-37-GP-56M UEAtc
12.	Tear resistance, N Longitudinal Transverse	600 400	ASTM-D-5147
13.	Tear strength, N Longitudinal Transverse	190 210	UEAtc
14.	Puncture Resistance, N Static indentation Dynamic indentation	1155 L ₄ I ₄	ASTM-E-154. UEAtc 5.1.9. UEAtc 5.1.10
15.	Water Absorption, %Wt @ 23 °C 24 hrs.	<1	ASTM-D-5147
16.	Water Vapour Transmission, g/m ² /24 hrs.	<0.5	ASTM E 96 procedure E 37.8 °C at 90% RH
17.	Dimensional Stability, % Longitudinal Transverse	+ 0.5 - 0.5	ASTM-D-5147
18.	Resistance to Leakage at joints	Pass	UEAtc
19.	Resistance to aging & U.V. (Weather-O-Meter, 2000 hrs)	No change greater than 20% of the original values	ASTM G53 UNI 8202

The information given in this Technical Data Sheet reflects typical median properties based on laboratory test, and practical experience; subject to the tolerance levels of UEAtc directives. However, as the product is often used under conditions beyond our control, we can't warrant but the product itself.
THIS PUBLICATION AUTOMATICALLY SUPERSEDES ALL PREVIOUS PUBLICATIONS RELATING TO THIS PRODUCT.