



BITUMAT

WATERPROOFING



GLASFLAME

APP Modified Membranes With
Nonwoven Glassfibre Reinforcement

INTRODUCTION

BITUMAT GLASFLAME is a superior, high performance prefabricated modified bitumen membrane consisting of proprietary waterproofing compound, reinforced with nonwoven glasfibre mat.

The BITUMAT proprietary waterproofing compound is formulated with select bitumen modified with Attactic 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 strong, dimensionally stable, rotproof & spunbonded glass fiber which is further reinforced with continuous strands of glass threads for increased strength. 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 available.

USES

GLASFLAME is a universal, all purpose membrane excellent in a single layer or multi layer roofing systems, underground waterproofing, multi-story car parks, water pond lining, irrigation canals lining, swimming pools or any structure that requires high performance waterproofing. It is most suited as the first layer in a multi-layer system.

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
- Application friendly (labour cost savings)
- Variety of finishes for exposed and covered applications
- Dimensional stability
- Rot-proof
- Inert base layer for multi-layer specifications
- Aluminium foil finish ideal for exposed flashings.

GENERAL DATA

- Roll length 10 mtrs.
- Roll Width 1 mtr.
- Thickness 3, 4, 5 mm
- Reinforcement 50 gm/m² glassfibre mat
Other weights on request

FINISHES

Glasflame is available in four basic finishes:

1. Black smooth finish with polyethylene surface for covered application.
2. Coloured granule surfacing for exposed application.
3. Embossed aluminium foil surfacing for exposed applications.
4. Black fine sanded upper surface for coated applications.

QUALITY CONTROL

In addition to stringent regular tests by BITUMAT Laboratory, our products are tested periodically by independent laboratories.

STANDARDS

GLASFLAME complies with the requirements and tolerance levels of UEATc (European Union of Technical Agreement) MOAT 27 - 1983 and MOAT 30 - 1984 and CGSB (Canadian General Standards Board) 37-GP-56M-July 1980.

INSTALLATION TOOLS REQUIRED

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

APPLICATION

GLASFLAME is installed by torch welding method, loose-laid or fully bonded to substrate. When loose-laid, only laps are bonded together. Peripheries and protrusions are sealed according to specifications.

COVERAGE RATE

For flat areas	1.13 m ² /m ² per layer
For 30 cm girth flashing	0.35 m ² /mtr length
Average wastage	3 - 5%

GENERAL GUIDELINES FOR TORCHING

The underside of the membrane should be torched just enough to superficially melt the bitumen. Excessive heating may damage the reinforcement. Overlaps should be reheated from the top and resealed with a trowel to ensure seam integrity. For details of installation methods and flashing requirements, consult the relevant *Bitumat Design and Installation Manual*.

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TECHNICAL DATA

Property	Result	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 for 2 hours and 15 minutes	No flow @120°C	ASTM D-5147
5. Tensile Strength, N/5cm @ 23°C		
Longitudinal	350 (7 KN/m)	ASTM D-5147
Transverse	300 (6 KN/m)	
6. Tensile Strength, N/5cm @ -18°C		
Longitudinal	425 (8.5 KN/m)	ASTM D-5147
Transverse	350 (7 KN/m)	
7. Elongation, % @ 23°C		
Longitudinal	3.5	ASTM D-5147
Transverse	3.5	
8. Elongation, % @ -18°C		
Longitudinal	1.5	ASTM D-5147
Transverse	1.5	
9. Load Strain Product @ 23°C		
Longitudinal	1,225	CGSB-37-GP-56M
Transverse	1,050	
10. Load Strain Product @ -18°C		
Longitudinal	637	CGSB-37-GP-56M
Transverse	525	
11. Lap Joint Strength, N/5 cm		
Longitudinal	400	CGSB-37-GP-56M UEAtc
Transverse	350	
12. Tear Resistance, N		
Longitudinal	300	ASTM D-5147
Transverse	200	
13. Puncture Resistance, N		
Static indentation	L ₂	UEAtc 5.1.9
Dynamic indentation	I ₂	UEAtc 5.4.1
14. Water Absorption, % Wt. @ 23°C 24 hrs.	< 1	ASTM D-5147
15. Water Vapour Transmission, g/m ² /24 hrs	< 0.5	ASTM E 96, Procedure E. 37.8°C at 90% RH.
16. Dimensional stability, %		
Longitudinal	- 0.1	ASTM D-5147
Transverse	+ 0.1	
17. Resistance to leakage at joints	Pass	UEAtc
18. Resistance to aging & U.V. (Weather-O-Meter, 2000 hrs.)	No change greater than 20% of the original values	ASTM D 4799-97 according to G53 Practice Procedure 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., wherever applicable. However, as the product is often used under conditions beyond our control, we can't warrant but the product itself.

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