



BITUMAT
بيتومات

The Power to Perform

تقوية في الأداء



NRCA MEMBER



ISO CERTIFIED

POLYFLAME

Garden (I-II) APP Root Resistant Waterproofing Membrane

INTRODUCTION

BITUMAT APP root resistant waterproofing reinforced membranes are produced from a blend of special polypropylene thermoplastic polymers, distilled bitumen and selected additives. This combination gives the proven waterproofing qualities of bitumen combined plasticity, excellent resistance to heat aging protect against root penetration, weathering and ease of application by torch welding.

BITUMAT Saudi-made membranes offer total impermeability to water, outstanding bondability and seam integrity, easy repair and maintenance and the possibility of a wide range of decorative finishes for exposed applications.

DESCRIPTION

POLYFLAME GARDEN is a range of modified bitumen membranes with a reinforcement of 180-200 gsm nonwoven, polyester which provides suppleness and flexibility to compliment the plastomeric qualities of the bitumen blend at both high and low temperatures. The polyester fabric is rot proof and extremely robust with certain isotropic qualities. Other weights of polyester are available on request.

USES

POLYFLAME GARDEN is a special membrane, excellent for roofing systems, flower boxes or wherever anti root penetration properties are required. When surfaced with factory applied coloured slate granules, POLYFLAME GARDEN is ideal as an exposed top layer.

OUTSTANDING FEATURES

- Root penetration resistance
- Good elongation and recovery
- High tensile strength and tear resistance
- Very good puncture resistance
- Excellent for mechanical anchorage
- Rot-proof

GENERAL DATA

Roll length	:	10 mt.
Roll width	:	1 mt.
Thickness	:	3, 4, 5 mm
Reinforcement	:	200 gsm nonwoven polyester fabric.
		Other weights available on request.

FINISHES

Polyflame Garden I - 3 mm black finish
Polyflame Garden II - 4 mm granule finish

QUALITY CONTROL

In addition to stringent regular tests by BITUMAT laboratory, periodic visits and Quality Control tests are performed by :
SOCOTEC, Paris, France
MASENCO, Hurst, Texas, U.S.A.

STANDARDS

POLYFLAME GARDEN 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

POLYFLAME GARDEN 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 /mt.. 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

MBM18 50-E R-01 80-J

	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	950 L ₄ I ₄	ASTM E 154 UEAtc 5.1.9. UEAtc 5.4.1.
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 & Ultra Violet (U.V.) (Weather-O-meter, 2000 hrs)	No change greater than 20% of the original values	ASTM D 4799 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 ASTM / DIN / 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.

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