

DOUBLE-TECH

APP modified membrane with double reinforcement for waterproofing & vapour barrier

INTRODUCTION

BITUMAT APP (atactic polypropylene) modified bitumen reinforced membranes are produced from a blend of special polypropylene thermoplastic polymers and distilled bitumen. This combination gives the proven waterproofing qualities of bitumen combined with plasticity, excellent resistance to heat aging and 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 application.

DESCRIPTION

DOUBLE-TECH is a range of modified bitumen membranes which incorporates a special double reinforcement of 180 gsm nonwoven, spun bond polyester fabric and a 50 gsm glassfibre matt. This multi-layer construction is positioned within the mass of the modified (APP) bitumen coating.

The finished product is a general purpose high performance waterproofing membrane and vapour barrier with added qualities of dimensional stability and robustness.

USES

DOUBLE-TECH with its unique combination of properties is ideal for use in heavy duty applications such as bridge & roof waterproofing, tunnels, tanking, vapour barrier etc. In fact, anywhere above and below ground where toughness, impact resistance and dimensional stability are required. It is an excellent vapour barrier.

OUTSTANDING FEATURES

- Dimensional stability
- Puncture resistance
- Robustness
- Increased resistance to hydrostatic pressure.

GENERAL DATA

Roll length : 10 mt.
Roll width : 1mt.
Thickness : 4,5 mm
Reinforcement : 160 or 180 gsm
nonwoven polyester fabric plus 50 gsm glassfibre matt.

FINISHES

DOUBLE-TECH is available in two basic finishes :

1. Black finish with sand surfacing for covered application. Thickness 4 or 5mm.
2. Coloured granule surfacing for exposed application. Granule finish DOUBLE TECH is available in various colours such as white, grey, red, green and mixed colours. Thickness 4 or 5 mm.

QUALITY CONTROL

In addition to stringent regular test by BITUMAT laboratory, periodic visits and Quality Control test are performed by:

Bureau Veritas, Paris, France

MASENCO, Hurst, Texas, U.S.A.

STANDARDS

DOUBLE-TECH 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.

ASTM D 6223 Type 1.

INSTALLATION

TOOLS REQUIRED

Gas torch, Knife, Trowel, Measuring Tape, Marking String, Gloves.

APPLICATION

DOUBLE-TECH 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 (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 M

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 Systems Design and Installation Manual*.

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TECHNICAL DATA

SI No	Property	Typical Value	Method
1.	Softening Point, °C	155	ASTM D 36
2.	Penetration, @ 25°C, dmm	20	ASTM D 5
3.	Low temperature flexibility °C	-2 to -5	ASTM D 5147
4.	Tensile strength, N/5cm @ 23+2°C <ul style="list-style-type: none">• Longitudinal• Transverse	800 600	ASTM D 5147
5.	Elongation, % @ 23+2°C <ul style="list-style-type: none">• Longitudinal• Transverse	40 45	ASTM D 5147
6.	Tear resistance, N <ul style="list-style-type: none">• Longitudinal• Transverse	600 450	ASTM D 5147
7.	Puncture resistance, N Static indentation (at 25 kg) Dynamic indentation	1100 L4 I4	ASTM E 154
8.	Lap joint strength, N/5cm <ul style="list-style-type: none">• Longitudinal• Transverse	860 600	CGSB-37-GP56M, UEAtc
9.	Water vapour transmission, gm/m ² /24hr. Permeance, perms	0.28 0.01	ASTM E96 Procedure E 37.8°C at 90% RH
10.	Resistance to aging & U.V. (Weather-O-Meter, 2000 Hrs) (Equals 10 yrs of exposure to the elements)	Pass	ASTM G53; UNI 8202
11.	Water absorption	<1.0	ASTM D 5147
12.	Heat resistance 105°C for 2 hours and 15 minutes	No flow pass	ASTM D 5147

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.

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