



# TPY

## APP Modified Bitumen Membrane

### Description:

TPY LAMA waterproofing membrane 4 or 5 mm thick, is most suitable for use in TROPICAL areas.

TPY membranes are manufactured from bitumen, modified with atactic polypropylene (APP). The compound is a mixture of distilled bitumen, thermoplastic polymers (TP) and elastoplastic copolymer (EPC) which gives the membrane excellent durability and flexibility at low temperature  $-12^{\circ}\text{C}$ , and ability to withstand high temperatures.

The reinforcement is 200 g/  $\text{m}^2$  non-woven polyester fabric to give about 40-45% elongation and to provide the membrane with the required resistance to heat aging, puncture, and rotting.

TPY is manufactured with a polyethylene film on the lower face to prevent sticking in the roll and which melts quickly when subjected to heat during installation, and gives a visual sign of the correct melting temperature of membrane. The upper face is covered with fine sand, granule or colored slates when membrane is used as exposed top layer.

### Advantages:

- Single-ply waterproofing layer.
- Fast, easy and clean application.
- Can be applied to repair existing asphalt roofing systems.
- Highly resistant to weathering.
- Resistant to salt solutions, dilute acids and alkalies.
- Resistant to U. V.

### Application:

- Lay down the rolls so that the lower face with polyethylene film is bonded to the substrate.
- To fix the sheet to the substrate, use a propane gas burner to melt off the polyethylene film and a thin layer of bitumen while unrolling and laying the membrane.
- Seams at overlaps should be properly secured and smoothed on with a hot round-tipped trowel.
- Side lap is 100mm and end lap is 150 mm.
- TPY membrane may be loosely laid, partially or fully bonded, depending on the structure and the specifications.

### Field of Application:

Due to its excellent resistance and elongation, TPY is used for a wide range of waterproofing applications such as:

- Roofs (reinforced concrete, prefabricated concrete, metal and timber deck).
- Roof gardens, terraces, kitchens, bathrooms, etc.
- Underground foundations, basements, and retaining walls.
- Reservoirs, basins and canals.



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## Technical Specifications

Property	Result	Test Method
Dimension, m/roll	1x10	
Thickness, mm	4 or 5	ASTM D5147
Weight per roll, Kg	40, 50 or 62	UEAtc MOAT 30
Reinforcement	Nonwoven Polyester 200 g/m <sup>2</sup> .	BS 747
Penetration of coating mixture at 25°C, dmm	20 ± 10	ASTM D5
Softening point of coating mixture, °C	150 ± 10	ASTM D36
Heat Resistance	No flowing after 2 hours at 120 °C.	UEAtc MOAT 30
Cold Pliability	No cracking at -12 °C	UEAtc MOAT 27
Tensile Strength, N/5cm. Long. Transv.	850 650	ASTM D5147 & D146
Ultimate Elongation, % Long. Transv.	40 45	ASTM D146
Tear Strength, N. Long. Transv.	360 280	ASTM D4073
Water Absorption, %.	<1	ASTM D5147
Static Indentation Resist.	Not perforated at 25 kg. (Class L4).	BS 747
Water Pressure Resistance	No leakage at 1000 mm water head/24 hrs.	UEAtc MOAT 27
Water Vapor Transmission	0.2 g/m <sup>2</sup> per day	ASTM E96
Resistance to U.V.	No Deterioration.	ASTM G53
Resistance to Chemicals	Resistant to alcohol, salt solutions, dilute acids and alkalis.	

- Acceptable deviation according to UEAtc. , ASTM D6164 or ASTM D6222
- This Technical Data is the average results of tests, measurements and trials carried out by LAMA's own laboratory and RSS laboratories according to international standards such as ASTM, B.S and UEAtc.
- This product data sheet supersedes all previous data publications pertaining to this product.
- This data may be changed, improved or modified by LAMA, in accordance with the Client's requirements, availability of raw material, without advance notice.

