

UB 11

1. SYSTEM GENERAL DESCRIPTION

DOUBLE LAYER MBM WATERPROOFING REVERSED TANKING SYSTEM, FOR SITES WITH LIMITED SPACE AT BOUNDARIES.

Using Torch Applied high performance (SBS) Polymer Modified Bitumen Membrane, reinforced with a synthetic carrier of Non-woven Polyester.

2. SYSTEM COMPONENTS

2.1 BLINDING CONCRETE

Blinding concrete layer shall be poured on compacted soil to receive horizontal waterproofing membrane system.

2.2 NON-STRUCTURAL WALL

Permanent brick wall at the basement perimeter, to receive the vertical waterproofing membrane system, stable and rendered.

2.3 PRIMER (OPTIONAL)

According to surface conditions, a layer of priming coat shall be required. Primer shall be applied in one coat.

Coverage rate: 200-300 gm / m²

REF.: PRIMANIL, as manufactured by BITUNIL or equivalent.

2.3 MBM HORIZONTAL AND VERTICAL WATERPROOFING SYSTEM

1-BASE LAYER:

This waterproofing layer shall be of SBS modified bitumen membrane reinforced with non-woven polyester reinforcement, and have the following properties: -

Type of Test	Test Method	Unit	PROPERTIES	
			Longitudinal	Transverse
Cold Flexibility	EN-1109	° C	-10 to -5	
Tensile Strength	EN-12311-1	N/5cm	600	400
Elongation @ Break	EN-12311-1	%	35	40
Tearing Strength	EN-12310-1	N	150	150
Dimensional Stability	EN-1107-1	%	±0.5	±0.5
Water Absorption	ASTMD-5147	%	<1	
Vapour Permeability	EN 1931	μ	60,000	
Flow resistance at elevated temperature	EN-1110	° C	110	
Water tightness	EN-1928	60 KPA	PASSED	
Thickness / weight	-	MM.	4	

Ref. "NiloFlex 5 PP" as manufactured by "BITUNIL" or equivalent

2-MAIN LAYER:

This waterproofing layer shall be of SBS modified bitumen membrane reinforced with non-woven polyester reinforcement, and have the following properties: -

Type of Test	Test Method	Unit	PROPERTIES	
			Longitudinal	Transverse
Cold Flexibility	EN-1109	° C	-15 to -10	
Tensile Strength	EN-12311-1	N/5cm	900	600
Elongation @ Break	EN-12311-1	%	40	40

Tearing Strength	EN-12310-1	N	225	225
Dimensional Stability	EN-1107-1	%	±0.5	±0.5
Water Absorption	ASTMD-5147	%	<1	
Vapour Permeability	EN 1931	μ	60,000	
Flow resistance at elevated temperature	EN-1110	°C	120	
Water tightness	EN-1928	60 KPA	PASSED	
Thickness / weight	-	MM.	4	

Ref. "NiloFlex 10 PX" as manufactured by "BITUNIL" or equivalent

NOTES:

- **MBM APPLICATION SHALL BE EXECUTED IN DRY CONDITIONS.**
- **HORIZONTAL BASE LAYER CAN BE LOOSE LAID, SEMI-BONDED, OR FULLY BONDED.**
- **VERTICAL BASE LAYER IS RECOMMENDED TO BE APPLIED LOOSE LAID.**
- **MAIN LAYER MUST ALWAYS BE FULLY BONDED ONTO BASE LAYER.**

2.4 HORIZONTAL PROTECTION- ABOVE MBM

A 30- 50mm sand/cement protective screed shall be applied onto a 150microns Polyethylene separation layer above horizontally laid waterproofing membrane.

2.5 VERTICAL PROTECTION –ABOVE MBM

A 3.0 mm bituminous protection board "NILOBOARD" as manufactured by "BITUNIL" or equivalent shall be spot bonded to the vertically applied waterproofing membrane.

2.6 STRUCTURAL RC WORKS

RC raft and RC perimeter walls, as specified

2.7 ACCESSORIES

1. PVC WATER STOP

A construction joint, PVC external water stop is installed to connect RC raft and RC perimeter walls.