BITUFA
Waterproofing B.V.

Introduction

FLEXOBIT Underground WATERPROOFING

Introduction **Flexobit**

Flexobit is a 5mm thick homogeneous SBS Bituminous membrane **without reinforcement**.

The product is high elastic and therefore perfect suitable for waterproofing foundation, concrete structures and difficult details.

Product Properties

- 1500% elongation with full recovery
- Mouldable in three directions (3D)
- No fillers added to the compound
- High static and dynamic Penetration resistance (self healing after punctured)
- Takes any shape without need for cutting

Technical Datasheet

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Characteristic	Standard	Value / Result
Length	EN 1848-1	6,0 m
Width	EN 1848-1	1,0 m
Thickness	EN 1849-1	5,0 ± 0,5 mm
Visible defects	EN 1850-1	No visible defects
Mass	EN 1849-1	5,2 ± 0,52 kg/m^2
Filler content		0%
Water tightness	EN 1928	500 KPa[1]
Water tightness after ageing (12 weeks at 80°C)	EN 1296 and EN 1928	500 KPa[1]
Tensile properties:		
Elongation at break (length and width direction)	ISO 37	1600 ± 150 %
Tensile strength (length and width direction)	ISO 37	1,2 ± 0,2 N/mm^2
Static loading	EN 12730	20 kg
Impact Resistance: Aluminium EPS 150	EN 12691	 500 mm 2000 mm
Low temperature flexibility	EN 1109	≥ -25 °C
Chemical resistance (seaside chemicals)	EN 13969	Resistant to chlorides, nitrates and sulphates
Reaction to fire	EN 13501-1	Class E-d2
Vapour Transmission	EN 1931	Moisture flow rate (g): 1,54 x 10^{-9} kg m^{-2} s^{-1} Moisture resistance factor(μ): 50400
Vapour Transmission after ageing	EN 1296 and EN 1931	Moisture flow rate (g): 1,01 x 10^{-9} kg m^{-2} s^{-1} Moisture resistance factor(μ): 78800
Peel resistance of joints	EN 12316-1	Does not peel[2]
Shear resistance of joints	EN 12317-1	Does not shear[2]

Properties

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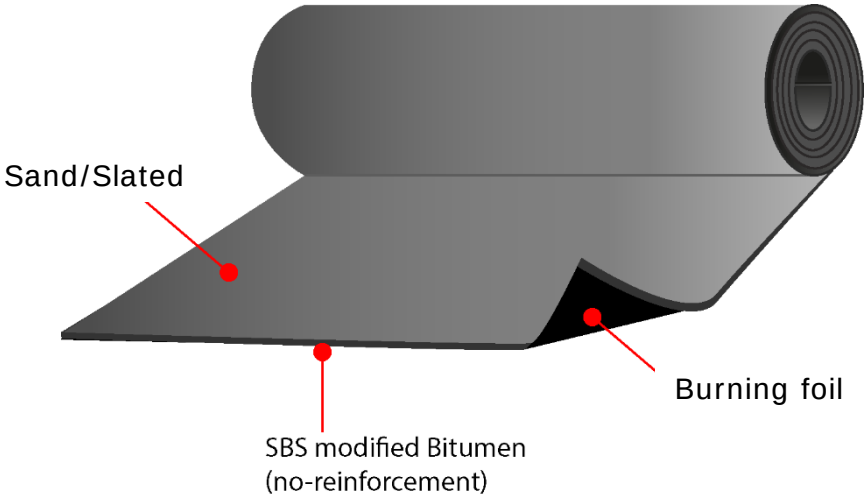
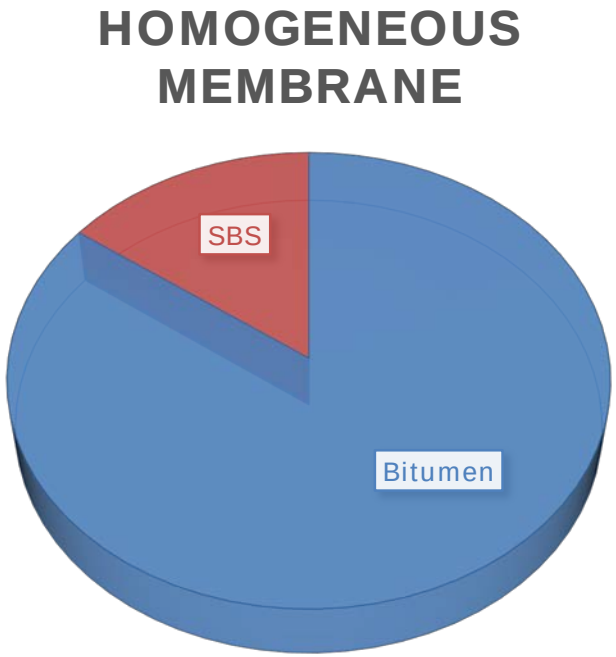
No fillers added to the compound





Selfhealing

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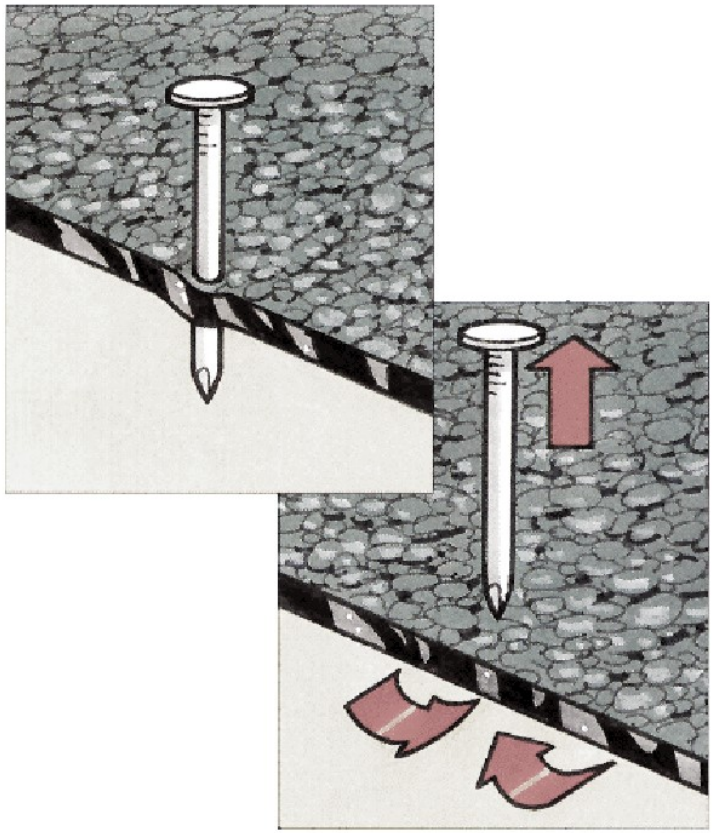
- The product is “self-healing”after puncturing



Topping

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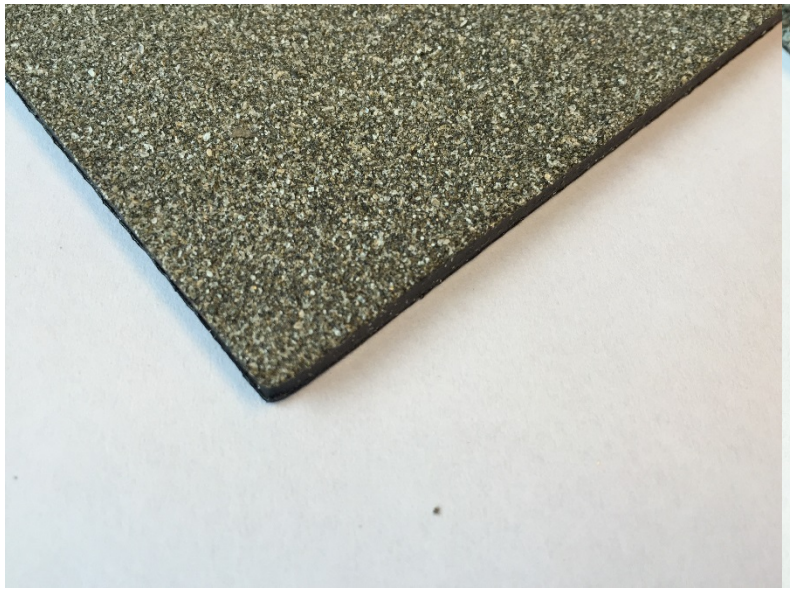
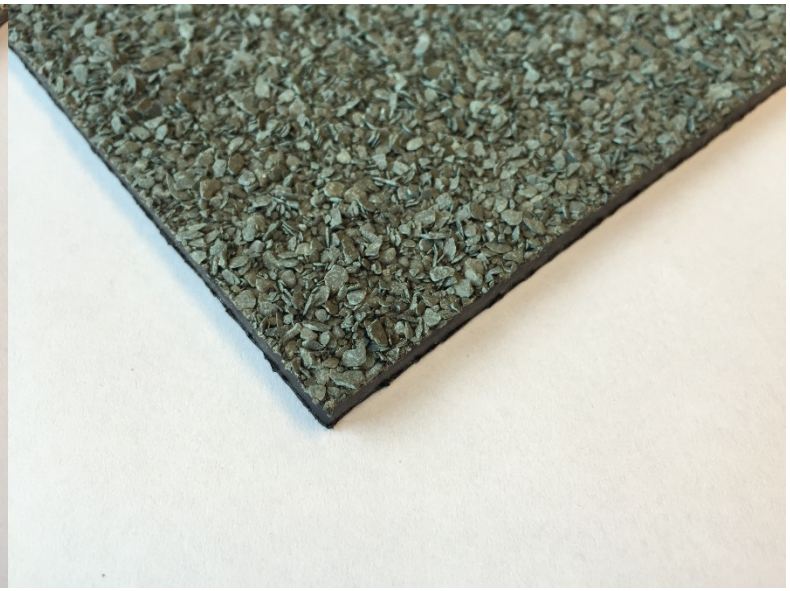
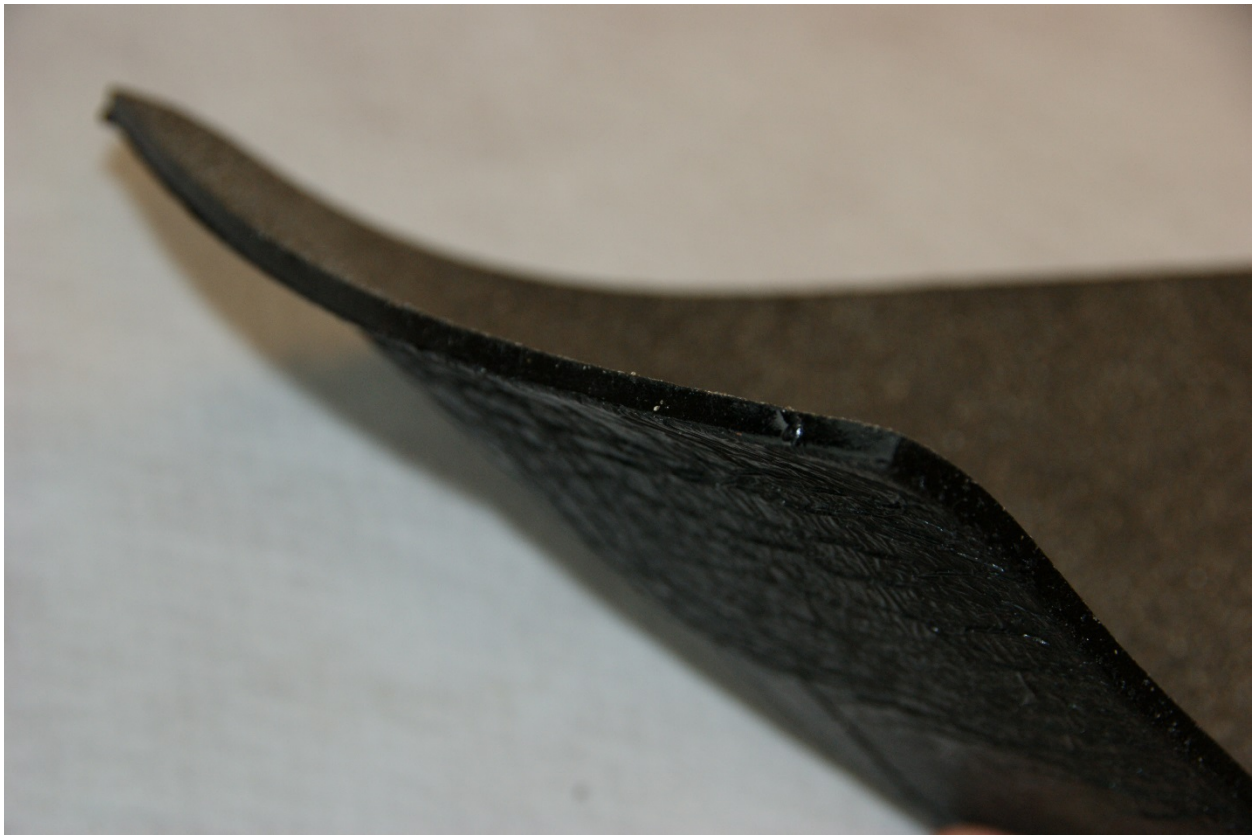
Sanded



Slated



Visualisation of the properties



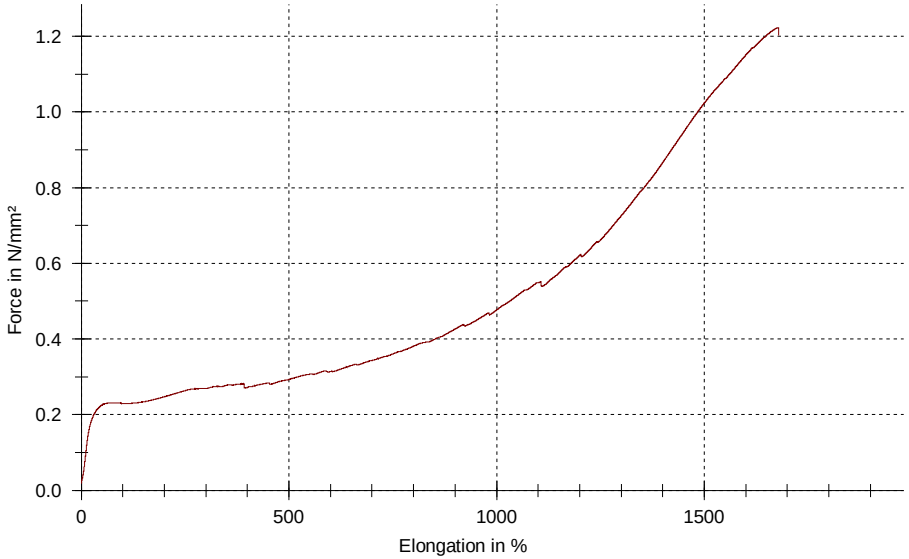
>1500% Elongation

NEN EN ISO 37 Determination of tensile properties
Parameter table:

	a0	L0	s 750 %	sM	eM
Nr	mm	mm	N/mm²	N/mm²	%
1	4.8	50.00	0.36	1.22	1678.87

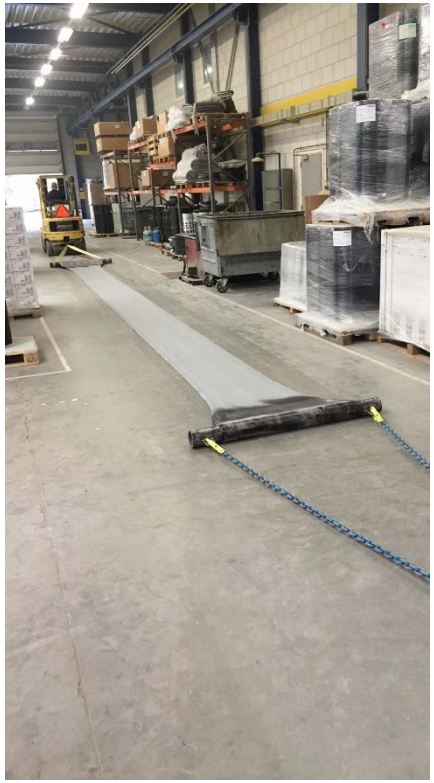
Test speed	:	100 mm/min	Pre-load	:	2 N

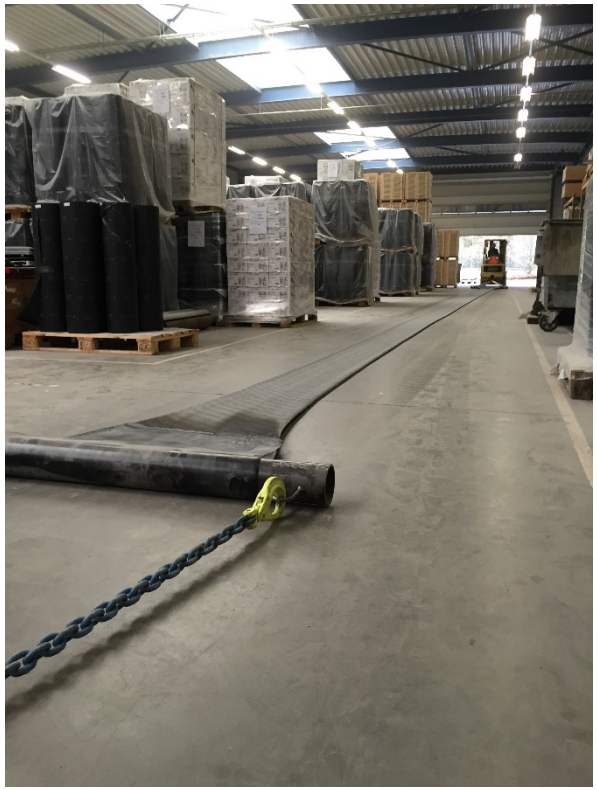
Heading	:	NEN EN ISO 37 Determination of tensile properties
Company name	:	Bitufa Waterproofing B.V.
material	:	Flexobit 5mm



1500% elongation

Elongation demonstration of a roll Flexobit





Mouldable in three directions (3D)

Mouldable in three directions (3D)

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Takes any shape without need for cutting

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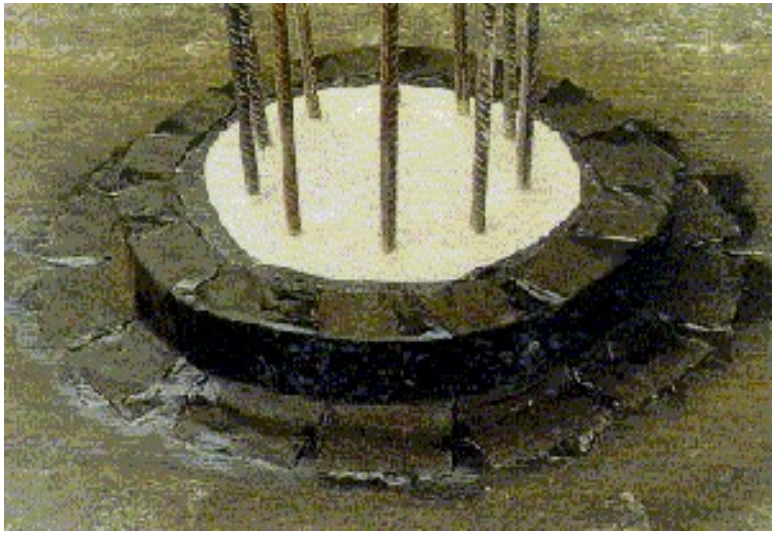
Flexobit unreinforced



reinforced membrane

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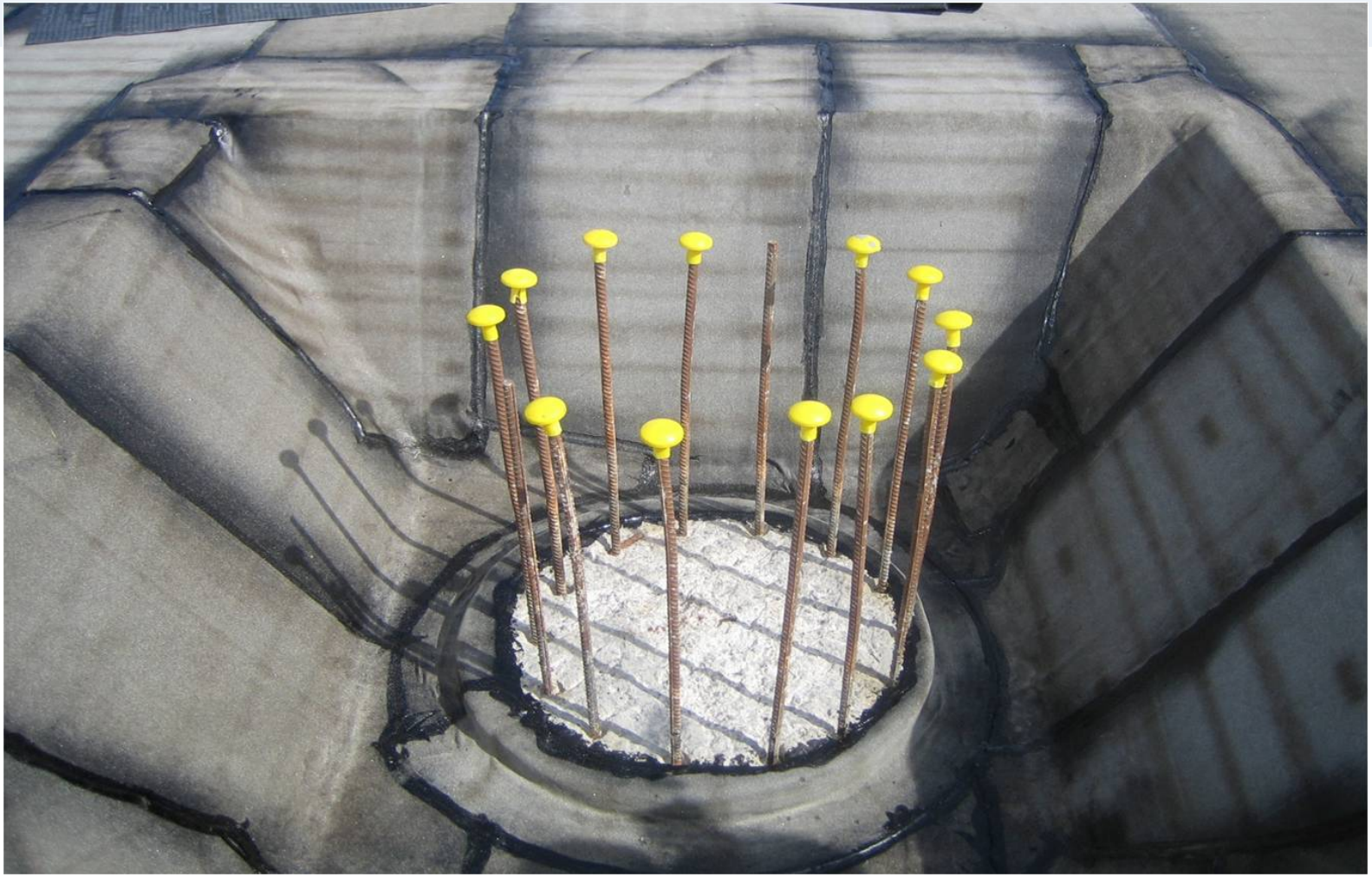

Application projects

- Foundation ONCOLOGY CENTRE AT KING HAMAD UNIVERSITY HOSPITAL

Application projects

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Application

- Foundations Hotel Istanbul

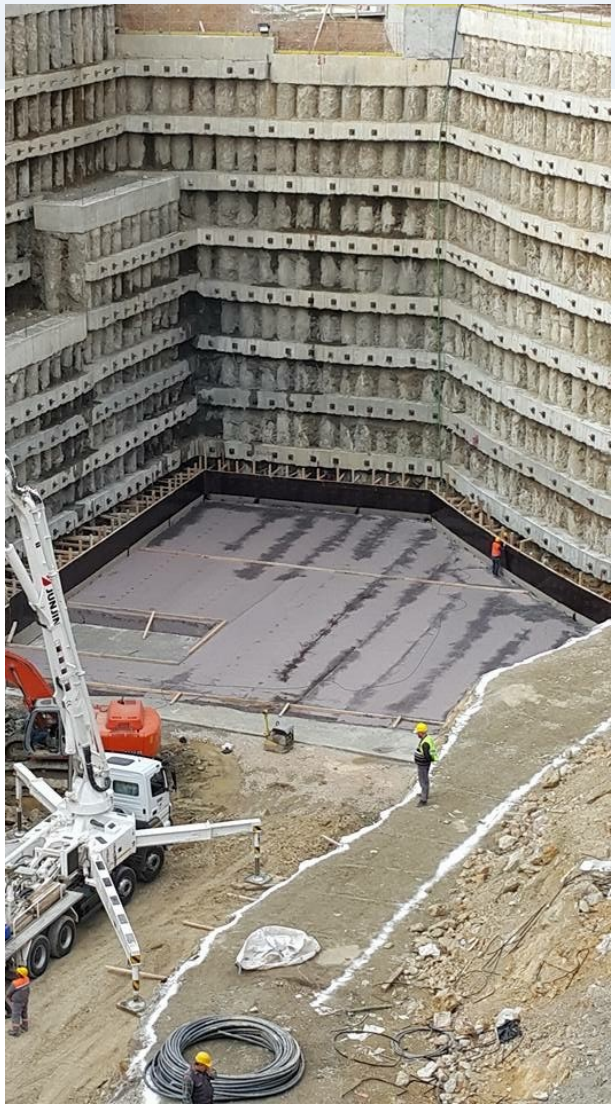
Application

- Foundations Hotel Istanbul

Application

- Foundations

Hotel Istanbul



Application

- Foundation

Ankara Airport

Application

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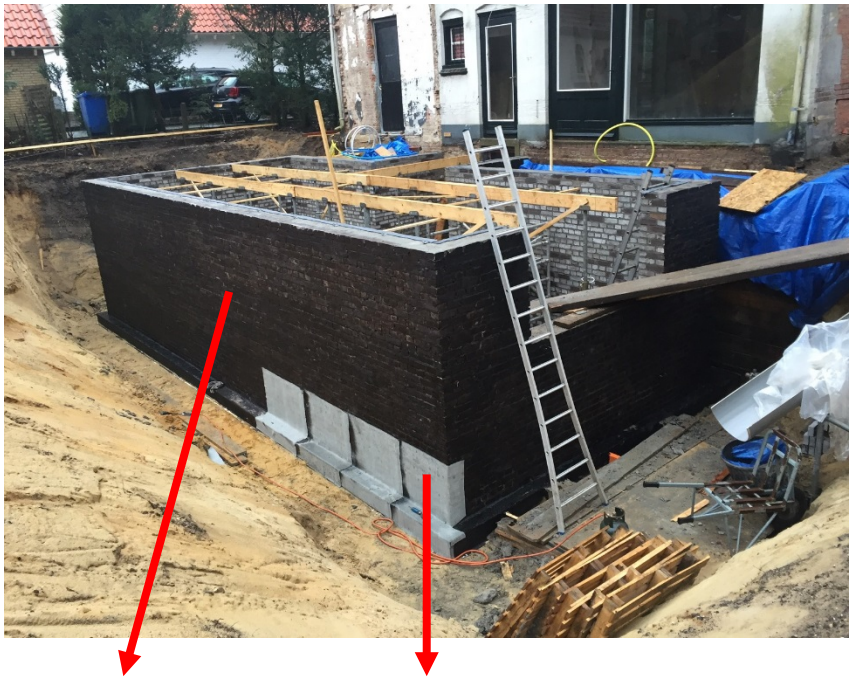
- Foundation Dubai

Application

- Basement Residential 1



Application

- Basement Residential 2

Scope

- Foundation: Pile heads

Scope

- Foundation: Pile heads

Scope

- Tunnels
- Joints

Area

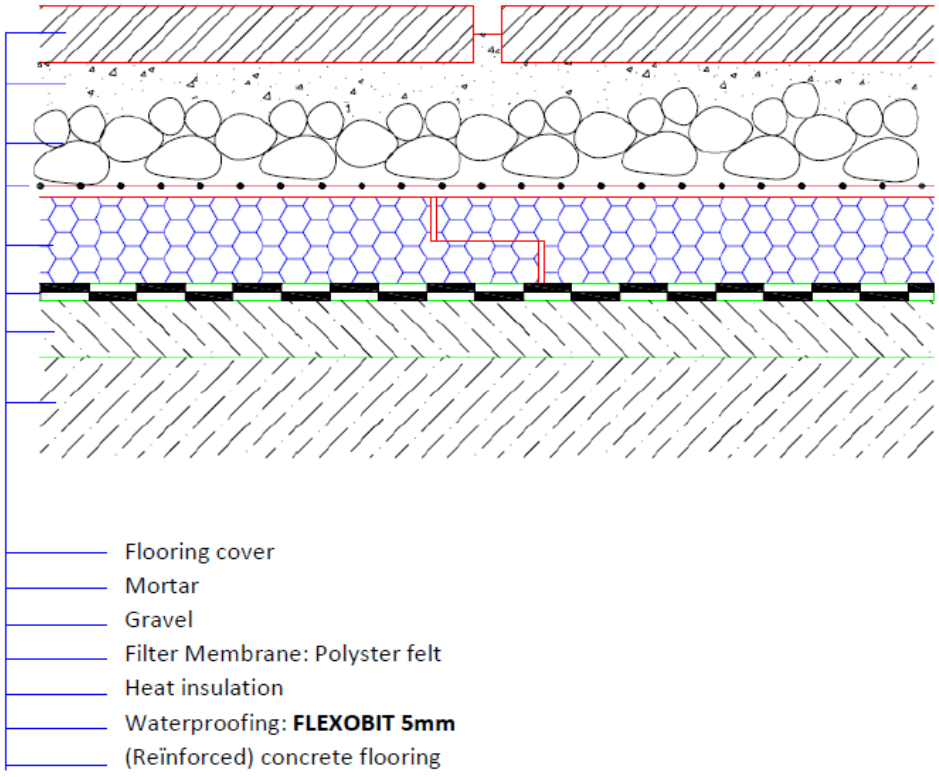
- Inverted roofs (non-exposed)

Scope

- Inverted roofs (non-exposed)

Scope

- Example Inverted roof system, cross section

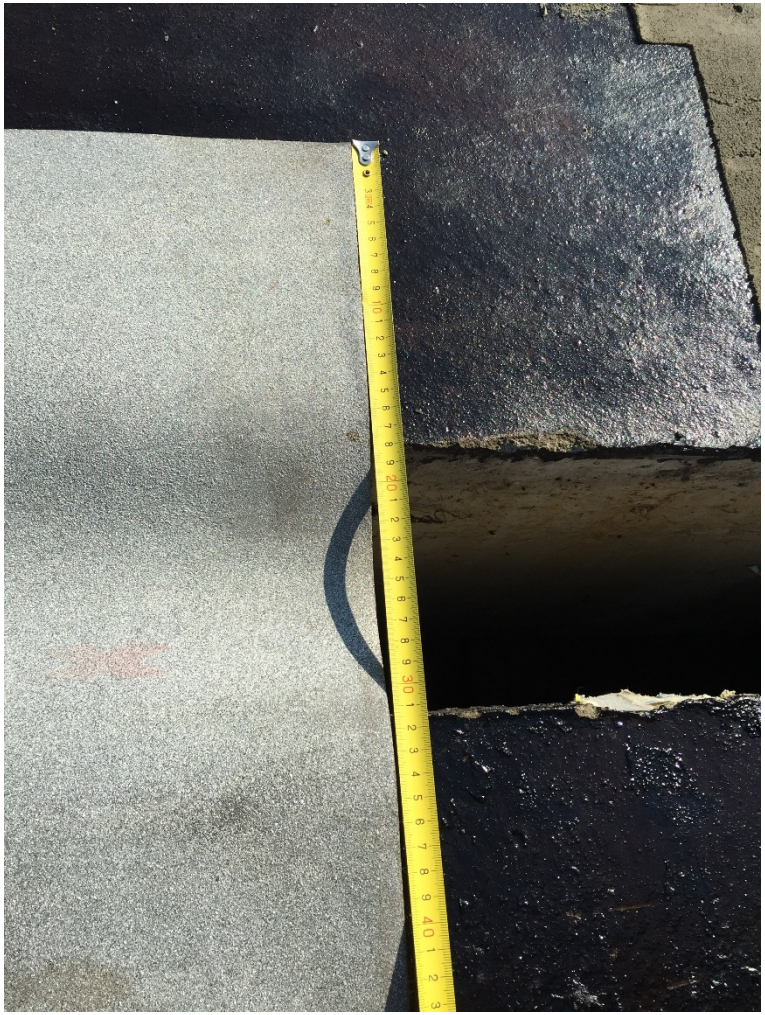


Scope
Expansion Joints

- 5cm joint
- Covered with 33cm membrane

Scope
Expansion Joints

- 15 cm joint
- Covered with 50cm membrane
- Loose laid in the middle (edge = bonded)



Scope
Expansion Joints

PU filler

Top layer of Urethane / other suited membrane

Scope

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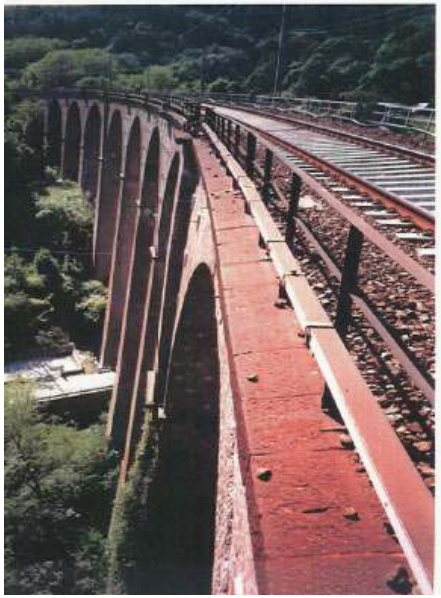
Railway Bridge Waterproofing



Cross section: Flexobit Railway Bridge

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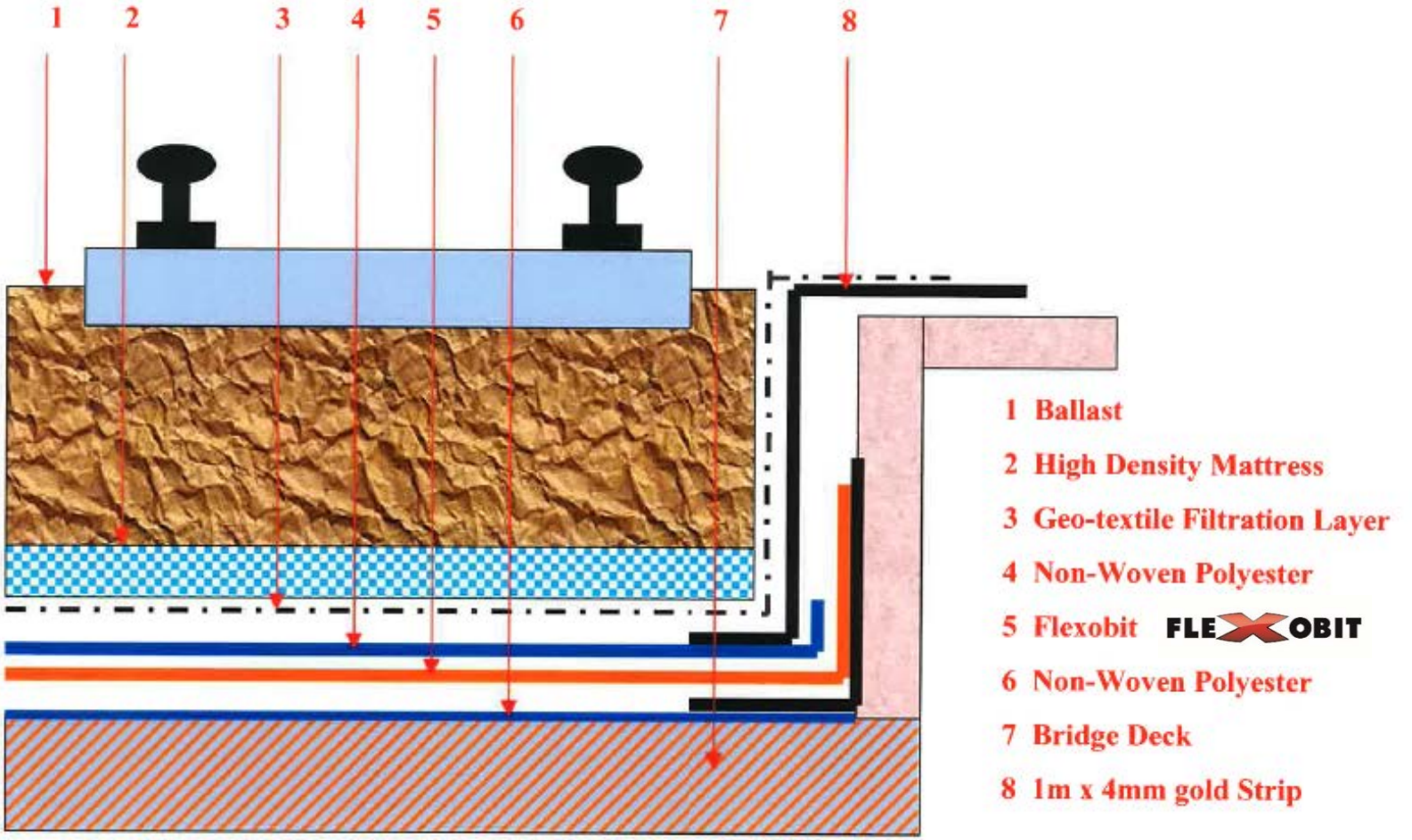

Some References

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- Atlantis Hotel
- Bvlgari Hotel
- DIFC Truck Tunnel
- Oncology Centre

Some References

- Meydan Business Park
- The Emirald palace Hotel
- Barsha Mall
- Bahrain City Center

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SMART WATERPROOFING SOLUTIONS

bitufa.com