Technical Book

ROOFING SYSTEMS

MAPEPLAN® T FPO/TPO

POLYGLASS® MAPEI GROUP

MAPEPLAN® T FPO/TPO

INDEX

1. Green Innovation

ISO 14001	Plant certificated ISO 14001
30%	30% of energy used in our plant is produced by cogeneration process
100%	100% recycling of water in the production process
100%	100% recycling of production wastage
EPD	EPD certification
	LEED certification *
70%	Reduction by 70% of packaging materials
ENVIRONMENTAL FRIENDLY	Environmental friendly production system
CO_2	Reduced emission CO_2

* LEED (Leadership in Energy and Environmental Design) is an internationally recognized green building certification system. It is the International reference for design, building and management of environmental friendly, high-performance buildings.

GREEN CREDENTIALS

Being free from plasticizers and volatile substances and containing no substances that are detrimental or harmful to people or the environment, MAPEPLAN® T is a highly eco-friendly product. The modern and technologically advanced production system has been designed and built to deliver the lowest possible environmental impact. This low environmental impact is guaranteed during all stages of the membrane life cycle: manufacture, transport, installation, service life, end-of-life disposal. Once the waterproofing membrane reaches the end of its life cycle, it can be removed and recycled/reused to produce new raw material.

EPD - Environmental Product Declaration

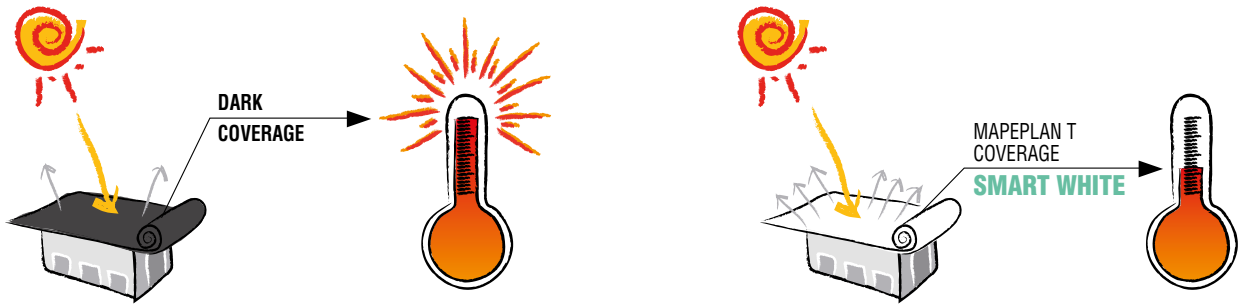
MAPEPLAN® T waterproofing membranes come with an EPD (Environmental Product Declaration). The EPD is defined by standard ISO 14025 as a document containing quantified environmental data for a product with pre-set categories of parameters calculated using the Life Cycle Assessment (LCA) method and hence based on the ISO 14040 series of standards.

The Environmental Product Declarations (EPD) are just another mark of the transparency espoused by POLYGLASS SpA and the MAPEI Group in their dealings with the market to provide information on the environmental performance of their products and services, according to relevant categories of parameters and following internationally standardized guidelines.

2. COOL ROOF - Reflectance and improved building energy efficiency

The MAPEPLAN® T waterproofing membrane has a special white top layer, called “Smart White”, which gives the product its excellent solar reflectance.
MAPEPLAN® T Smart White can reduce roof surface temperature by over 50% compared to a dark/black colored roof, also resulting in lower temperatures inside the building and helping to keep them constant.
This is an undeniable advantage during the warmer months: lower surface temperatures actually result in reduced and optimized use of the air-conditioning system, which also translates into energy and financial savings.

For MAPEPLAN® T, the SRI (Solar Reflectance Index) value is 102 according to standard ASTM E1980.
The solar reflectance rating is 81% according to standard ASTM E903.
The thermal emissivity rating is 91% according to standard ASTM C1371.



GENERAL INFORMATION

To help you gain a better understanding of aspects relating to solar reflectance and “cool roofs”, below is some information of a general nature that is applicable to MAPEPLAN® T.

What is solar reflectance?

Solar reflectance is a measure of the ability of a material/surface to reflect incident solar radiation.
A surface with a high solar reflectance reflects most of the incident solar radiation and hence stays cooler on the surface.
Light colours, especially white, have a high solar reflectance.
Solar reflectance is rated from 0 to 1 or as a %.

What is thermal emissivity?

Thermal emissivity is a measure of the ability of a material/surface to disperse heat.
A surface with a high thermal emissivity rating has the property of effectively radiating heat to the surrounding environment.
FPO/TPO polymer waterproofing membranes have high thermal emissivity. Emissivity is rated from 0 to 1 or as a %.

What is the SRI (Solar Reflectance Index) value?

This is a value worked out using a calculation method to determine and measure the combination of reflectance and emissivity properties of a material/surface.
The combined impact of the solar reflectance and thermal emissivity factors is measured according to standard ASTM E1980, and is calculated based on three wind speed conditions (low, medium, high).
The SRI value is given as a %. The higher the SRI value, the lower the temperature of the surface exposed to sunlight.
Note: since this calculation method is based on reference values/surfaces, the result may be higher than 100%.

Reference to LEED

LEED (Leadership in Energy and Environmental Design) is a rating system for high-performance environmentally sustainable buildings. LEED certification refers to the building as a whole, certifying its environmental impact and sustainability, and was developed in the US in the early 90s.
The certification system is based on a series of credits awarded for different categories. More specifically, cool roofs can earn points towards certification under:
Category 1 - Sustainable sites.

- Credit 7.2 - Heat island effect: Roof.

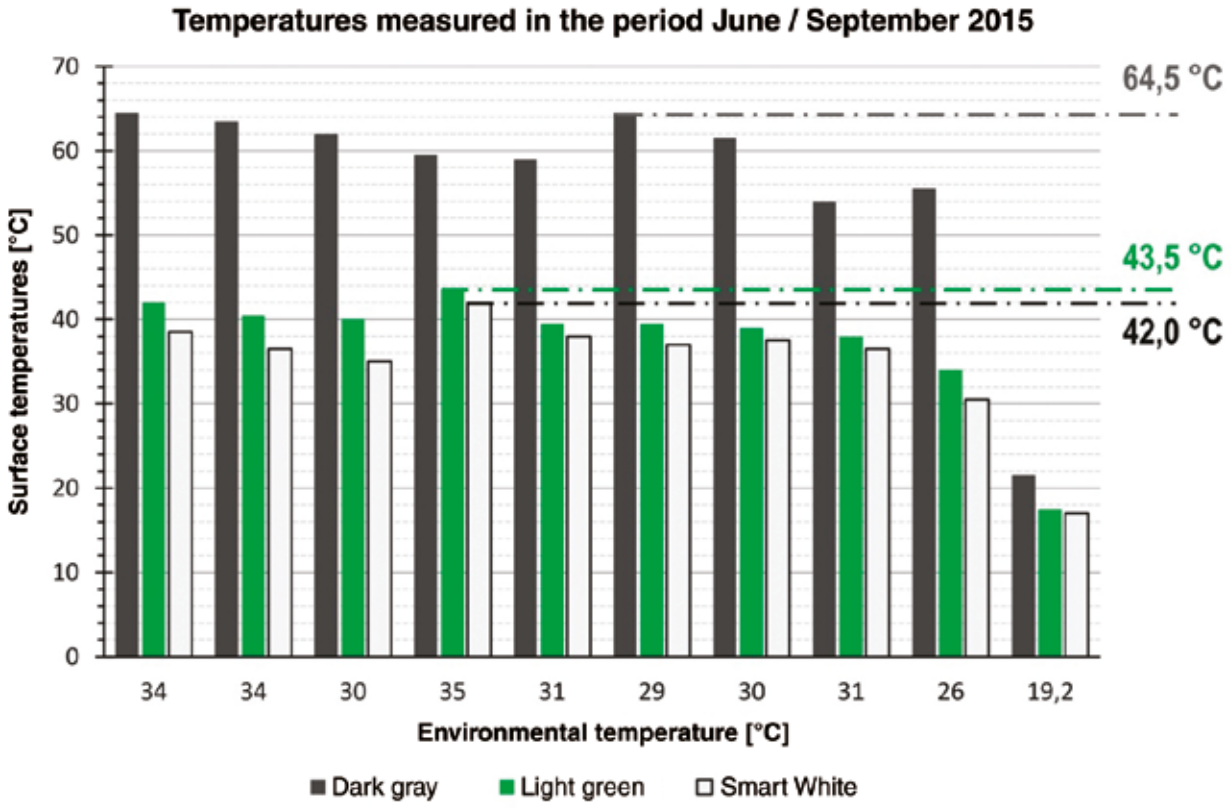
In order to achieve the credit for reducing the heat island effect, the finished roof should:

- Have an SRI ≥82 (for roofs with a slope ≤15%).
- Have an SRI ≥39 (for roofs with a slope >15%).

FIELD TESTS

Measurements were taken directly off a roof, to record the surface temperatures of three waterproofing membranes with different coloured top layers.

Measurements were taken at the hottest time of day (2pm) with the membranes in full sun. Below is a chart giving the surface temperatures for the three different MAPEPLAN® T membrane colours along the Y-axis, while the outside temperature is given along the X-axis. As you can see, on the surface of the MAPEPLAN® T membrane in Smart White, the surface temperature reading was around +40 °C, approx. 20-25 °C less than the dark grey version, thus confirming that the Smart White colour really works.



The MAPEPLAN® T Smart White waterproofing membrane makes a significant contribution to improving building energy efficiency.

3. Production Process

- Factory quality system certified according to ISO 9001/2015 and ISO 14001/2015
- **Multi-extrusion coating** production line of latest generation
- One passage production process, insertion of internal reinforcement without pre-lamination
- Environmental friendly feeding vacuum pipes system
- Constant digital control of the membrane's thickness
- Video electronic control of membrane's quality to both surfaces
- No stress membrane winding system
- Quality control tracking system
- Total quality concept: from formulation of raw materials until finished product
- Cogeneration plant for a rational and conscious production of electricity

4. Roof application systems for FPO/TPO membranes

	MECHANICAL FASTENING SYSTEM	BALLASTED, PROTECTED AND GREEN ROOF SYSTEMS	ADHERED SYSTEM
MAPEPLAN® T M	■		
MAPEPLAN® T B		■	■
MAPEPLAN® T Af			■

MAPEPLAN® T D unreinforced membrane for details and building particulars.

MECHANICAL FASTENING SYSTEM

Mapeplan® T M

Synthetic membrane in flexible polyolefin FPO/TPO with high-resistant polyester net reinforcement.

Mechanically fixed membrane system for exposed roof installations.

MAPEPLAN® T M is produced in one **multi-extrusion coating** process, and insertion of internal reinforcement is without pre-lamination.

Standard colour of top layer is **Smart White**, the bottom layer is black.

MAPEPLAN® T M is UV-resistant and may be exposed to all weather conditions.

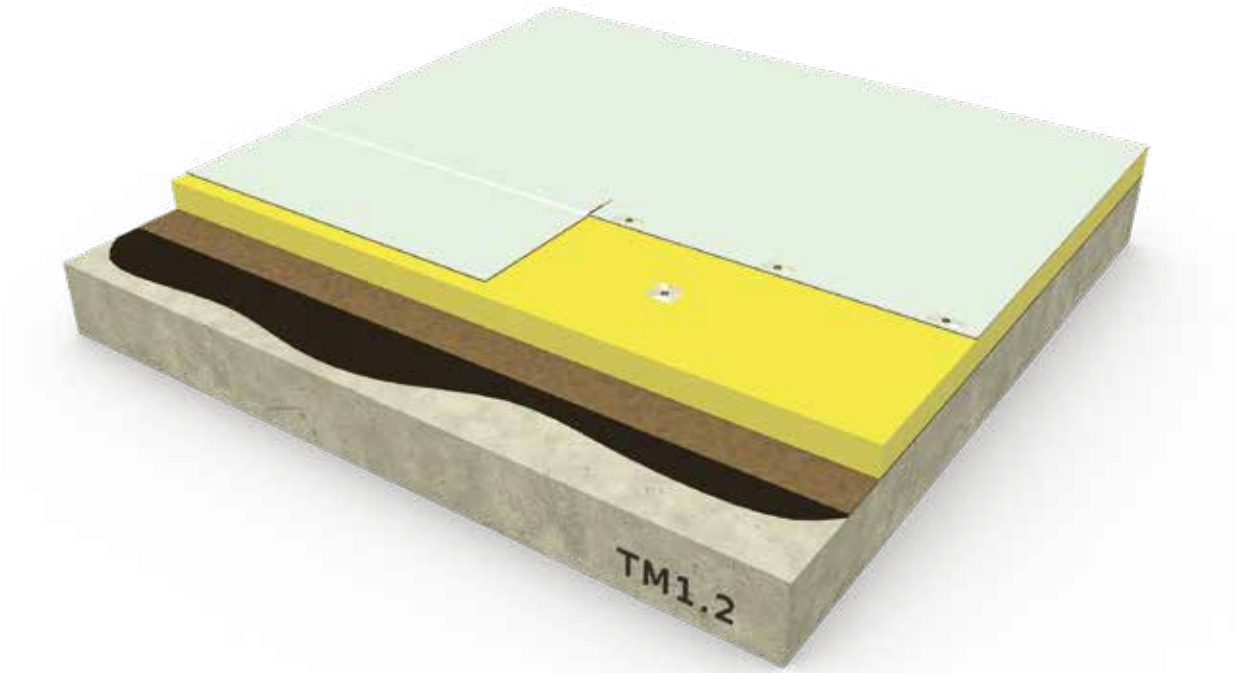
	STANDARD THICKNESSES			
MAPEPLAN® T M	**1,2 mm**	**1,5 mm**	**1,8 mm**	**2,0 mm**

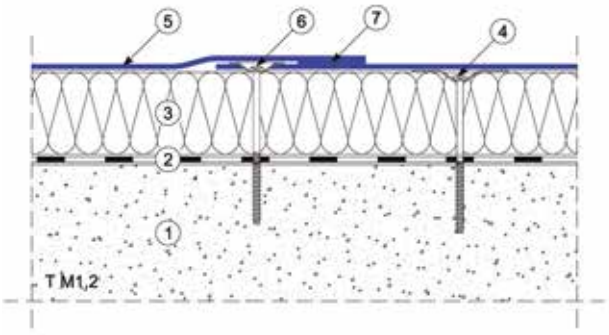
Available in B_{ROOF} (t1 - t2 - t3) versions according to EN 13501-5.

CHARACTERISTICS OF MAPEPLAN® T M:
• High solar reflectance
• Environmental friendly
• Resistant to ageing processes
• Flexible at low temperatures
• Puncture resistant
• Hail resistant
• UV resistant
• High workability and weldability
• Formulation without plasticizers
• Vapour permeable
• Dimensionally stable
• Excellent fire behaviour

BUILD-UP T M1.2

MAPEPLAN® T M membrane - Insulated roof with concrete deck and spot fastening



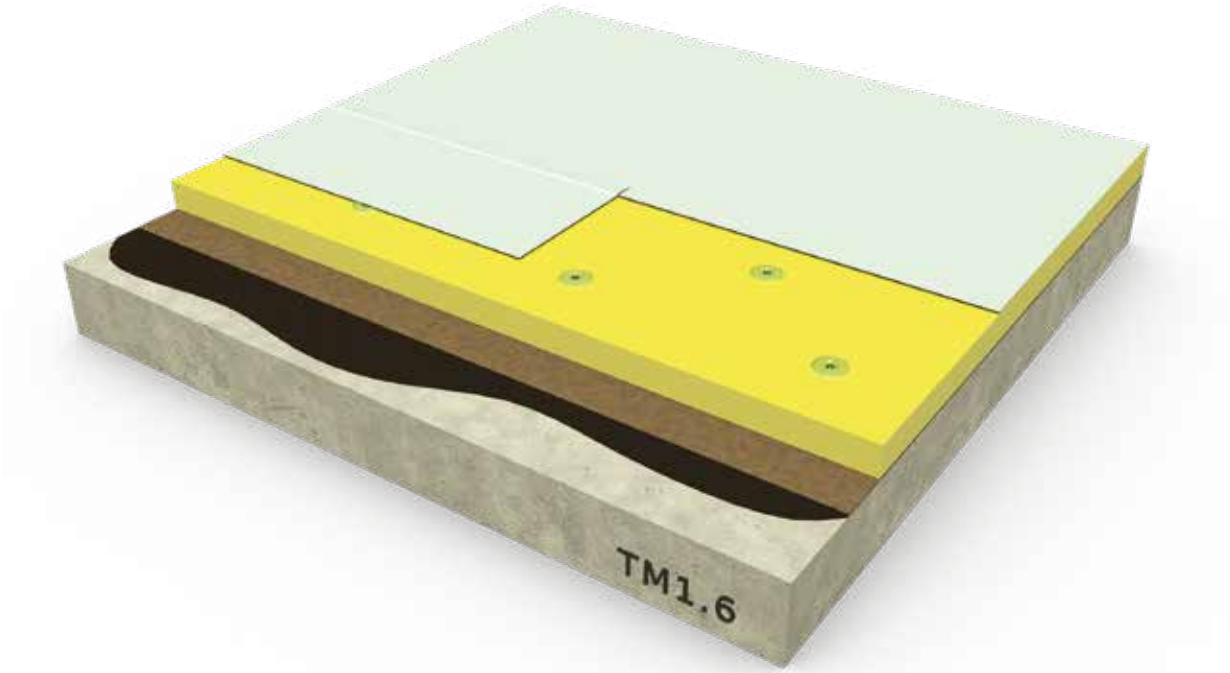


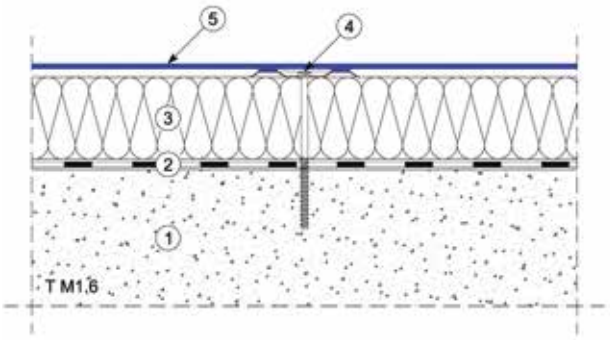
① Concrete/composite deck
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **IDROPRIMER** + **POLYVAP**)
③ Mechanically fastened thermal insulation layer
④ Mechanical fastening of insulation
⑤ **MAPEPLAN® T M** waterproofing membrane
⑥ Mechanical fastening with stress plate
⑦ Welding

NOTE: for some solutions it may be necessary to interpose a layer of 120 g/m² of glass matt between the thermal insulation and the waterproofing membrane, in accordance to the B_{ROOF} classification tested systems.

BUILD-UP T M1.6

MAPEPLAN® T M membrane - Insulated roof with concrete deck and induction fastening



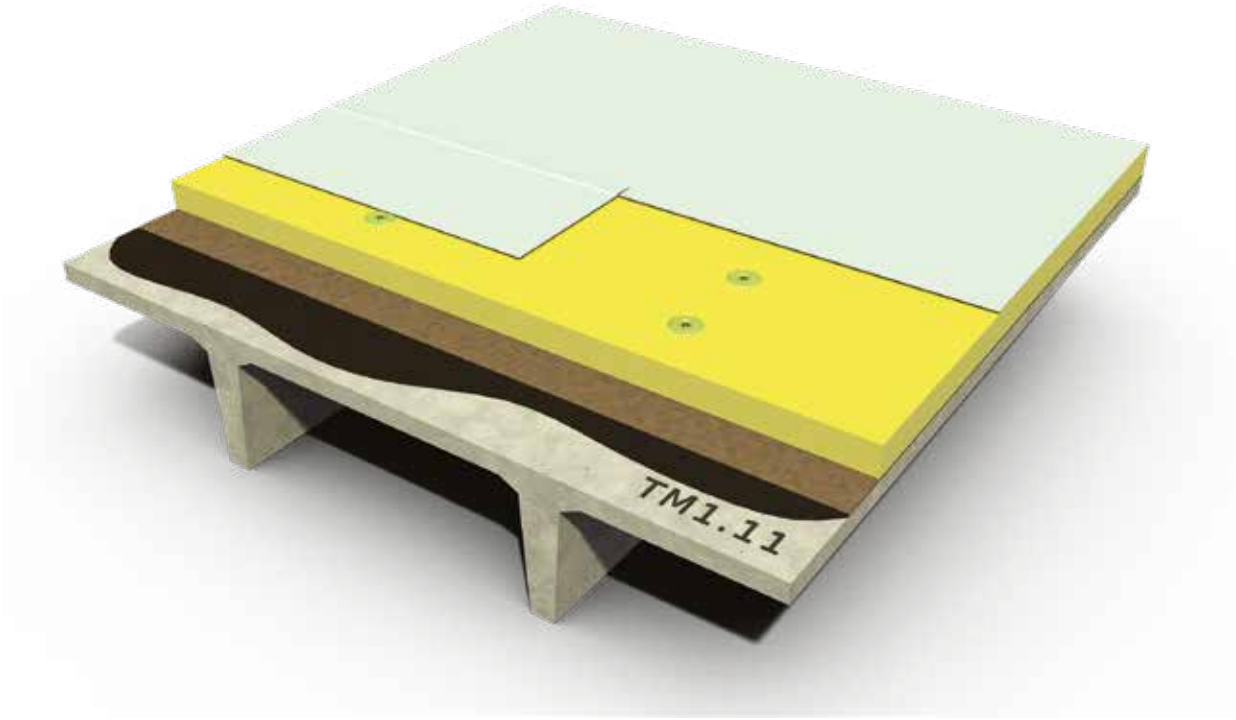


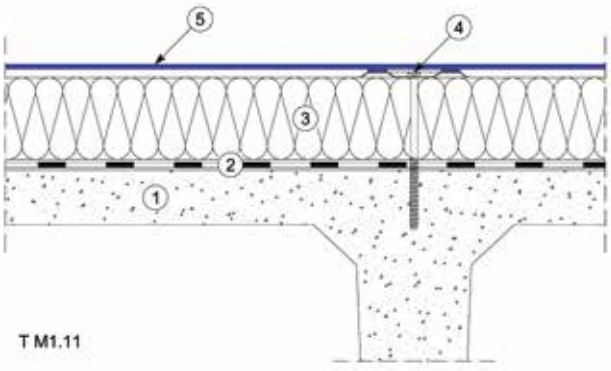
① Concrete/composite deck
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **IDROPRIMER** + **POLYVAP**)
③ Mechanically fastened thermal insulation layer
④ Induction welding mechanical fastening
⑤ **MAPEPLAN® T M** waterproofing membrane

NOTE: for some solutions it may be necessary to interpose a layer of 120 g/m^2 of glass matt between the thermal insulation and the waterproofing membrane, in accordance to the B_{ROOF} classification tested systems.

BUILD-UP T M1.11

MAPEPLAN® T M membrane - Insulated roof with precast concrete beam deck and induction fastening



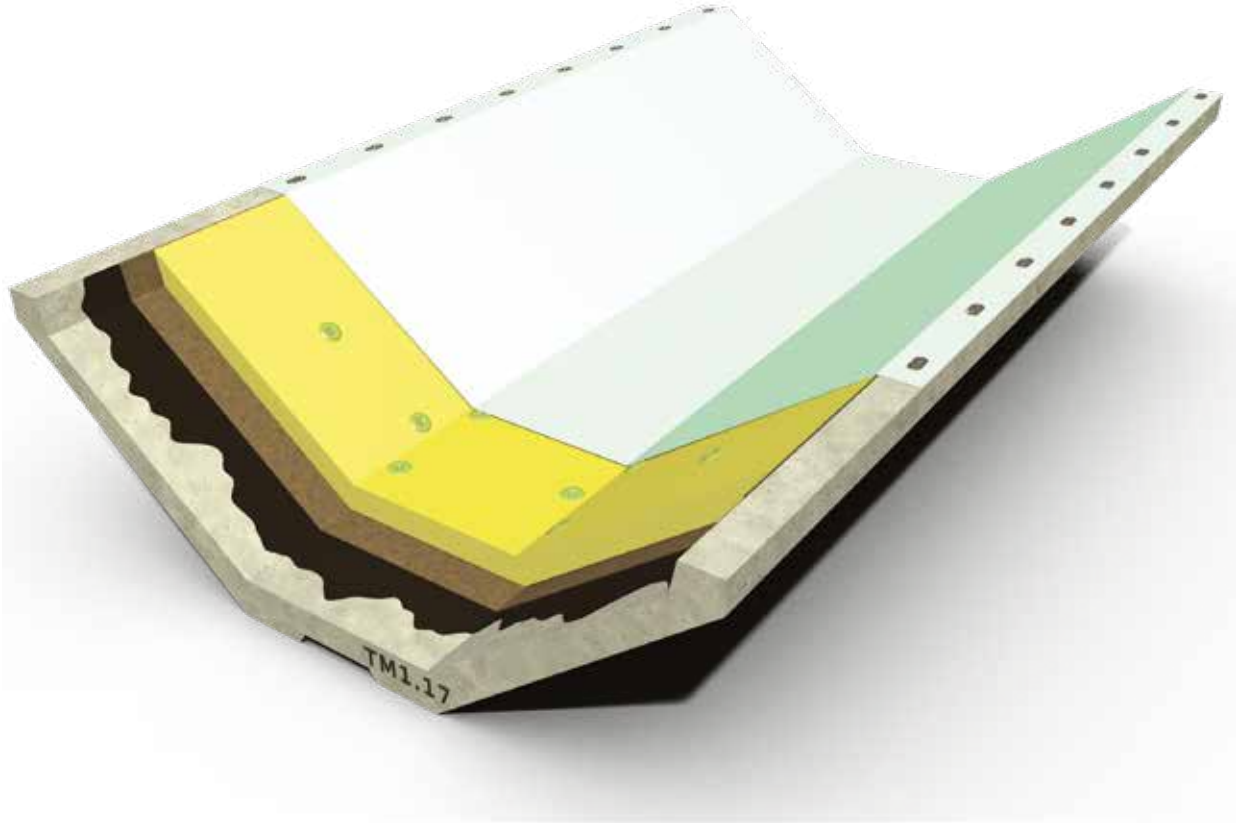


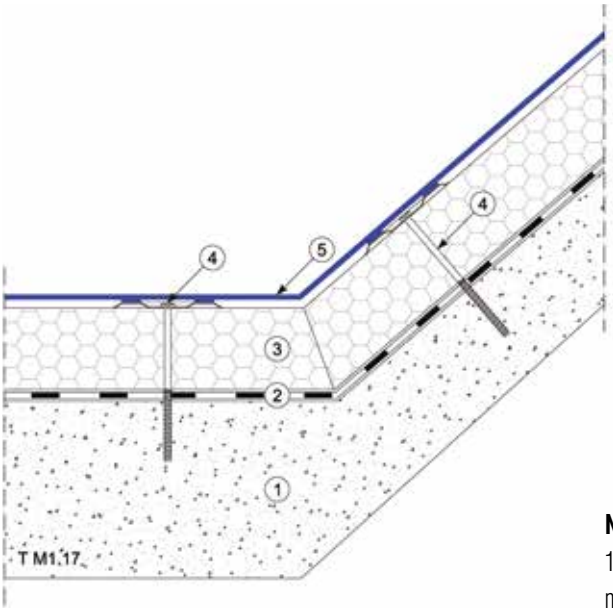
① Deck - precast double tee beams
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **IDROPRIMER** + **POLYVAP**)
③ Mechanically fastened thermal insulation layer
④ Induction welding mechanical fastening
⑤ **MAPEPLAN® T M** waterproofing membrane

NOTE: for some solutions it may be necessary to interpose a layer of 120 g/m² of glass matt between the thermal insulation and the waterproofing membrane, in accordance to the B_{ROOF} classification tested systems.

BUILD-UP T M1.17

MAPEPLAN® T M membrane - Insulated roof with precast concrete V beam deck and induction fastening



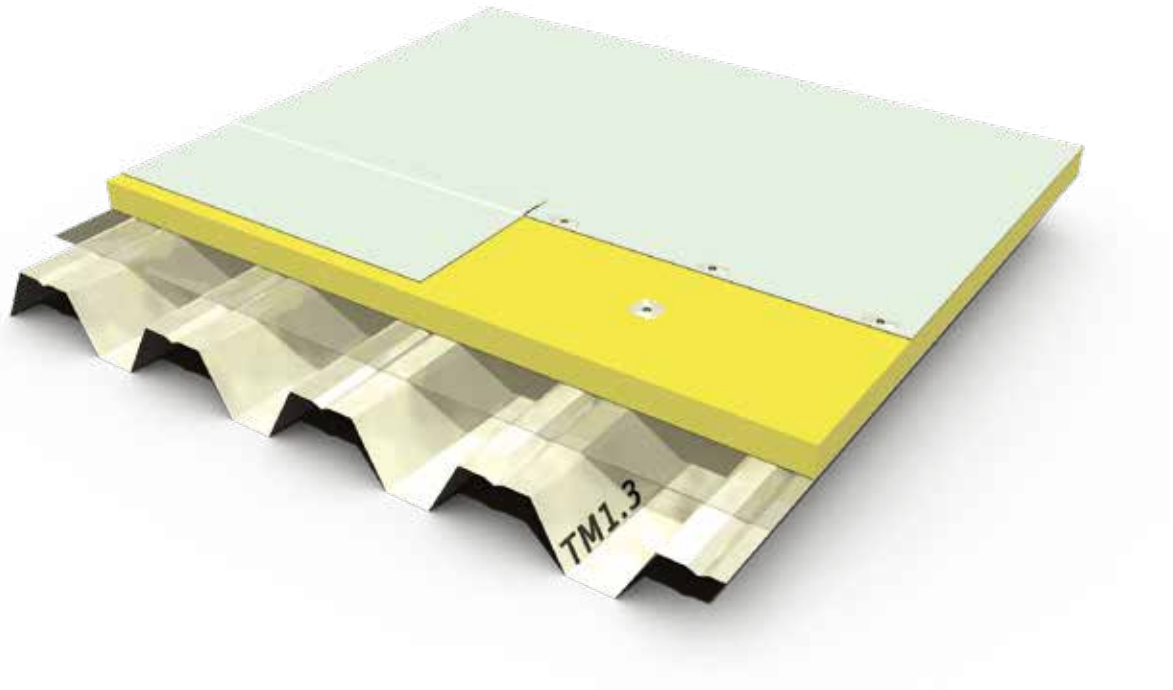


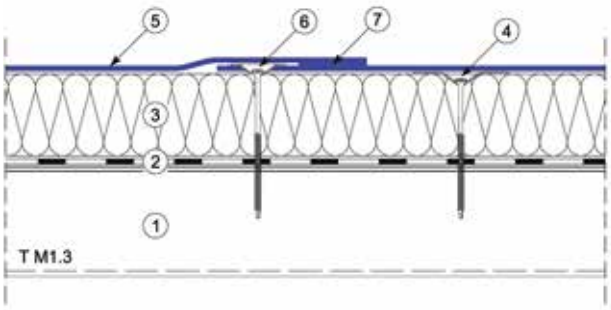
① Deck - precast V beams
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **IDROPRIMER** + **POLYVAP**)
③ Mechanically fastened thermal insulation layer
④ Induction welding mechanical fastening
⑤ **MAPEPLAN® T M** waterproofing membrane

NOTE: for some solutions it may be necessary to interpose a layer of 120 g/m^2 of glass matt between the thermal insulation and the waterproofing membrane, in accordance to the B_{ROOF} classification tested systems.

BUILD-UP T M1.3

MAPEPLAN® T M membrane - Insulated roof with corrugated steel deck and spot fastening



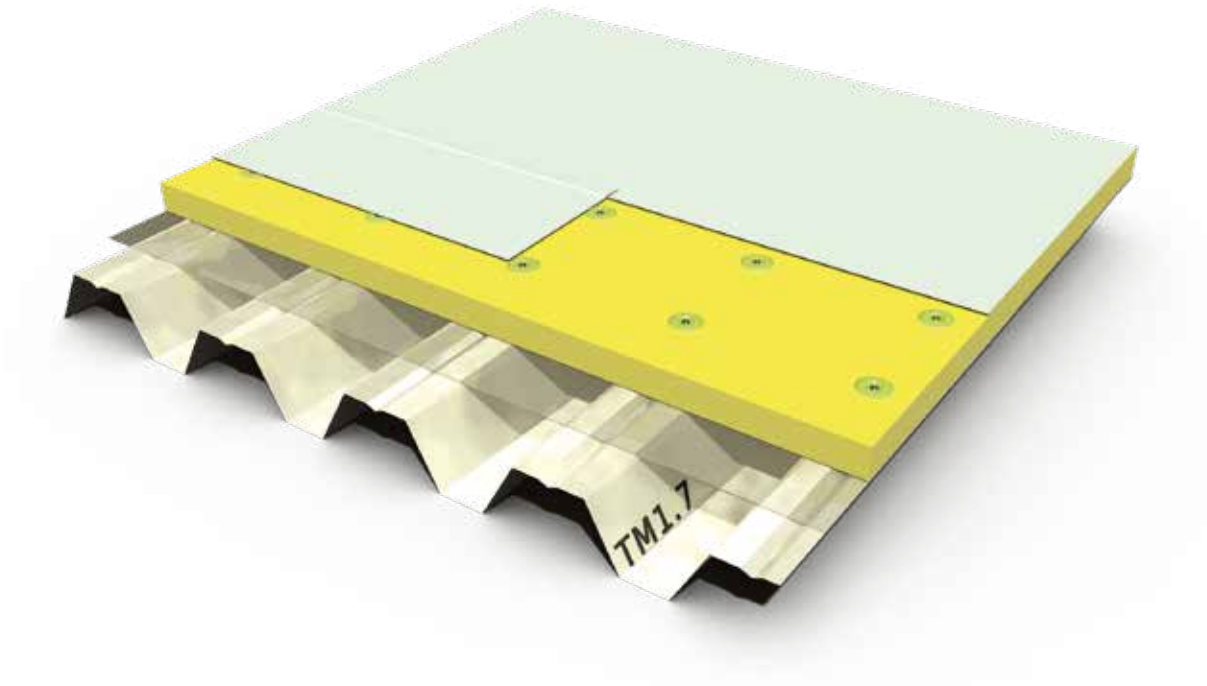


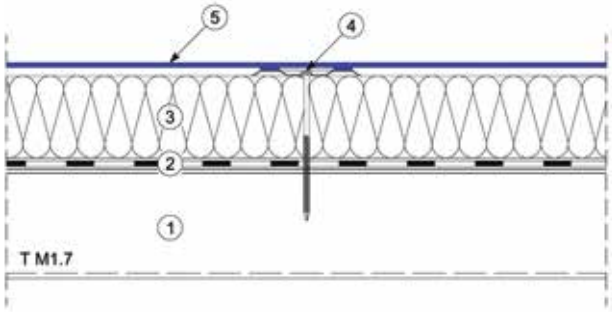
① Corrugated steel deck
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **MAPEPLAN® EVO SK**)
③ Mechanically fastened thermal insulation layer
④ Mechanical fastening of insulation
⑤ **MAPEPLAN® T M** waterproofing membrane *1
⑥ Mechanical fastening with stress plate
⑦ Welding

NOTE *1: When fixing in to a corrugated steel deck, the membrane must be installed at 90° to the decking profile.
NOTE: for some solutions it may be necessary to interpose a layer of 120 g/m² of glass matt between the thermal insulation and the waterproofing membrane, in accordance to the B_{ROOF} classification tested systems.

BUILD-UP T M1.7

MAPEPLAN® T M membrane - Insulated roof with corrugated steel deck and induction fastening



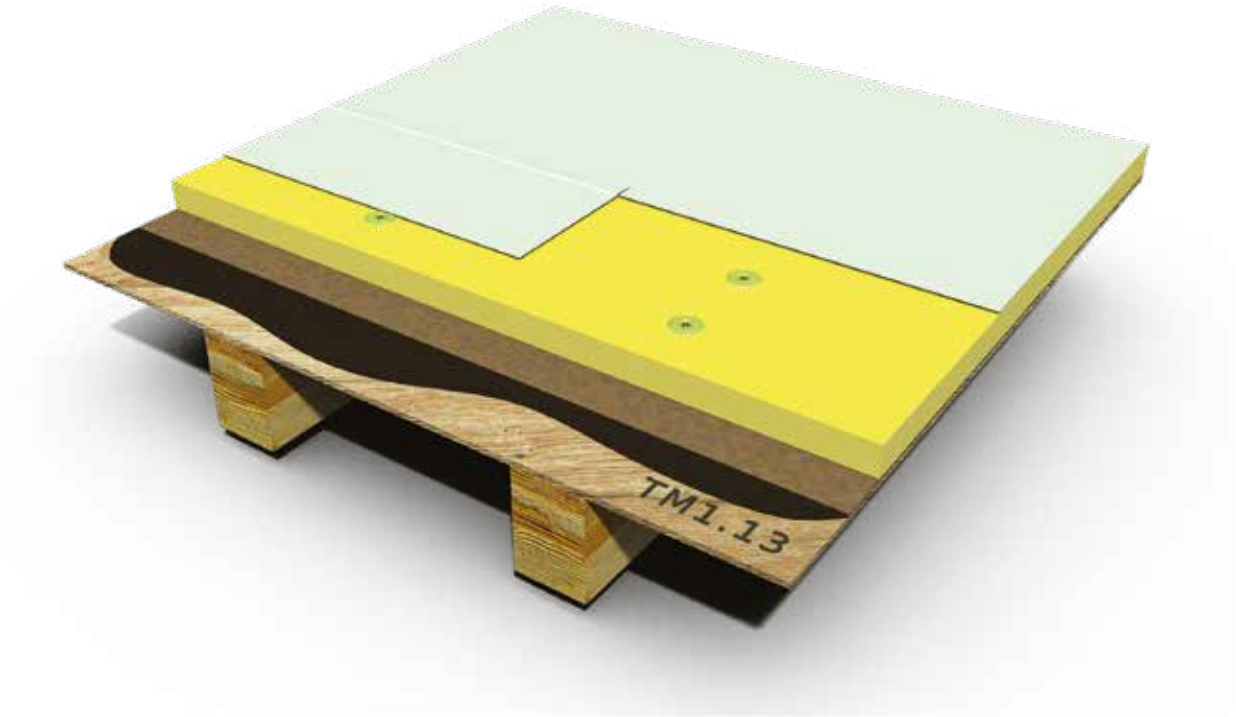


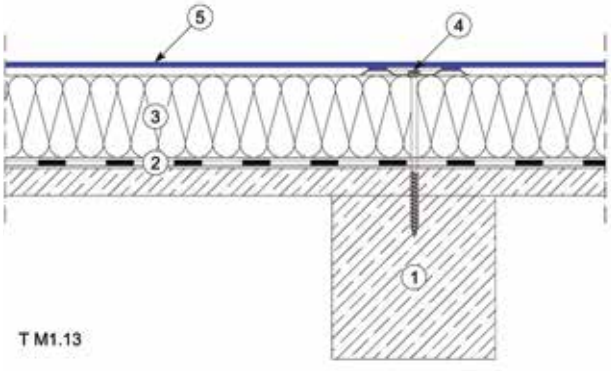
1. Corrugated steel deck
2. Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **MAPEPLAN® EVO SK**)
3. Mechanically fastened thermal insulation layer
4. Induction welding mechanical fastening
5. **MAPEPLAN® T M** waterproofing membrane

NOTE: for some solutions it may be necessary to interpose a layer of 120 g/m^2 of glass matt between the thermal insulation and the waterproofing membrane, in accordance to the B_{ROOF} classification tested systems.

BUILD-UP T M1.13

MAPEPLAN® T M membrane - Insulated roof with thin wooden deck and induction fastening



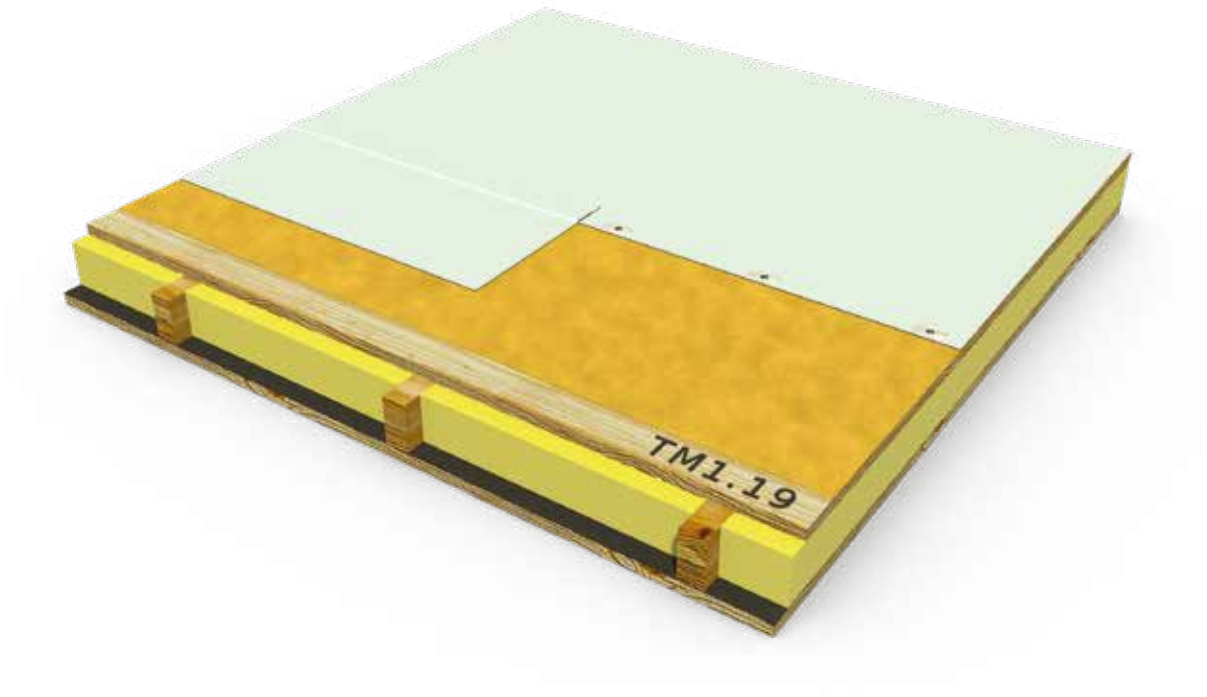


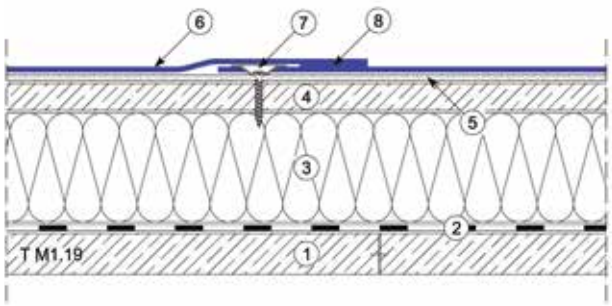
① Deck - wooden boarding and battens
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **MAPEPLAN® EVO SK** or **IDROPRIMER + POLYVAP**)
③ Mechanically fastened thermal insulation layer
④ Induction welding mechanical fastening
⑤ **MAPEPLAN® T M** waterproofing membrane

NOTE: for some solutions it may be necessary to interpose a layer of 120 g/m^2 of glass matt between the thermal insulation and the waterproofing membrane, in accordance to the B_{ROOF} classification tested systems.

BUILD-UP T M1.19

MAPEPLAN® T M membrane - Insulated roof with double-sheated wooden deck and spot fastening



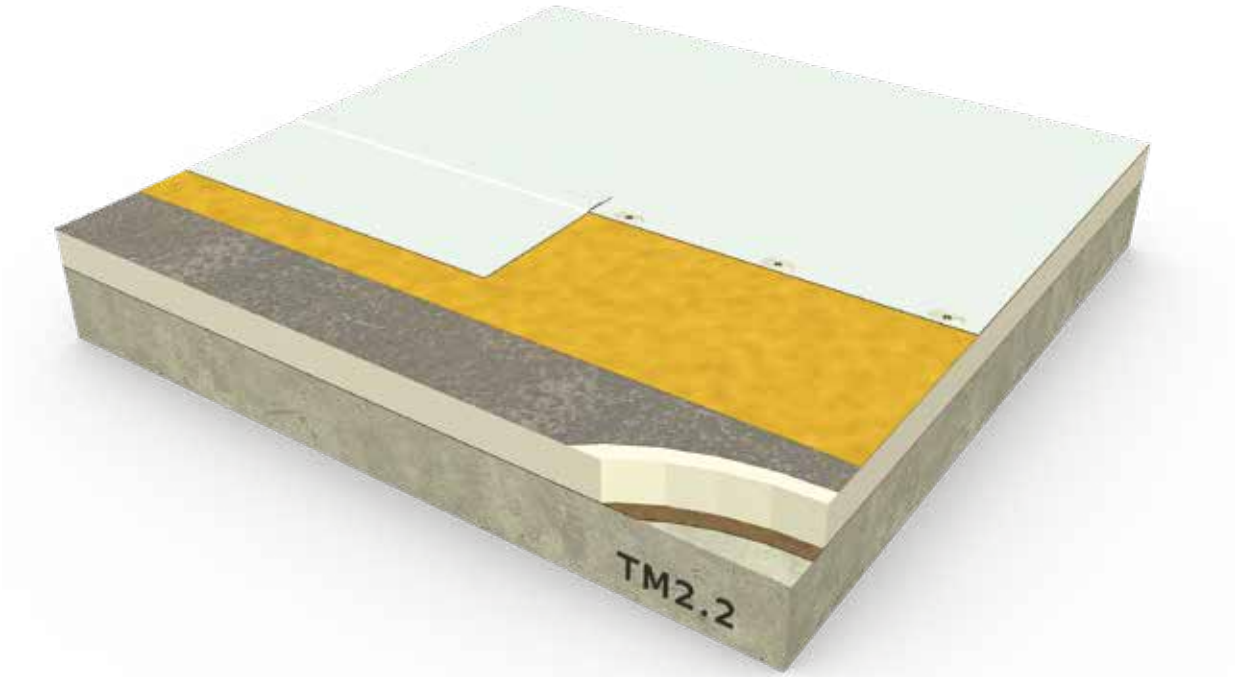


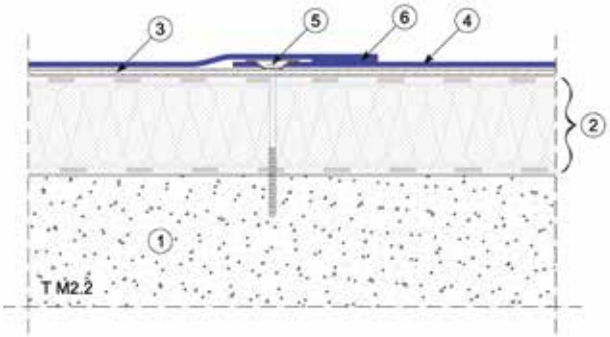
① Deck - 1st wooden board
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **MAPEPLAN® EVO SK** or **IDROPRIMER + POLYVAP**)
③ Thermal insulation layer
④ 2nd wooden board
⑤ **POLYDREN PP** levelling layer
⑥ **MAPEPLAN® T M** waterproofing membrane
⑦ Mechanical fastening with stress plate
⑧ Welding

NOTE: for some solutions it may be necessary to interpose a layer of 120 g/m² of glass matt between the thermal insulation and the waterproofing membrane, in accordance to the B_{ROOF} classification tested systems.

BUILD-UP T M2.2

MAPEPLAN® T M membrane - Over-roofing refurbishment with spot fastening



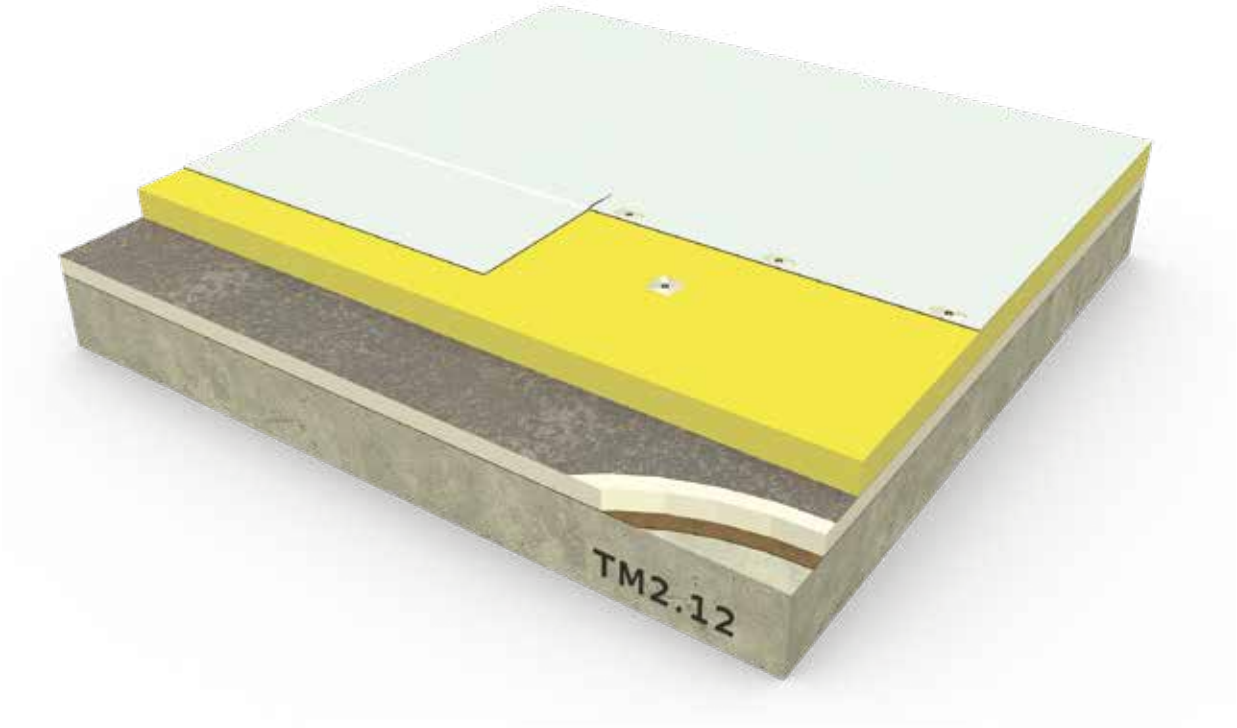


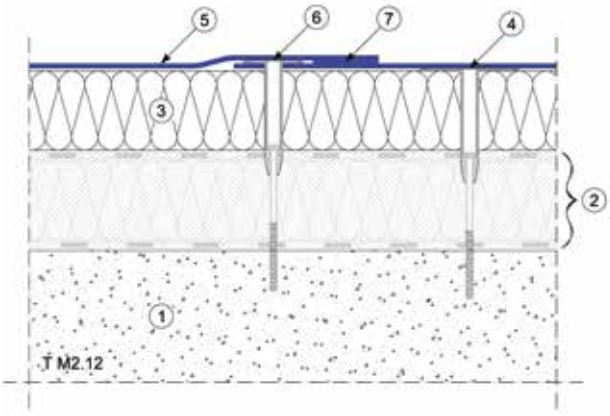
① Concrete/composite deck
② Existing waterproofing build-up
③ Separation layer **POLYDREN PP**
④ **MAPEPLAN® T M** waterproofing membrane
⑤ Mechanical fastening with stress plate
⑥ Welding

NOTE: for some solutions it may be necessary to interpose a layer of 120 g/m^2 of glass matt between the thermal insulation and the waterproofing membrane, in accordance to the B_{ROOF} classification tested systems.

BUILD-UP T M2.12

MAPEPLAN® T M membrane - Refurbishment incorporating thermal insulation and spot fastening





① Concrete/composite deck
② Existing waterproofing build-up
③ Supplementary thermal insulation layer
④ Mechanical fastening with sleeve
⑤ **MAPEPLAN® T M** waterproofing membrane
⑥ Mechanical fastening with sleeve
⑦ Welding

NOTE: for some solutions it may be necessary to interpose a layer of 120 g/m^2 of glass matt between the thermal insulation and the waterproofing membrane, in accordance to the B_{ROOF} classification tested systems.

BALLASTED, PROTECTED AND GREEN ROOF SYSTEMS

Mapeplan® T B

Synthetic membrane in flexible polyolefin FPO/TPO with high dimensional stability glass mat reinforcement.

Suitable for ballasted and roof garden systems.

MAPEPLAN® T B is produced in one **multi-extrusion coating** process, and insertion of internal reinforcement is without pre-lamination.

Standard colour of top layer is **Smart White**, the bottom layer is black.

MAPEPLAN® T B is UV-resistant, resistant to microbiological attacks and is root-resistant.

MAPEPLAN® T B is totally resistant to roots and rhizomes, in compliance with the strict two-year FLL test, it also complies with the EN 13948 standard.

	STANDARD THICKNESSES		
MAPEPLAN® T B	**1,5 mm**	**1,8 mm**	**2,0 mm**

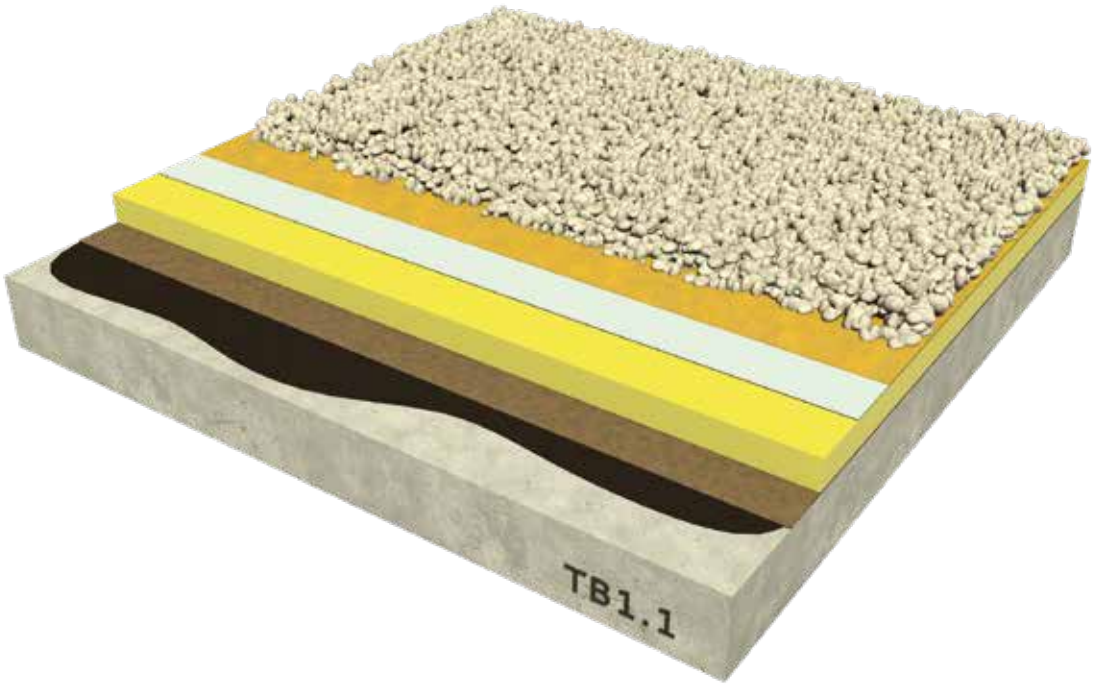
(Other thicknesses are available on request).

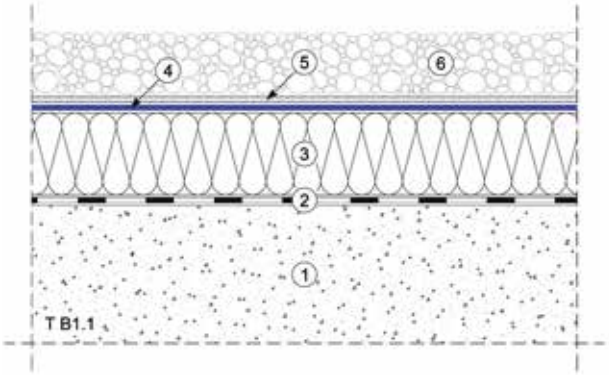
CHARACTERISTICS OF MAPEPLAN® T B:
• High solar reflectance
• Environmental friendly
• Resistant to ageing processes
• Root resistant - FLL test
• Resistant to microbiological attacks
• Flexible at low temperatures
• Puncture resistant
• UV resistant
• High workability and weldability
• Formulation without plasticizers
• Vapour permeable
• Dimensionally stable
• Excellent fire behaviour

FLL
Forschungsgesellschaft
Landschaftsentwicklung
Landschaftsbau e.V.

BUILD-UP T B1.1

MAPEPLAN® T B membrane - Insulated roof ballasted with gravel

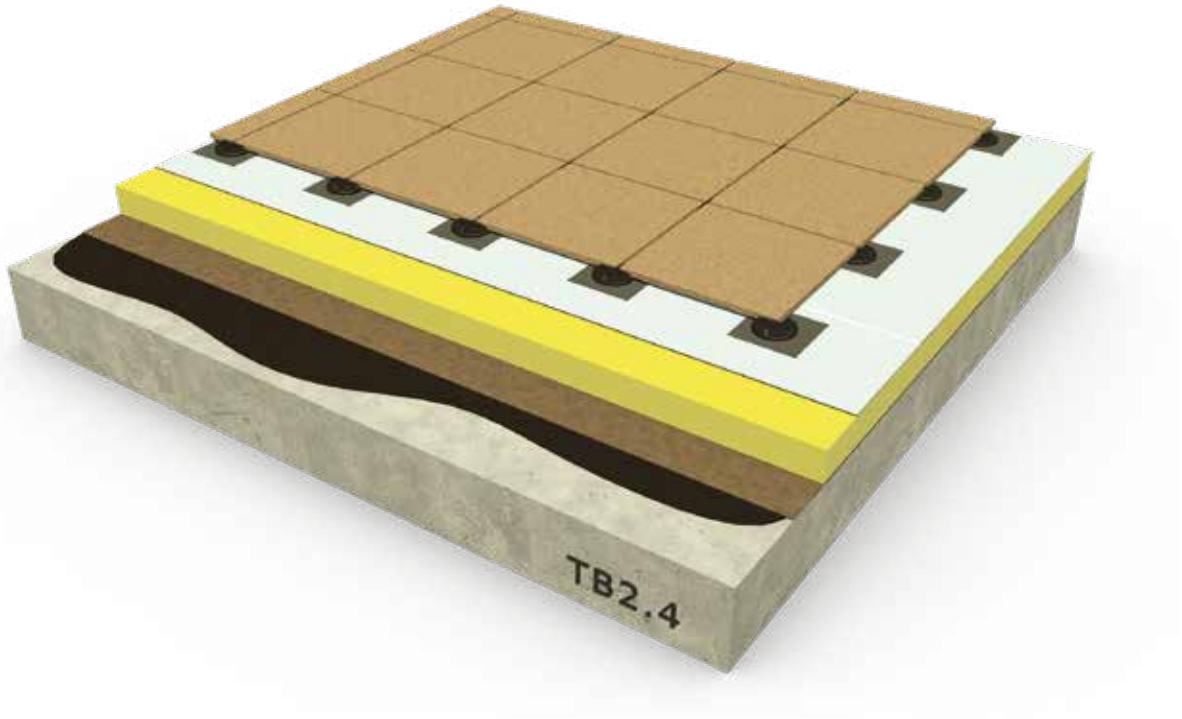


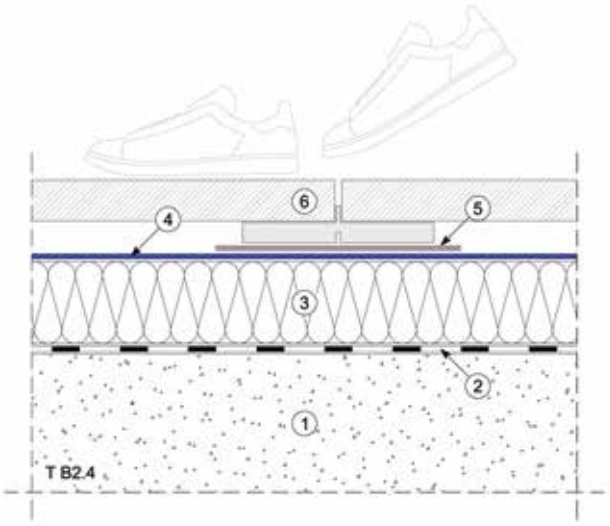


① Structure
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **IDROPRIMER** + **POLYVAP**)
③ Thermal insulation layer
④ **MAPEPLAN® T B** waterproofing membrane
⑤ Protection layer **POLYDREN PP**
⑥ Gravel

BUILD-UP T B2.4

MAPEPLAN® T B membrane - Insulated roof ballasted with floating paving

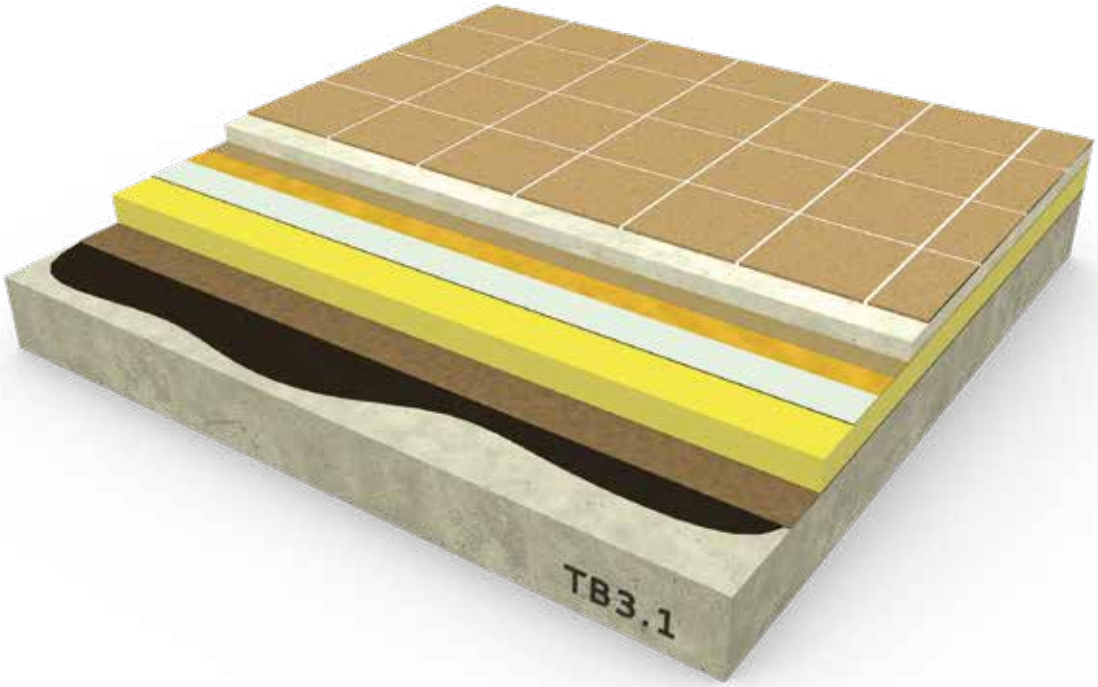


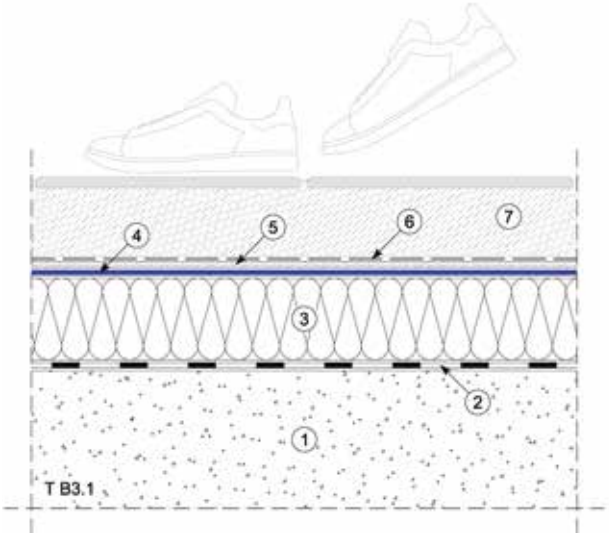


① Structure
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **IDROPRIMER** + **POLYVAP**)
③ Thermal insulation layer
④ **MAPEPLAN® T B** waterproofing membrane
⑤ Protection patch **MAPEPLAN® T**
⑥ Floating paving

BUILD-UP T B3.1

MAPEPLAN® T B membrane - Insulated walkable roof

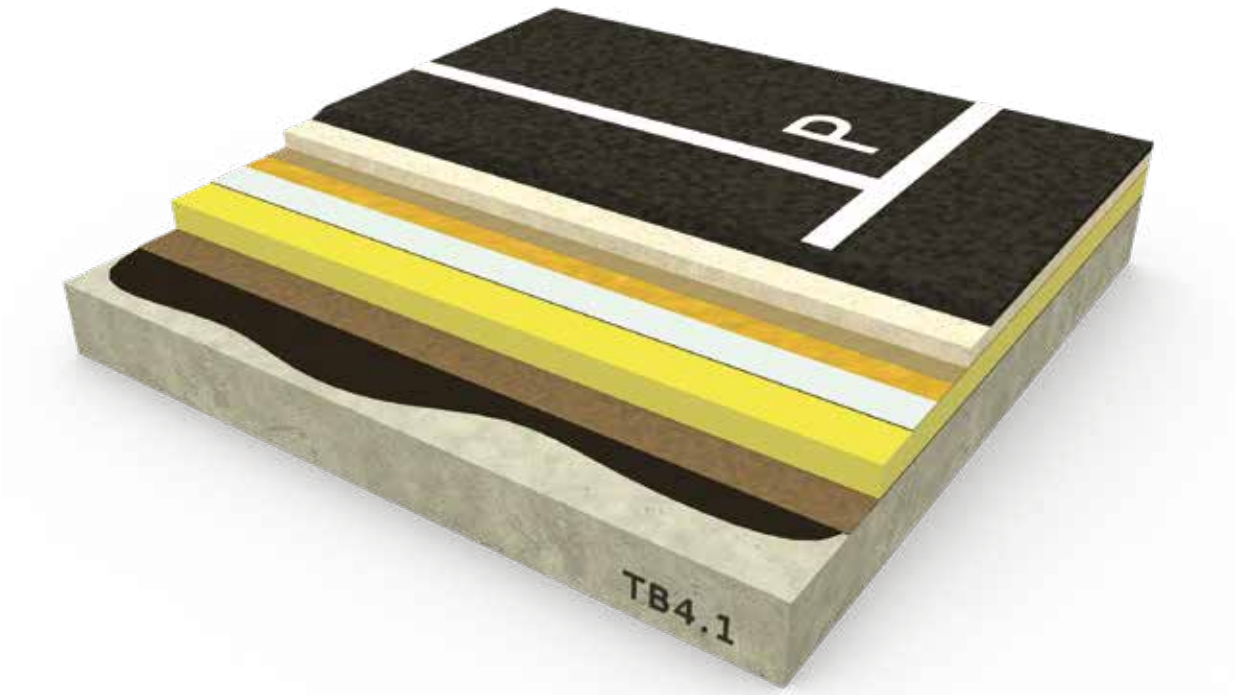


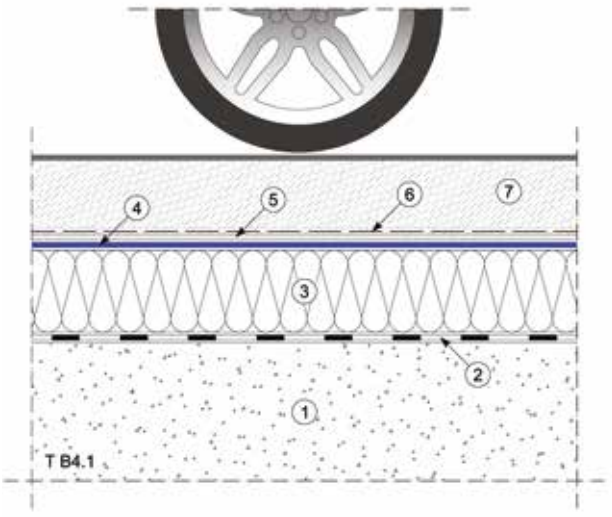


① Structure
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **IDROPRIMER** + **POLYVAP**)
③ Thermal insulation layer
④ **MAPEPLAN® T B** waterproofing membrane
⑤ Protection layer **POLYDREN PP**
⑥ Anti-imbibition layer **MAPEPLAN® PE micro-perforated**
⑦ Tiled floor

BUILD-UP T B4.1

MAPEPLAN® T B membrane - Insulated roof parking

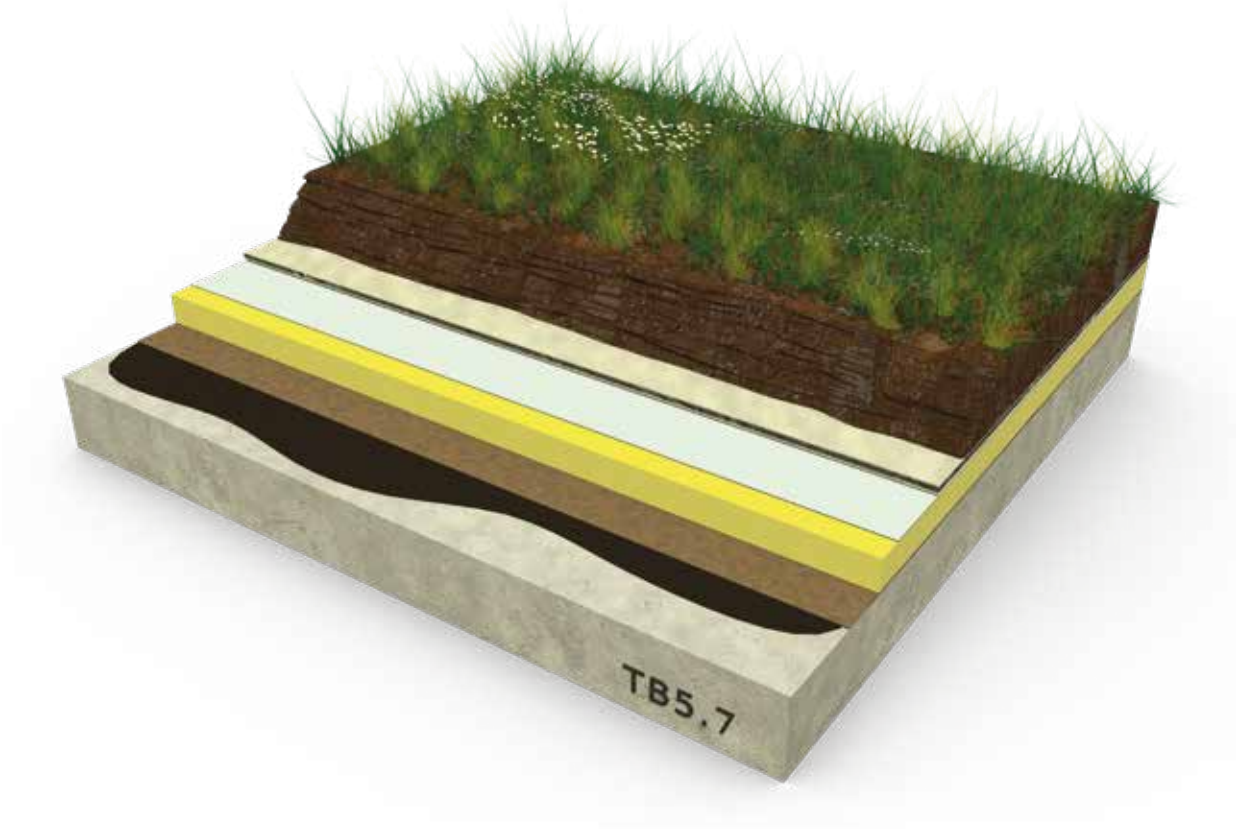


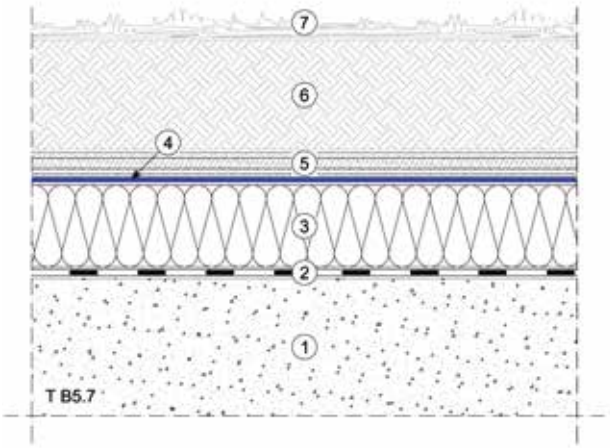


① Structure
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **IDROPRIMER** + **POLYVAP**)
③ Thermal insulation layer
④ **MAPEPLAN® T B** waterproofing membrane
⑤ Protection layer **POLYDREN PP**
⑥ Anti-imbibition layer **MAPEPLAN® PE micro-perforated**
⑦ Concrete screed with wearing course

BUILD-UP T B5.7

MAPEPLAN® T B membrane - Insulated roof with POLYSTUOIA geocomposite drainage

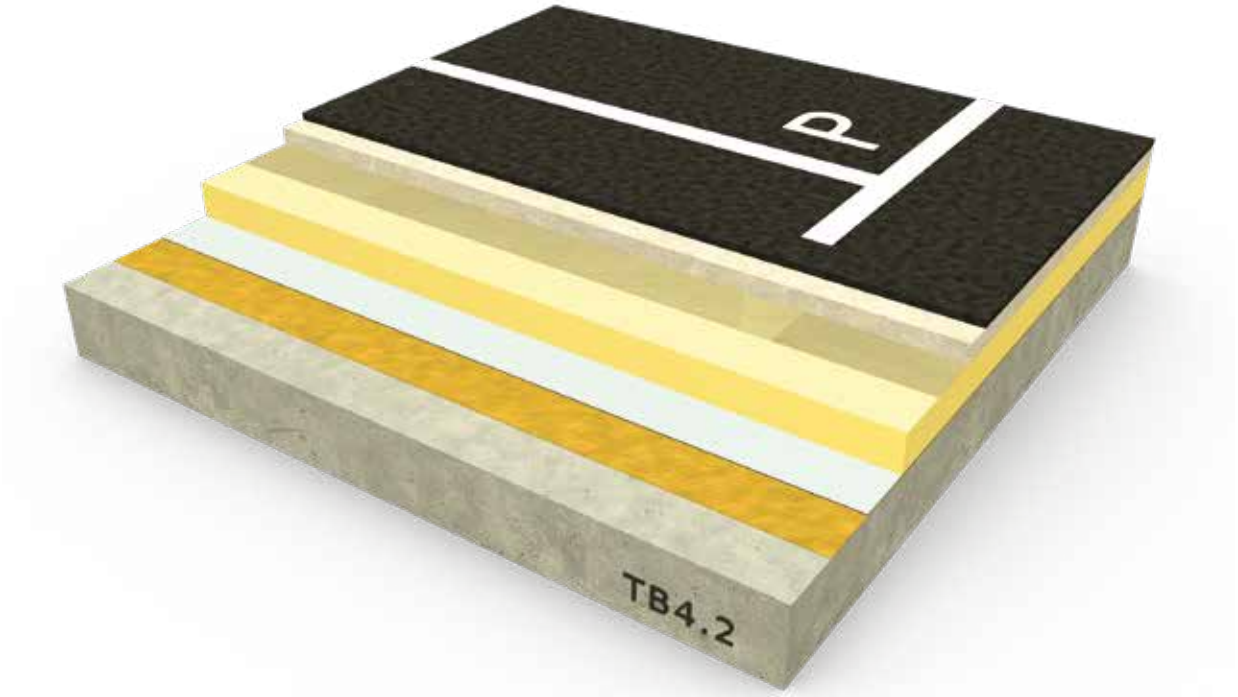


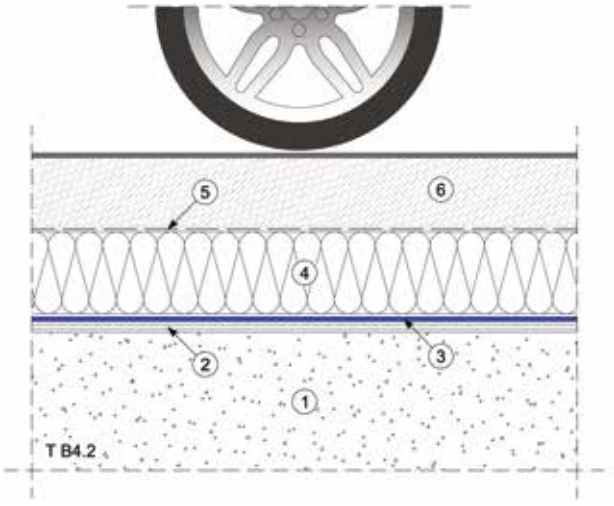


① Structure
② Vapour control layer (e.g. **IDROPRIMER** + **POLYVAP**)
③ Thermal insulation layer
④ **MAPEPLAN® T B** waterproofing membrane - Certificate FLL
⑤ Protection and drainage layer **POLYSTUOIA**
⑥ Growing substrate
⑦ Vegetation

BUILD-UP T B4.2

MAPEPLAN® T B membrane - Inverted roof parking

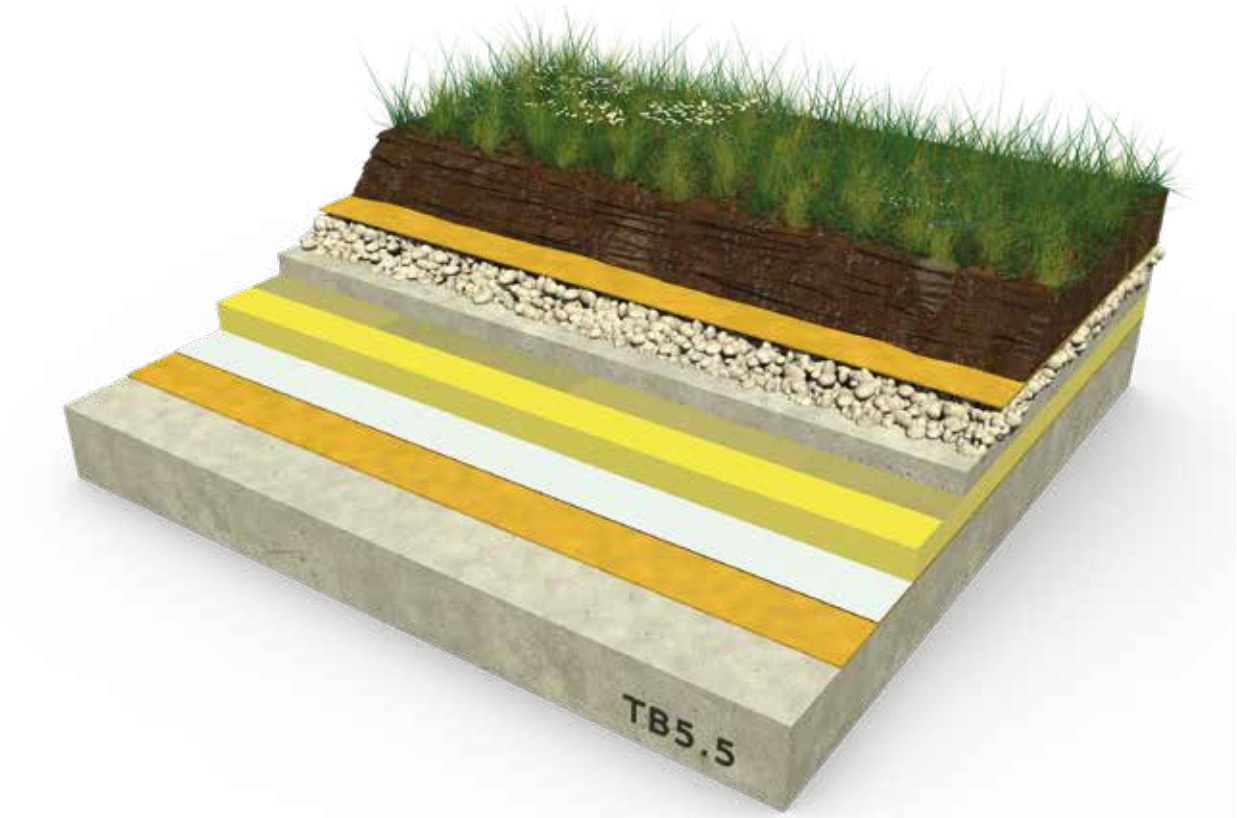


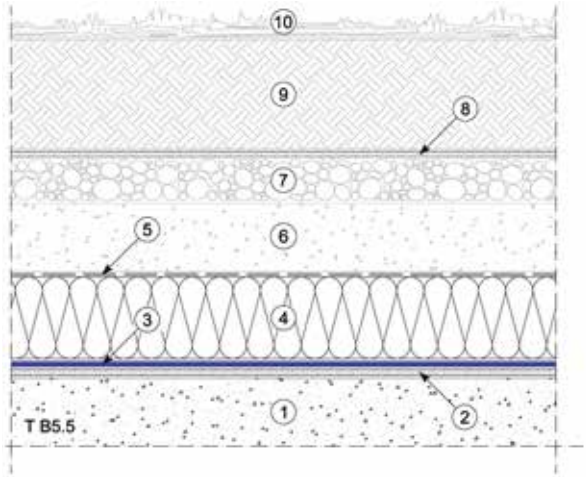


① Structure
② Levelling layer **POLYDREN PP**
③ **MAPEPLAN® T B** waterproofing membrane
④ Thermal insulation layer Extruded Polystyrene XPS
⑤ Anti-imbibition layer **MAPEPLAN® PE micro-perforated**
⑥ Concrete screed with wearing course

BUILD-UP T B5.5

MAPEPLAN® T B membrane - Inverted green roof

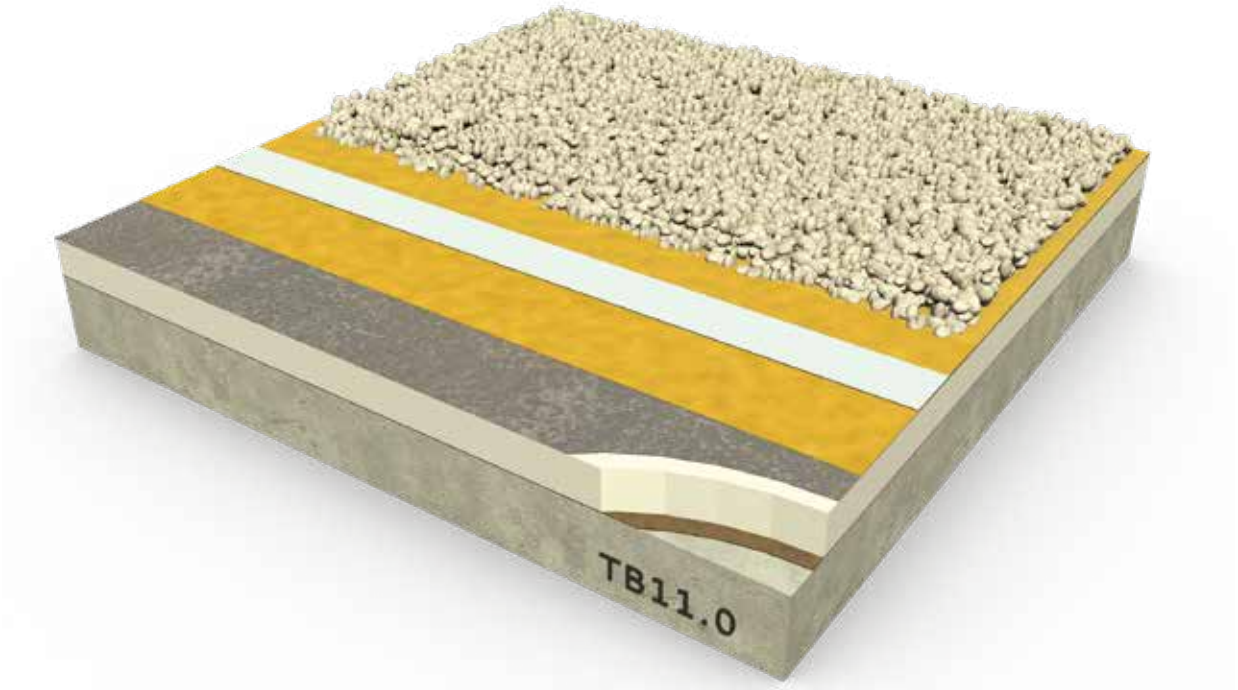


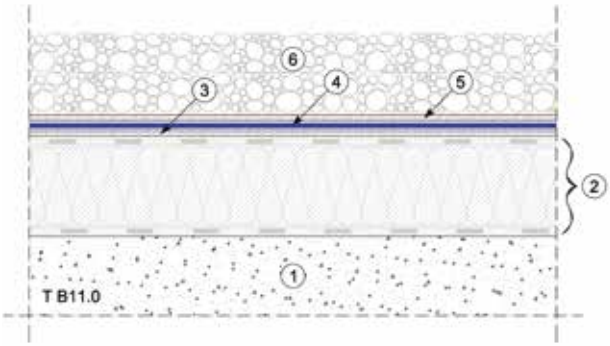


① Structure
② Levelling layer **POLYDREN PP**
③ **MAPEPLAN® T B** waterproofing membrane - Certificate FLL
④ Thermal insulation layer Extruded Polystyrene XPS
⑤ Anti-imbibition layer **MAPEPLAN® PE micro-perforated**
⑥ Protective concrete screed
⑦ Drainage layer (gravel or expanded clay)
⑧ Filter layer **POLYDREN PP**
⑨ Growing substrate
⑩ Vegetation

BUILD-UP T B11.0

MAPEPLAN® T B membrane - Over-roofing refurbishment ballasted with gravel

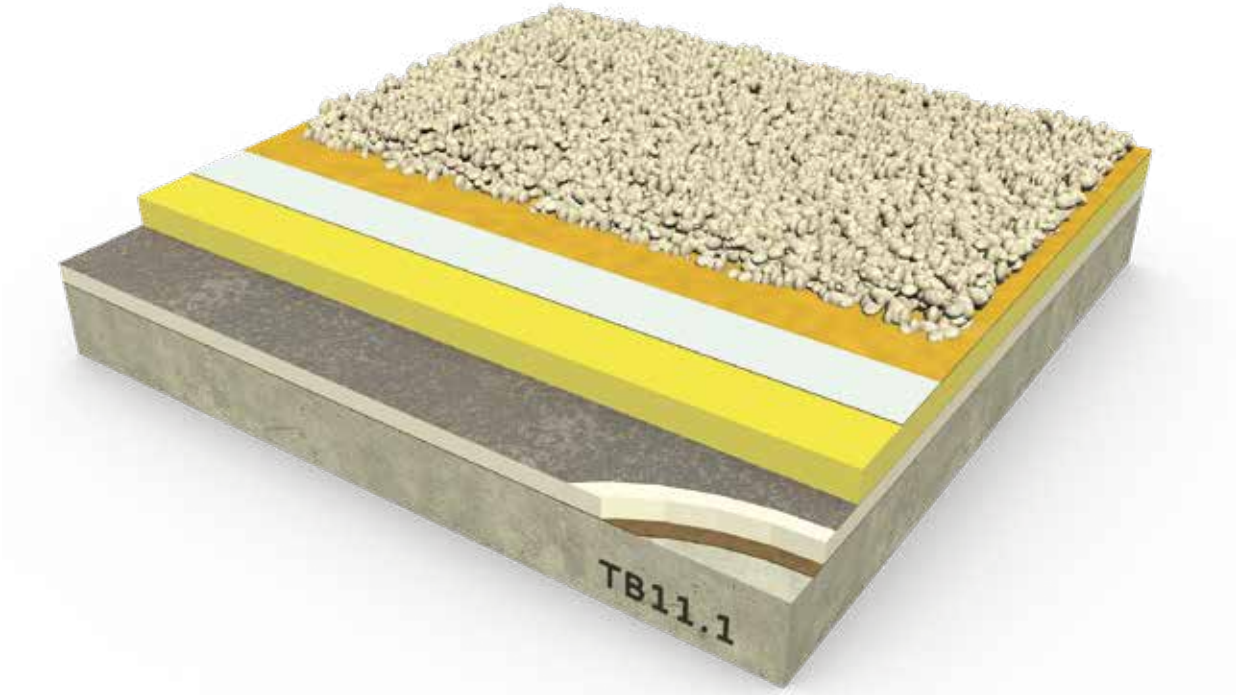


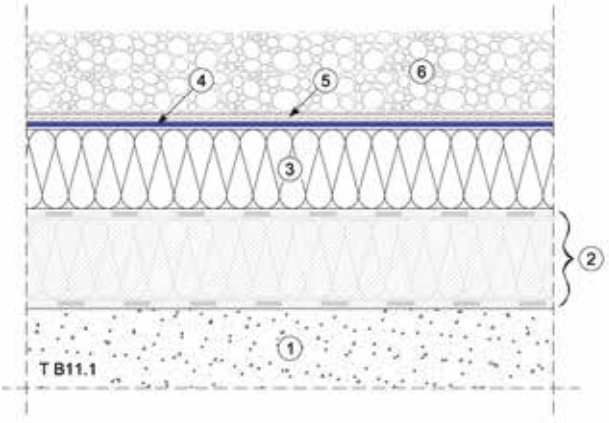


① Structure
② Existing waterproofing build-up
③ Separation layer **POLYDREN PP**
④ **MAPEPLAN® T B** waterproofing membrane
⑤ Protection layer **POLYDREN PP**
⑥ Gravel

BUILD-UP T B11.1

MAPEPLAN® T B membrane - Refurbishment incorporating thermal insulation ballasted with gravel





1. Structure
2. Existing waterproofing membrane
3. Supplementary thermal insulation layer
4. **MAPEPLAN® T B** waterproofing membrane
5. Protection layer **POLYDREN PP**
6. Gravel

ADHERED SYSTEMS

Mapeplan® T Af

Synthetic membrane in flexible polyolefin FPO/TPO with high dimensional stability glass mat reinforcement, fleece backed with 200 g/m² woven-non-woven polyester.

Adhered system for exposed roof installations with specific MAPEPLAN® ADS 100 monocomponent adhesive, or POLYGLUE PU 2K two-component polyurethane adhesive, or MAPEPLAN® ADS 310 monocomponent adhesive for double coating (contact adhesive).

Suitable for installation on non-compatible surfaces.

MAPEPLAN® T Af is produced in one **multi-extrusion coating** process, and insertion of internal reinforcement is without prelamination.

Standard colour of top layer is **Smart White**, the bottom layer is black.

MAPEPLAN® T Af is UV-resistant and may be exposed to all weather conditions.

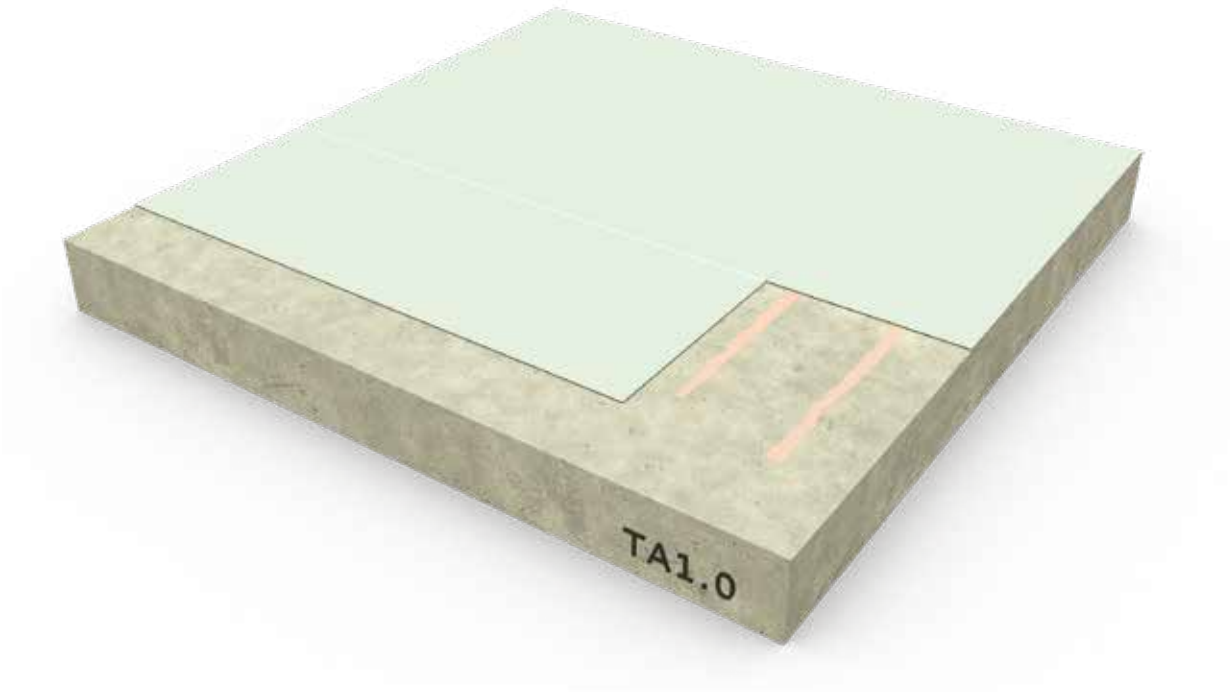
	STANDARD THICKNESSES		
MAPEPLAN® T Af	**1,5 mm**	**1,8 mm**	**2,0 mm**

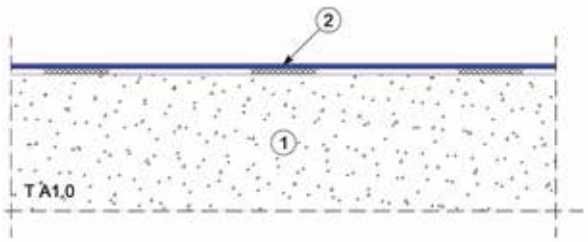
(Other thicknesses are available on request).

CHARACTERISTICS OF MAPEPLAN® T Af:
• High solar reflectance
• Environmental friendly
• Resistant to ageing processes
• Flexible at low temperatures
• Puncture resistant
• Hail resistant
• UV resistant
• High workability and weldability
• Formulation without plasticizers
• Vapour permeable
• Dimensionally stable
• Excellent fire behaviour

BUILD-UP T A1.0

MAPEPLAN® T Af membrane - Non-insulated roof with adhered waterproofing membrane



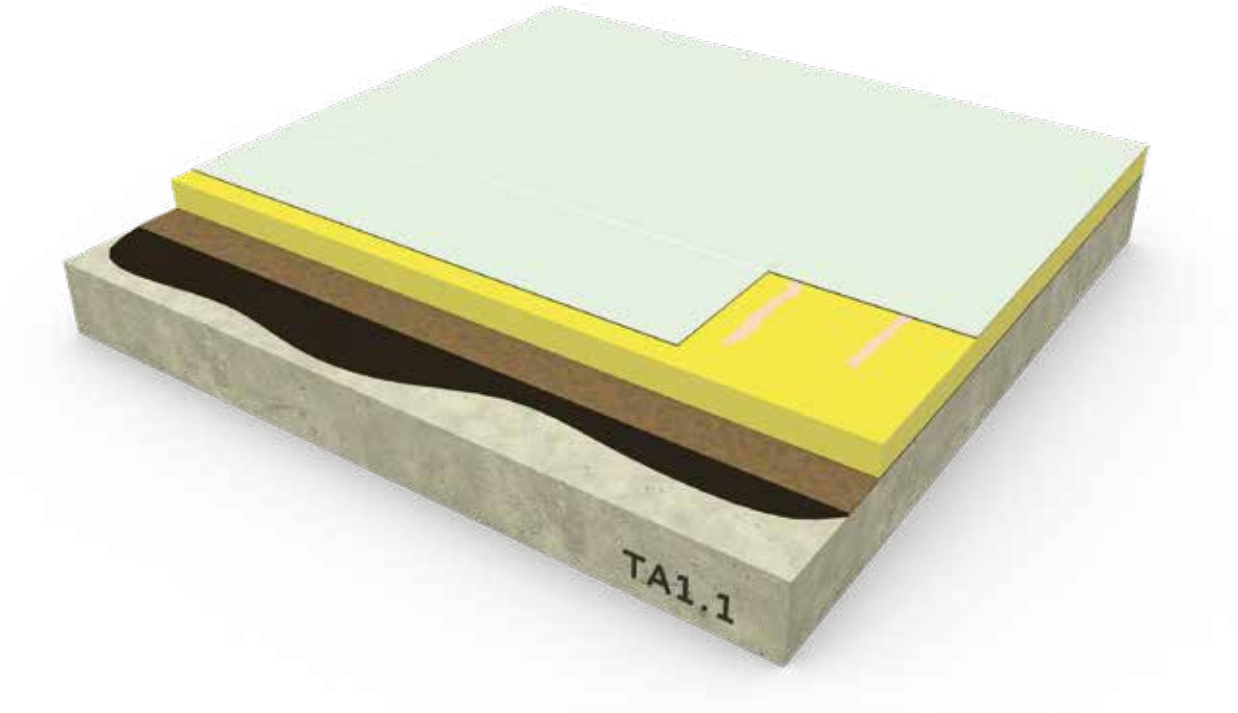


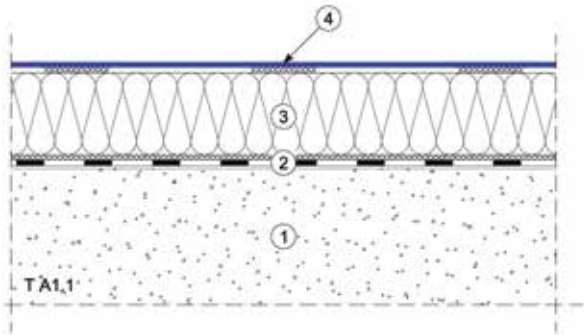
① Structure - Concrete/composite deck
② **MAPEPLAN® T Af** waterproofing membrane glued in strips with adhesive **POLYGLUE PU 2K** *1

NOTE *1**:** Apply only on compatible structure.

BUILD-UP T A1.1

MAPEPLAN® T Af membrane - Insulated roof with adhered thermal insulation layer and waterproofing membrane



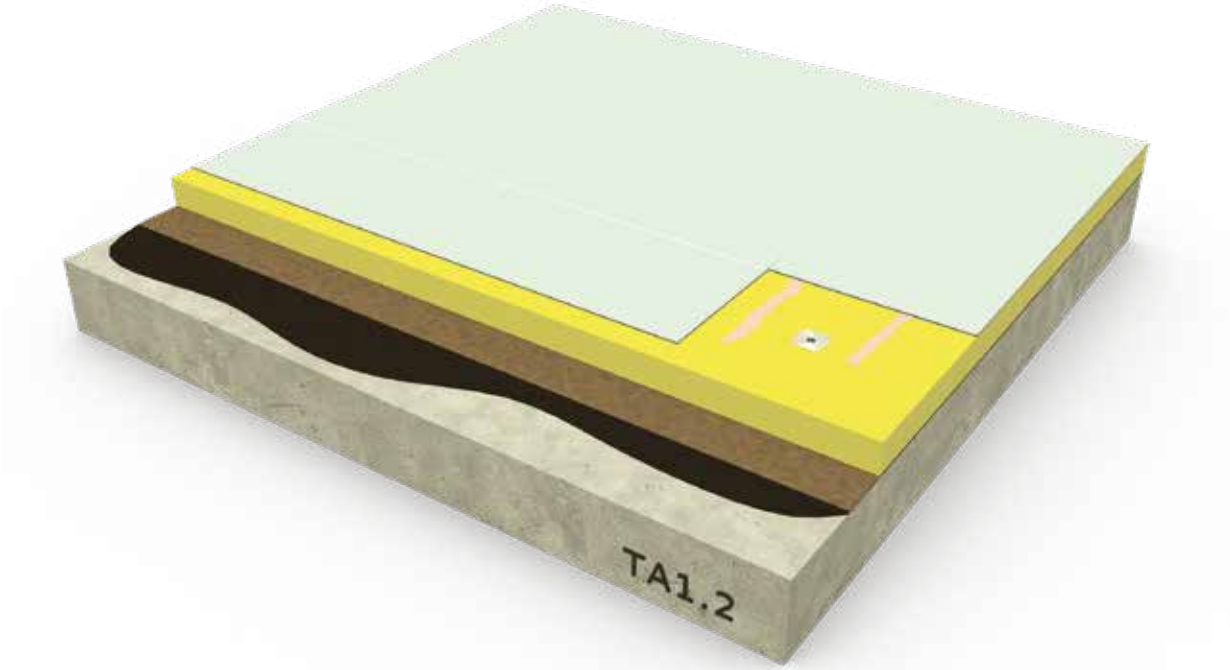


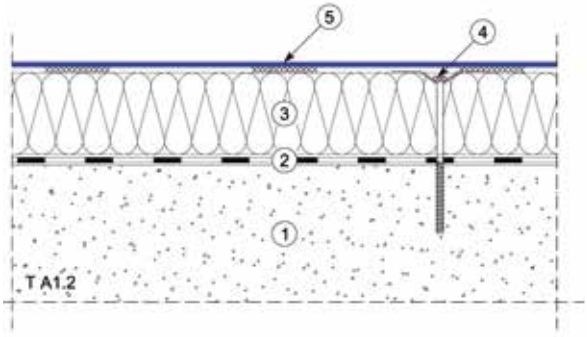
① Structure - Concrete/composite deck
② Fully adhered vapour control layer (e.g. **IDROPRIMER** + **POLYVAP**)
③ Fully adhered thermal insulation layer
④ **MAPEPLAN® T Af** waterproofing membrane glued in strips with adhesive **POLYGLUE PU 2K** *1

NOTE *1: Apply only on compatible insulation.

BUILD-UP T A1.2

MAPEPLAN® T Af membrane - Insulated roof with mechanical fastened thermal insulation layer and adhered waterproofing membrane



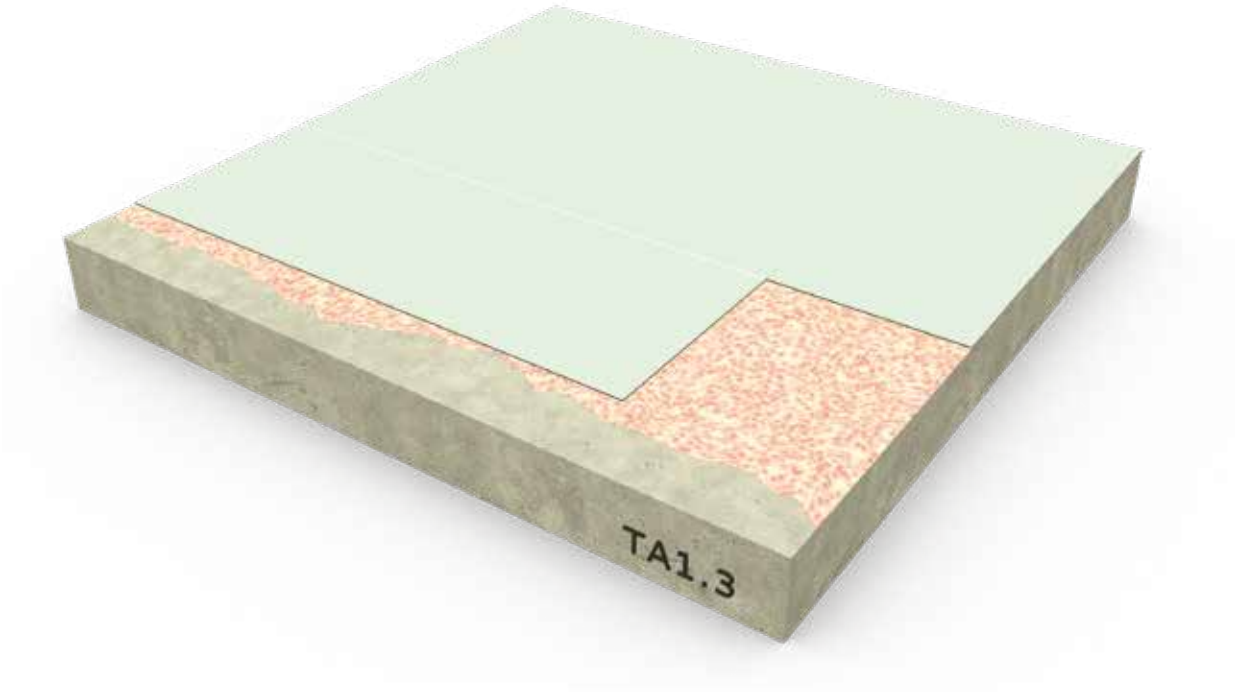


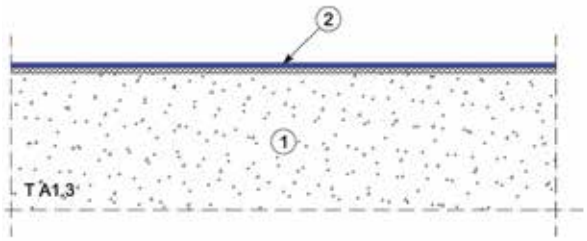
① Structure – Concrete/composite deck
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **IDROPRIMER** + **POLYVAP**)
③ Mechanical fastened thermal insulation layer
④ Mechanical fastening of insulation
⑤ **MAPEPLAN® T Af** waterproofing membrane glued in strips with adhesive **POLYGLUE PU 2K** *1

NOTE *1**:** Apply only on compatible insulation.

BUILD-UP T A1.3

MAPEPLAN® T Af membrane - Non-insulated roof with adhered waterproofing membrane



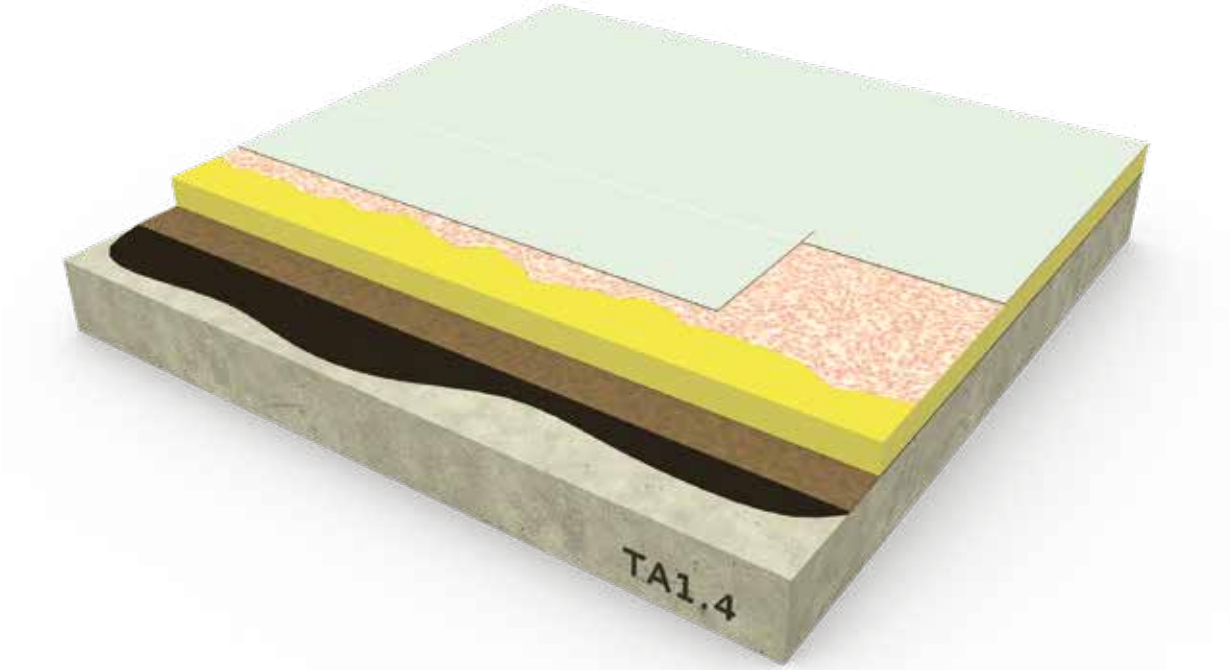


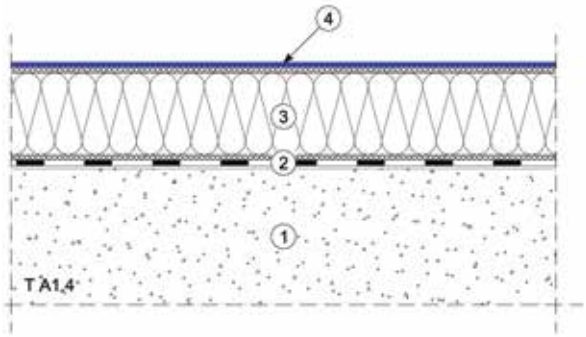
① Structure - Concrete/composite deck
② **MAPEPLAN® T Af** waterproofing membrane fully adhered with adhesive **MAPEPLAN® ADS 100** *1 or **MAPEPLAN® ADS 310** *1

NOTE *1**:** Apply only on compatible structure.

BUILD-UP T A1.4

MAPEPLAN® T Af membrane - Insulated roof with fully adhered thermal insulation layer and waterproofing membrane



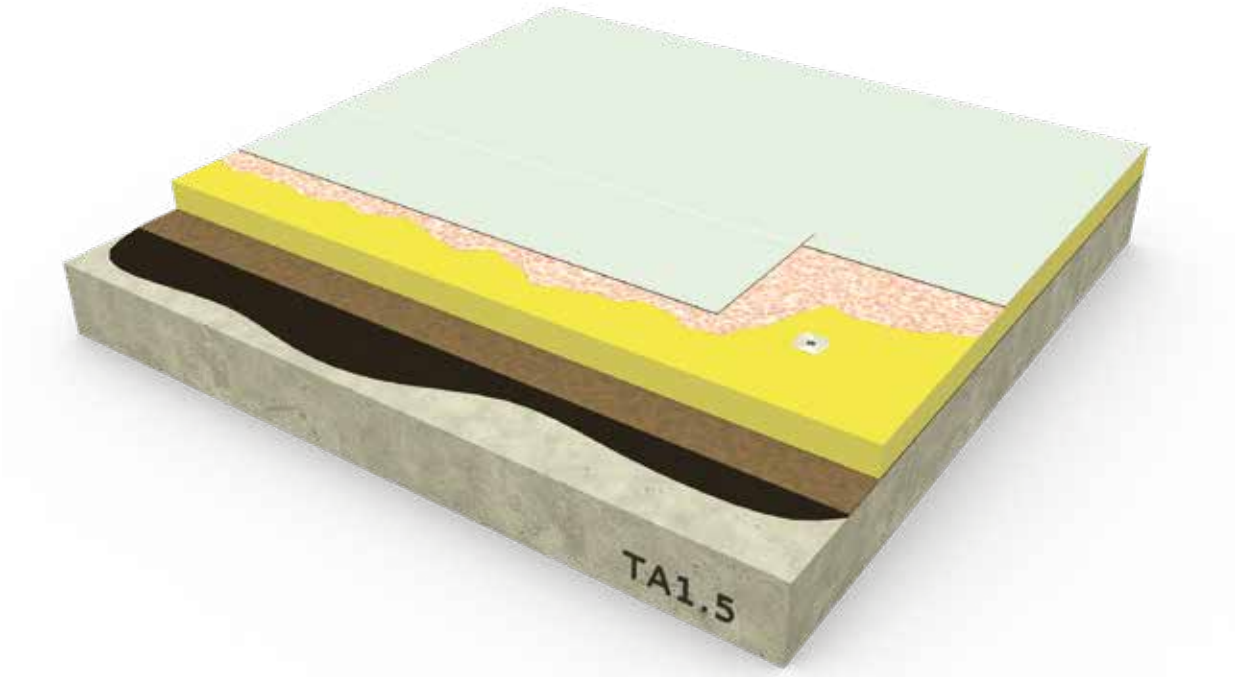


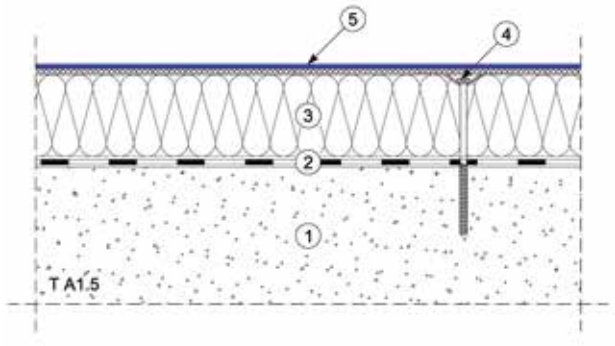
① Structure - Concrete/composite deck
② Vapour control layer (e.g. **IDROPRIMER** + **POLYVAP**)
③ Fully adhered thermal insulation layer
④ **MAPEPLAN® T Af** waterproofing membrane fully adhered with adhesive **MAPEPLAN® ADS 100** *1 or **MAPEPLAN® ADS 310** *1

NOTE *1**:** Apply only on compatible insulation.

BUILD-UP T A1.5

MAPEPLAN® T Af membrane - Insulated roof with mechanical fastened thermal insulation layer and adhered waterproofing membrane



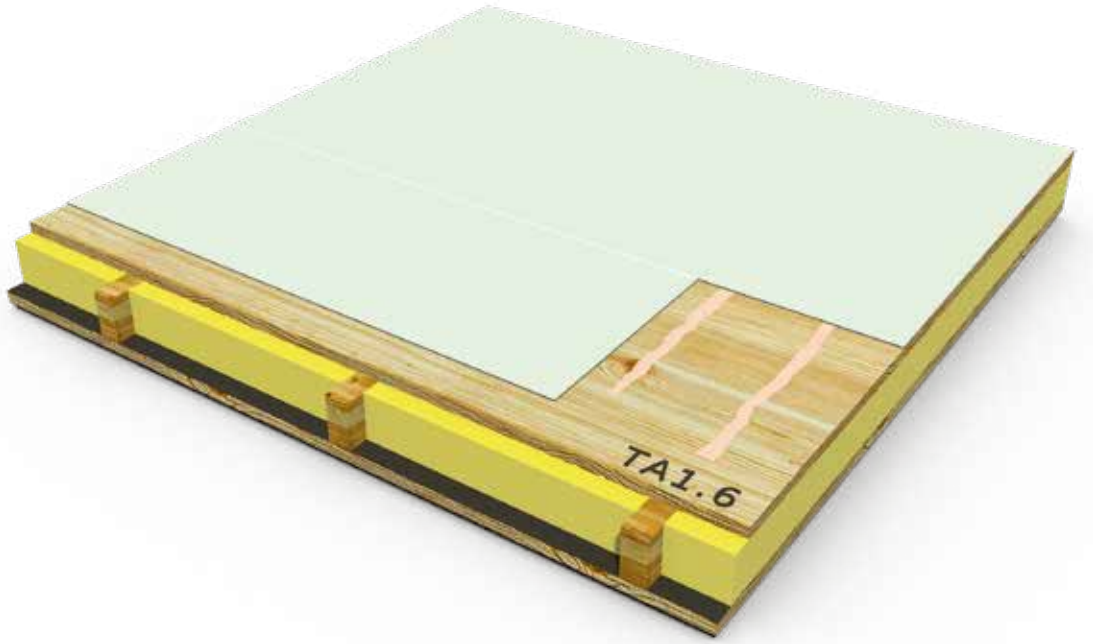


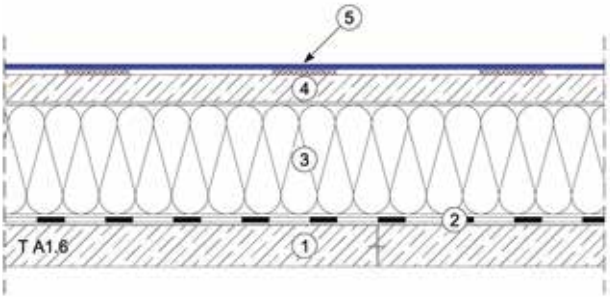
① Structure - Concrete/composite deck
② Vapour control layer (e.g. **MAPEPLAN® VB PE SD 220** or **IDROPRIMER** + **POLYVAP**)
③ Mechanical fastened thermal insulation layer
④ Mechanical fastening of insulation
⑤ **MAPEPLAN® T Af** waterproofing membrane fully adhered with adhesive **MAPEPLAN® ADS 100** *1 or **MAPEPLAN® ADS 310** *1

NOTE *1: Apply only on compatible insulation.

BUILD-UP T A1.6

MAPEPLAN® T Af membrane - Insulated roof with double-sheathed wooden deck and adhered waterproofing membrane



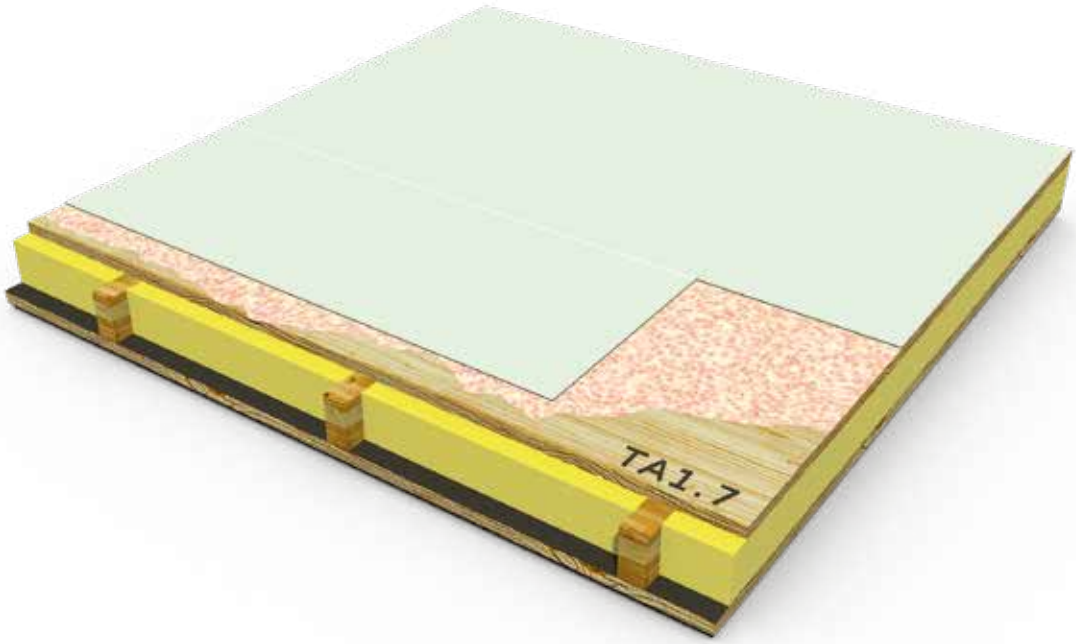


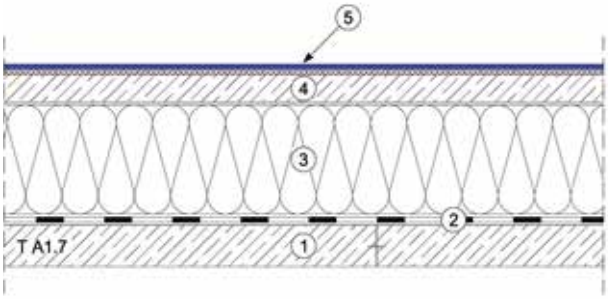
① Structure - 1st wooden board
② Vapour control layer (e.g. **MAPEPLAN® EVO SK** or **IDROPRIMER** + **POLYVAP**)
③ Thermal insulation layer
④ 2nd wooden board
⑤ **MAPEPLAN® T Af** waterproofing membrane glued in strips with adhesive **POLYGLUE PU 2K** *1

NOTE *1: Apply only on compatible structure.

BUILD-UP T A1.7

MAPEPLAN® T Af membrane - Insulated roof with double-sheathed wooden deck and adhered waterproofing membrane



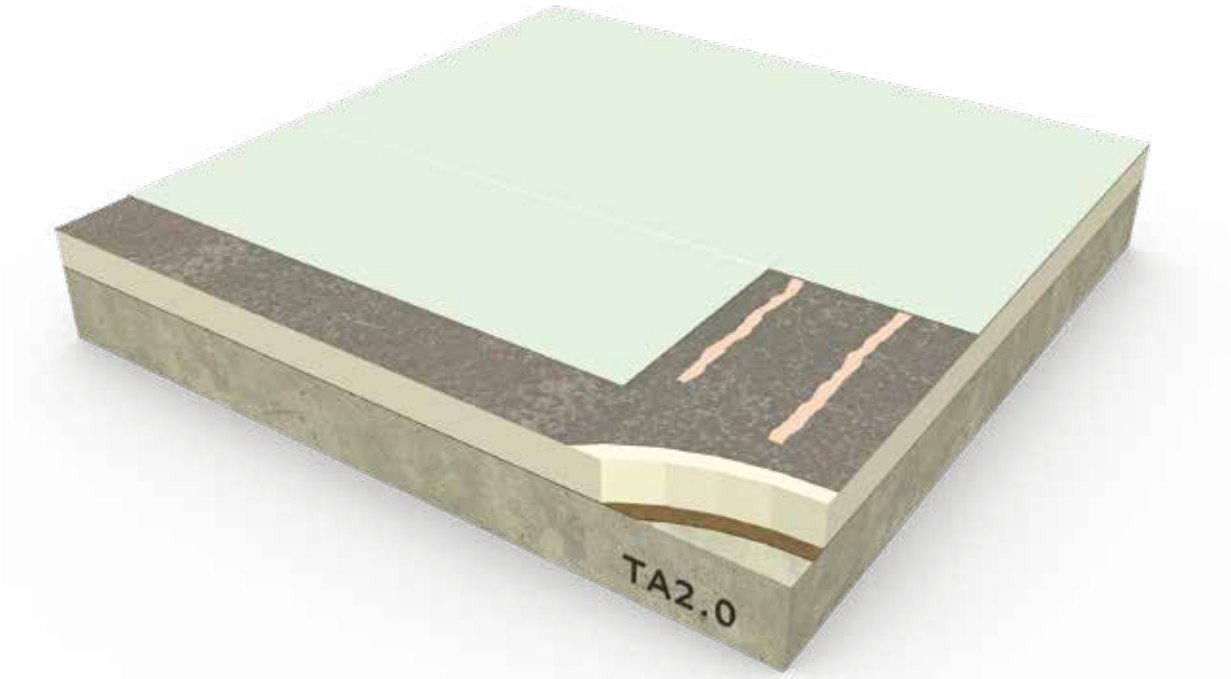


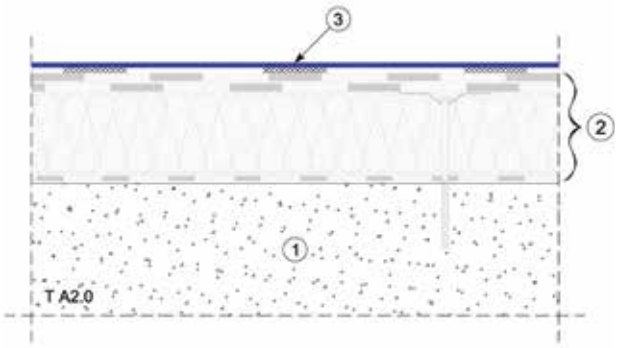
① Structure - 1st wooden board
② Vapour control layer (e.g. **MAPEPLAN® EVO SK** or **IDROPRIMER** + **POLYVAP**)
③ Thermal insulation layer
④ 2nd wooden board
⑤ **MAPEPLAN® T Af** waterproofing membrane fully adhered with adhesive **MAPEPLAN® ADS 100** *1 or **MAPEPLAN® ADS 310** *1

NOTE *1: Apply only on compatible structure.

BUILD-UP T A2.0

MAPEPLAN® T Af membrane - Over-roofing refurbishment above bituminous membrane





① Structure
② Existing waterproofing build-up with bituminous membrane
③ **MAPEPLAN® T Af** waterproofing membrane glued in strips with adhesive **POLYGLUE PU 2K**

5. Accessories

MAPEPLAN® T WALKWAY

Protection synthetic membrane in FPO/TPO with non-slip textured surface.
MAPEPLAN® T WALKWAY is UV-resistant and may be exposed to all weather conditions.
Standard thickness: 1,8 mm.
Colour: grey.

MAPEPLAN® T D

Unreinforced synthetic membrane in FPO/TPO, suitable for details and building particulars.
MAPEPLAN® T D is UV-resistant and may be exposed to all weather conditions.
Standard thickness: 1,5 mm.
Colour: Smart White.

MAPEPLAN® EVO SK

Vapour control layer made of aluminum foil.
Vapour diffusion resistance - Sd value: 5000 m.
Standard thickness: 0,20 mm.
Colour: blue.

MAPEPLAN® VB PE

Vapour control layer and for generic uses.
Vapour diffusion resistance - Sd value: 87 m.
Standard thickness: 0,30 mm.
Colour: transparent.

MAPEPLAN® VB PE SD 220

Vapour control layer and for generic uses in polyethylene.
Vapour diffusion resistance - Sd value: 220 m.
Standard thickness: 0,25 mm.
Colour: blue.

MAPEPLAN® PE micro-perforated

Anti-imbibition layer and for generic uses in polyethylene with micro-perforation.
Standard thickness: 0,10 mm.
Colour: transparent.

POLYDREN PP

Separation, protection, filter and levelling layers in woven-non-woven polypropylene 100%.

PREFABRICATED MAPEPLAN® T ACCESSORIES

Inside and outside corners, outlets, connections and other special prefabricated parts.

MAPEPLAN® T METAL SHEET

Zinc steel sheet having the surface laminated with MAPEPLAN® T FPO/TPO waterproofing membrane.
It is resistant to weathering and UV rays.
Used as press-formed finishing profiles and flashings.

MAPEPLAN® METALBAR - MAPEPLAN® T CORD

Metal fixing profile in galvanized carbon steel, prepunched, with oval perforations, to be used as anchoring element for MAPEPLAN® T FPO/TPO waterproofing membranes and anti-tear cord close to the prepunched profiles.

MAPEPLAN® T SEAM PREP

A solvent based thinner, specially formulated for the cleaning and for the preparation of the overlaps before welding of MAPEPLAN® T FPO/TPO waterproofing membranes.

MAPEPLAN® ADS 300

Policloroprenic monocomponent solvent adhesive for double coating (contact adhesive), to bond FPO/TPO synthetic waterproofing membranes MAPEPLAN® T on vertical surfaces.

MAPEPLAN® ADS 310

One component solvent adhesive for double coating (contact adhesive), to bond FPO/TPO synthetic waterproofing membranes MAPEPLAN® T, supplied in pressurized canister for spray application.

MAPEPLAN® ADS 100

Solvent free polyurethane monocomponent adhesive for bonding FPO/TPO MAPEPLAN® T Af synthetic waterproofing membranes with non-woven polyester fleece backing.

POLYGLUE PU 2K

Fast drying two-component polyurethane adhesive, free from solvents, for gluing insulating panels and waterproofing synthetic membranes such as MAPEPLAN® T Af in FPO/TPO, fleece backed with woven-non-woven polyester.

The delivery program is complete with all accessories to perform the MAPEPLAN® T roofing system.

RELATED TECHNICAL DOCUMENTS

The technical literature mentioned below can be accessed via the website www.polyglass.com

Use, inspection and maintenance SYNTHETIC WATERPROOFING MEMBRANES MAPEPLAN® T FPO/TPO

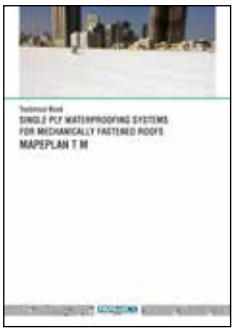
This document contains more in-depth technical information on the use, inspection and maintenance of MAPEPLAN® T waterproofing membranes.

MAPEPLAN® T FPO/TPO installation manual

This document contains correct, detailed instructions on installing and laying MAPEPLAN® T waterproofing membranes.

Technical book WATERPROOFING SYSTEMS FOR GREEN ROOFS MAPEPLAN® T B

This document provides technical, design and construction information and solutions for the correct installation of green roof waterproofing and thermal insulation systems, with the use of MAPEPLAN® T B flexible polyolefin (FPO/TPO) synthetic waterproofing membranes.



Technical book SINGLE PLY WATERPROOFING SYSTEMS FOR MECHANICALLY FASTENED ROOFS MAPEPLAN® T M

This document provides technical, design and construction information and solutions for the correct installation of single ply waterproofing systems for mechanically fastened roofs, with the use of MAPEPLAN® T M flexible polyolefin (FPO/TPO) synthetic waterproofing membranes.

Standard roofing systems ROOFING AND WATERPROOFING SYNTHETIC MEMBRANES MAPEPLAN® T FPO/TPO

This document contains the collection of some standard roofing systems that can be realized with MAPEPLAN® T waterproofing membranes.

Standard roofing details ROOFING AND WATERPROOFING SYNTHETIC MEMBRANES MAPEPLAN® T FPO/TPO

This document contains the collection of some standard roofing details that can be realized with MAPEPLAN® T waterproofing membranes.

NOTE

Technical Book
ROOFING SYSTEMS
MAPEPLAN® T FPO/TPO

MPY 2120030 - 09/21

MAPEI®

www.mapei.com

MAPEPLAN® range is produced by:

POLYGLASS® Q

MAPEI GROUP

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