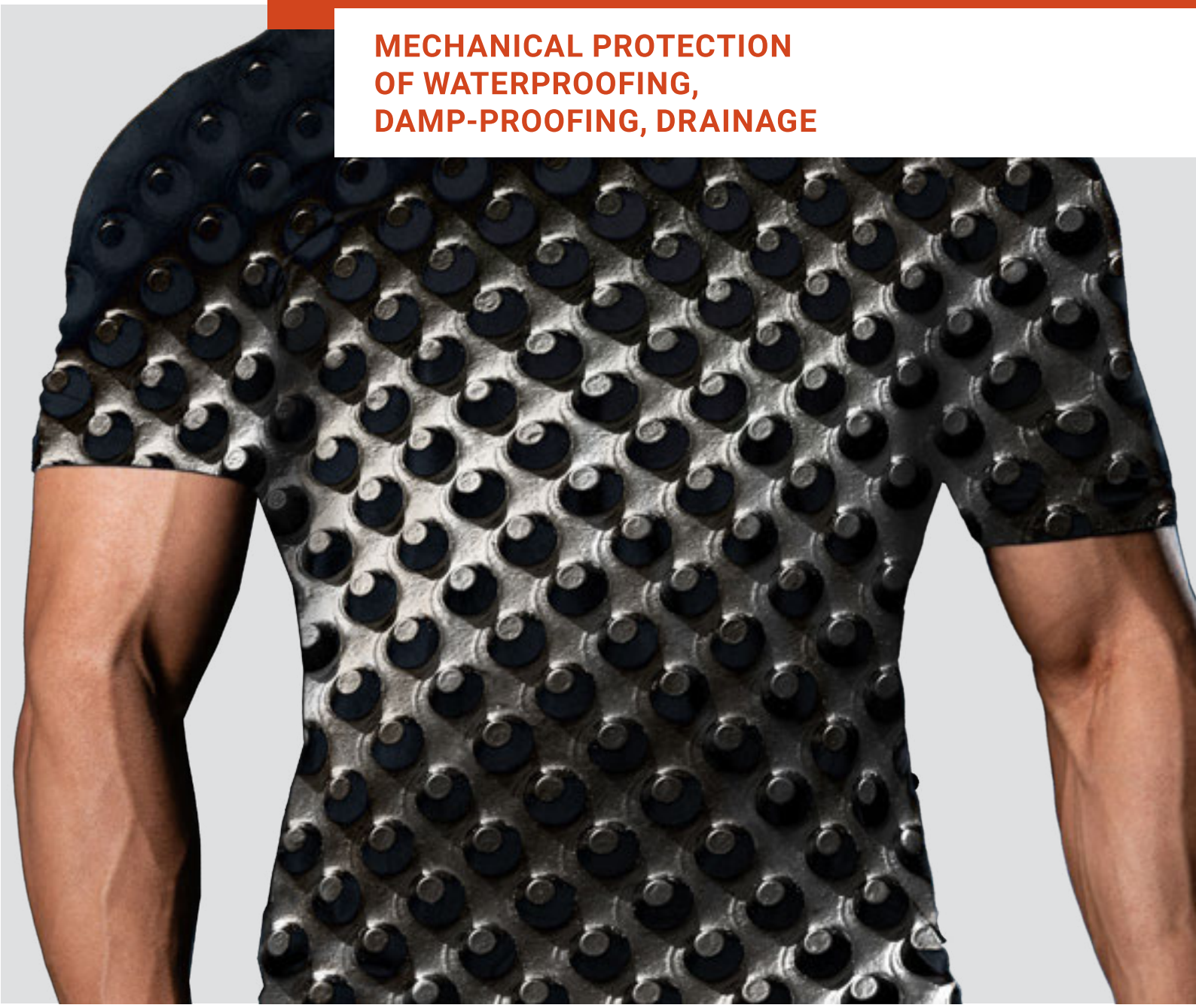
TeMa
Building
Solutions

Foundations, underground structures and flat roof applications

MECHANICAL PROTECTION OF WATERPROOFING, DAMP-PROOFING, DRAINAGE



Company

Building Solutions is the TeMa business unit that develops technologies and products designed for the world of residential and commercial building, and civil engineering projects. A division with a strong technical focus that aims to provide its customers with the most effective solutions by delivering products packed with specialist content. This catalogue presents membranes and geosynthetics for the mechanical protection of waterproofing, damp-proofing, and rainwater and groundwater drainage in foundations, underground structures and flat roof applications.

Drawing on experience gained from our global presence in over 60 different countries, we provide the market and various professionals in the industry with products tested in-house in the TeMa laboratories, as well as a steady stream of innovations developed right here in our R&D centre to improve product performance

www.temabuilding.com

Group

IWIS
Insulation Waterproofing Industrial Systems

IWIS is a "thinking holding company" established to effi ciently manage its member companies and enhance all its various aspects: production, commercial, operational, logistics and R&D.

It is called a “thinking holding” because it is a group of companies that understands the critical thinking and ideas required to meet the diverse expectations and demands of an entire chain of professionals, retailers, installers and waterproofers.

With 17 factories, 11 subsidiaries, distributors and a sales network covering 86 countries, IWIS is a reliable global supply partner, providing an extensive range of products and systems for the building and construction industry. With its product development clearly focused on research, IWIS offers products and systems that always make use of the latest technologies.

Contents

Underground structure protection systems

The climate is changing

With exceptional rain events increasing in frequency and bringing a deluge of water over a short period, ensuring buildings and structures in contact with the ground are suitably protected is essential.
These new rain patterns result in sudden changes in the amount of runoff and an increase in groundwater levels.

Protection of structures and efficient drainage

In this context, below-grade structures can become fragile systems that need to be reassessed with an appropriate systemic engineering approach.
This is an aspect of paramount importance, especially when dealing with hydrostatic pressure.

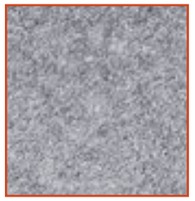
Schematically then, the phenomena that need controlling will be:

- descending water resulting from precipitation
- capillary rising water and/or damp
- groundwater
- condensation that, because of the difference in temperature between the ground and interiors, forms on the cold walls of basements that sit up against the ground in question

In addition, in certain situations, another factor to take into account is that you may be dealing with a combination of the above phenomena.

SLIMY SOIL
DRAINAGE: poor

SANDY SOIL
DRAINAGE: medium



GRAVELLY SOIL
DRAINAGE: very good

Critical issues

LARGE QUANTITIES OF WATER OVER A SHORT PERIOD

Resulting critical issues for the *local area*:
- considerable amounts of runoff
- rising groundwater levels.

Resulting critical issues for the structures:
- significant hydrostatic pressure
- significant water seepage issues.

TeMa Building Solutions

New opportunities for suitable solutions

TeMa Building supplies products for:

- **MECHANICAL PROTECTION OF WATERPROOFING**
  systems designed to boost the general level of protection, delivering long-term **reliability** and **longevity**.
- **WATER DRAINAGE**
  in order to reduce water loading on underground structures - both vertical and horizontal - in contact with the ground, and when dealing with water.

International certifications

All **TeMa Building** membranes are CE marked in compliance with European standards

Certificate	Certificate Holder	Product	Standard	Functions
CE	TeMa Italia TeMa Iberica TeMa North	Studded membrane	13967	Aeration Protection
CE	TeMa Italia TeMa Iberica TeMa North	Studded membrane laminated to a geotextile	13252	Separation Filtration Drainage
Avis tecnique	TeMa Iberica	Studded membrane	13967	Protection Drainage
Avis tecnique	TeMa Iberica	Studded membrane laminated to a geotextile	13252	Protection Drainage
ICC damp proofing	TeMa Italia	Studded membrane + Studded membrane laminated to a geotextile	International building code + Internatinale residential code	Damp-proofing
ICC waterproofing	TeMa Italia	Studded membrane + Studded membrane laminated to a geotextile	International building code + Internatinale residential code	Waterproofing
CCMC drainage	TeMa Italia	Studded membrane	Canadian "National Building code"	Drainage
CCMC damp proofing	TeMa Italia	Studded membrane	Canadian "National Building code"	Damp-proofing

01.
WATER SEEPAGE

02.
DISPUTES IN BUILDING SECTOR

03.
PEACE OF MIND WITH COMPLIANCE AND CERTIFICATIONS

Waterproofing protection is our products' core function. Research carried out in the construction market has revealed that most disputes in the building sector are attributable to damage caused by water seepage and damp in below-grade structures.

This is why we are committed to developing products and systems designed to protect waterproofing during the backfilling process, providing all the necessary certifications and allowing customers to draw on our decades of experience, with suggestions for their application.

The value of **TeMa Building** products for below-grade structures

Application versatility

The extensive range of **TeMa Building** products for below-grade structures can be used in both vertical and horizontal applications. Some of the main applications are:

- Foundations and basement walls
- Below-grade and retaining walls
- Diaphragm walls, soldier pile walls
- Green surfaces
- Paved pedestrian surfaces
- Drivable surfaces
- Ballasted flat roofs.

The value of TeMa Building products for below-grade structures lies in the assurance of consistent safety and reliability over the products' service life, with the following advantages:

1. They mechanically protect waterproofing, preventing damage during the backfilling process.
2. In the absence of waterproofing, they provide effective damp-proofing.
3. In the event waterproofing is applied incorrectly, damaged, or there is a break in continuity, they stop water ingress, as they reduce hydrostatic pressure on the surface.
4. They produce a slight ventilation effect if laid with the studs facing in.

All membranes featuring geotextiles serve the following additional functions:

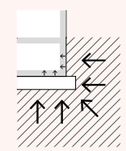
5. Filtration and separation.
6. Drainage, thus removing water.

Protection of waterproofing during the backfilling process

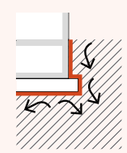
TeMa Building studded membranes stand out for their excellent mechanical strength, which makes them invaluable in protecting waterproofing from puncture damage, absorbing the impact of material being handled during the backfilling and soil compaction process.

Water drainage

Rainwater and/or groundwater normally present in the soil must be directed away and removed to keep the structure safe.
TeMa Building geocomposites serve the dual purpose of filtering and draining water, dissipating its energy resulting from the hydrostatic load. The water will then be removed permanently by a suitably positioned collection pipe connected to a drainage system. Provided the system is planned properly during the design stage, it ensures the continued proper functioning of the structure, which might otherwise be subjected to significant hydrostatic pressure, with the ensuing risk of seepage.



A. **GREATER** HYDROSTATIC PRESSURE



B. **LESS** HYDROSTATIC PRESSURE

Research, development and certified quality

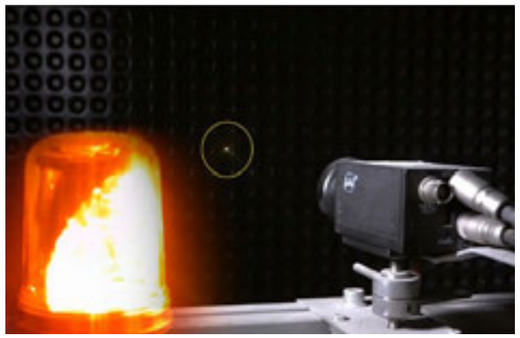
Laboratory

The effectiveness of continuous research.

Constant commitment to research is a hallmark of TeMa's success. Our laboratory is the heart of the R&D department, where **we work on new solutions and technologies every day** in order to offer our customers cutting-edge products. We have developed countless **international patents** and our experimentation is ongoing.

Product quality is further ensured by **testing** to check longevity, compressive strength, drainage capacity under the most critical conditions...
These are just some of the properties tested by the TeMa laboratory daily to ensure that our products meet strict pre-established quality standards.

It is in this relentless pursuit of excellence that TeMa has chosen to implement a UNI EN ISO 9001-certified quality system designed to ensure top performance across the whole production process. In compliance with the CPD (Construction Product Directive) 89/106/EEC, the TeMa product ranges have followed the procedure to be awarded the CE mark.



All aspects of work are monitored and continuously optimized: design, manufacturing, and pre- and after-sales support. Weighing ourselves up against the most accredited independent laboratories drives us to continuously improve test and inspection procedures.

THE TeMa LAB OFFERS:

- → Research and development
- → Testing on raw materials
- → Inspection of finished products and prototypes for quality and performance
- → Compilation and updating of product Safety Data Sheets
- → Quality control
- → Certifications
- → Production process supervision and control
- → Random testing of production lots and compliance checks

Technical department

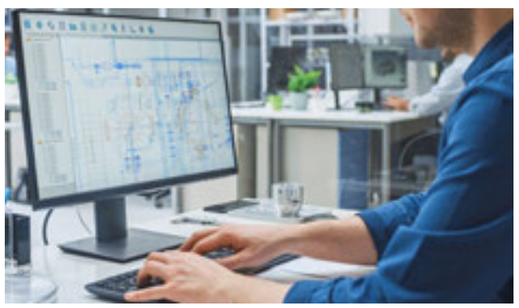
The solid backing of a solid team.

TeMa has an in-house technical department capable of assisting customers, from identifying the right solution through to determining the best installation procedures for each specific application.

Our engineers support the sales network and help customers assess one or more products identified as candidates for solving a given technical issue and meeting a project's specifications.

Following a preliminary analysis of all the variables involved, they provide all the relevant information on the product's technical properties, illustrating product certifications and installation procedures.

They are with you every step of the way to provide advice and tangible support.



Areas of application

01. RESIDENTIAL

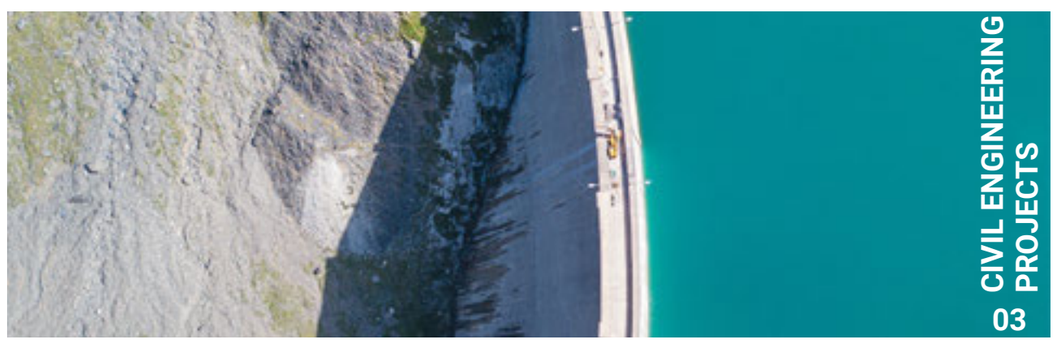
Securing your comfort zone.
Residential buildings often extend below ground level and have additional spaces set up as cellars or garages across a single basement level. The base on which the foundations are built is usually at a depth of around 3 m. We have developed materials designed to offer unbeatable protection for foundations and underground structures. And that's not all: they are also specifically suited to application on flat roofs and other similar surfaces.

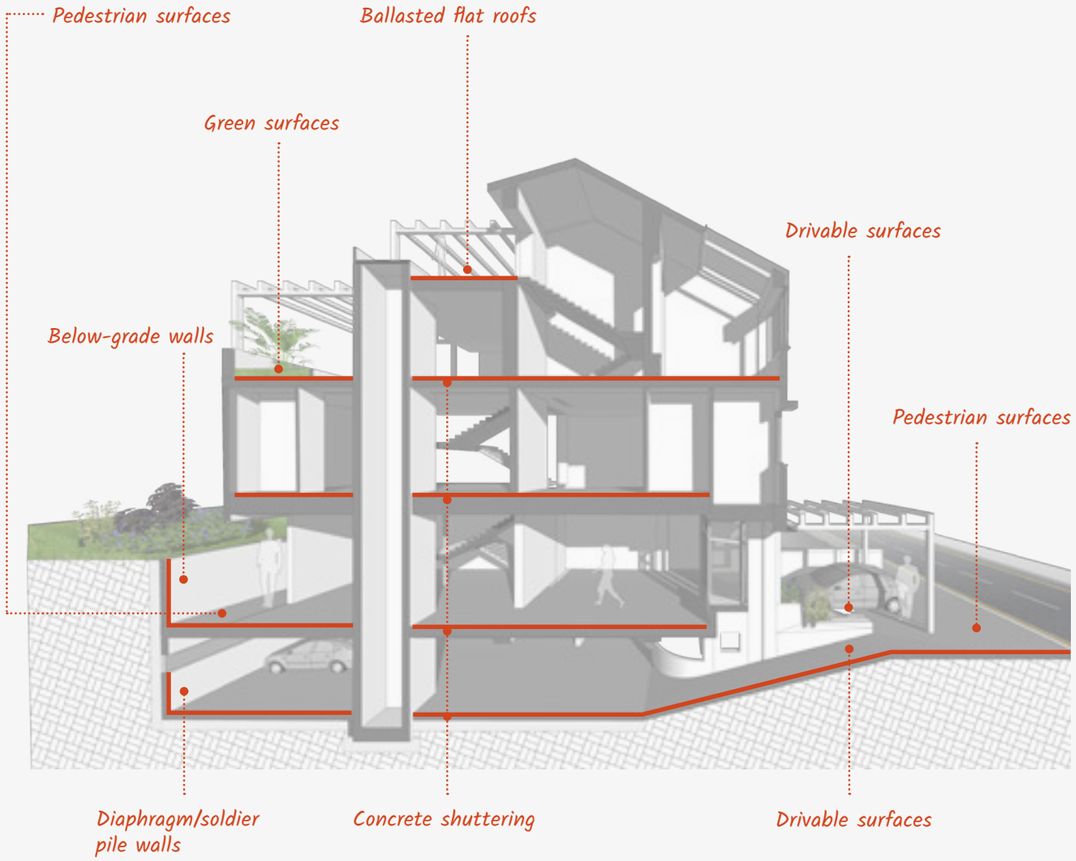
02. COMMERCIAL

Making the most of basements.
In addition to featuring above-ground floors, buildings for the tertiary/commercial sector have basement levels used for a variety of purposes, such as storerooms, file rooms, or plant rooms. TeMa membranes are designed to withstand the high loads and pressures that can be encountered in deeper excavations and deliver excellent drainage and damp-proofing performance.

03. CIVIL ENGINEERING PROJECTS

The skill of a team ahead of the curve.
With a reputation for meeting requirements such as reliability and effectiveness, TeMa also plays a key role in civil engineering projects. In this field, every project demands an exceptional level of thoroughness, specialization and technique: values that our brand is known for.
TeMa products stand out for their performance in terms of mechanically protecting waterproofing, filtration, separation and drainage in applications such as below-grade walls and foundations.





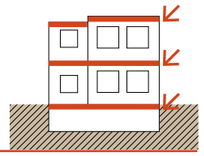
Residential

Applications

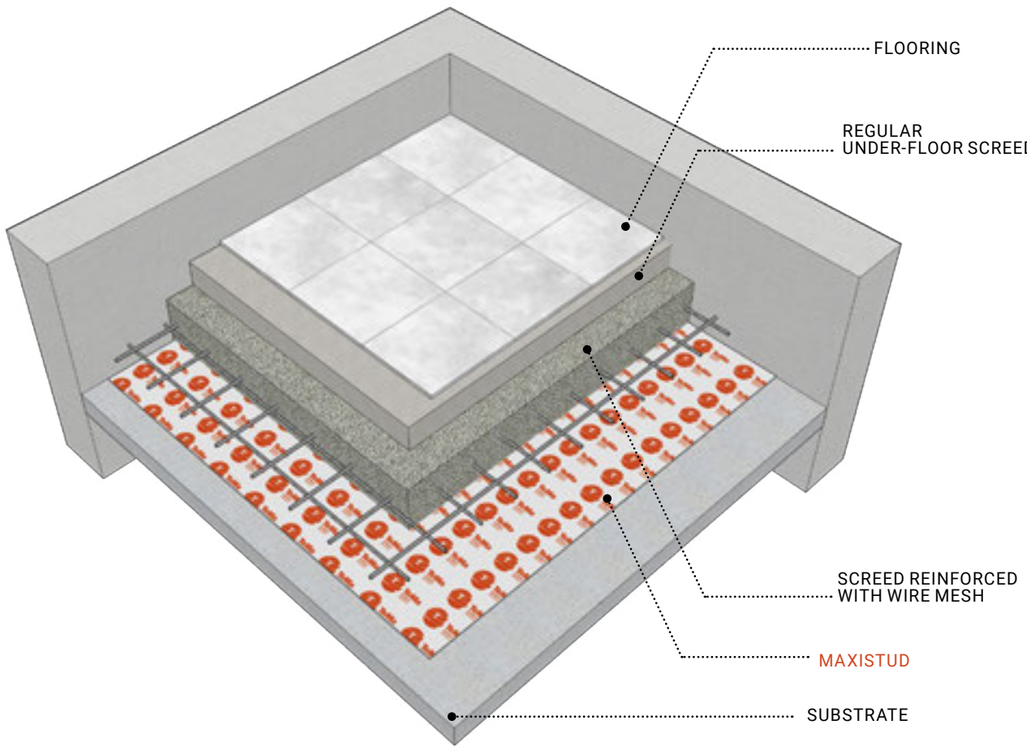
CONCRETE SHUTTERING
BELOW-GRADE WALLS
DIAPHRAGM/SOLDIER PILE WALLS

GREEN SURFACES
PEDESTRIAN SURFACES
DRIVABLE SURFACES
BALLASTED FLAT ROOFS

Concrete shuttering



These are applications on horizontal slabs, produced by placing the membrane under the screed reinforced with electrically welded wire mesh. The purpose of this system is to create a **more lightweight** slab and provide **ventilation** between the substrate and the reinforced screed.

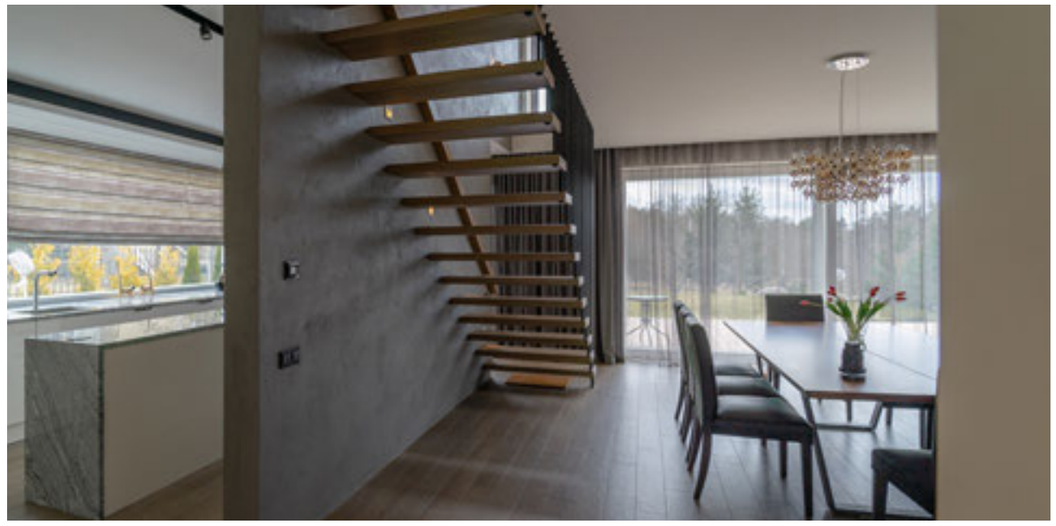


FUNCTIONS

01.
Lighter weight
and ventilation

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 150 kPa	DRAINAGE low loads	DRAINAGE high loads
	MAXISTUD STUDDED MEMBRANE						
01. Lighter weight and ventilation	**Maxistud**	–		—	▲▲▲▲	–	–



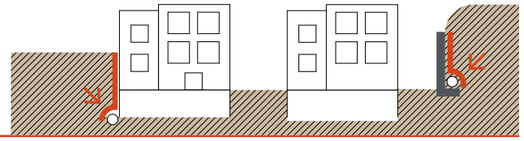
ADVANTAGES

- It can be used in place of the traditional shuttering system.
- Light, non-bulky material, easy to transport.
- Easy to cut.
- Quick and easy to lay.

BENEFITS

- Reduced installation costs.
- Reduced transport costs.
- Reduced time on site.
- Lighter weight slab.
- Ventilation.

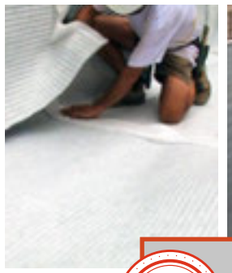
Below-grade walls

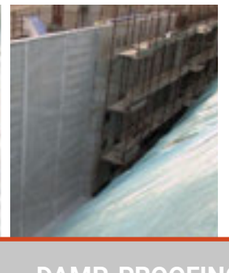


BASEMENT WALLS AND RETAINING WALLS

These are applications on vertical surfaces subjected to the pressure of the ground as a result of hydrostatic loading. TeMa Building membranes eliminate this stress and, more specifically, can have a **damp-proofing function**, creating separation between the structure and the ground, which is inherently damp. They also offer **mechanical protection** for the waterproofing, to ensure there is no damage done to it: during construction work on site to start with, and then as the ground naturally drops and settles.

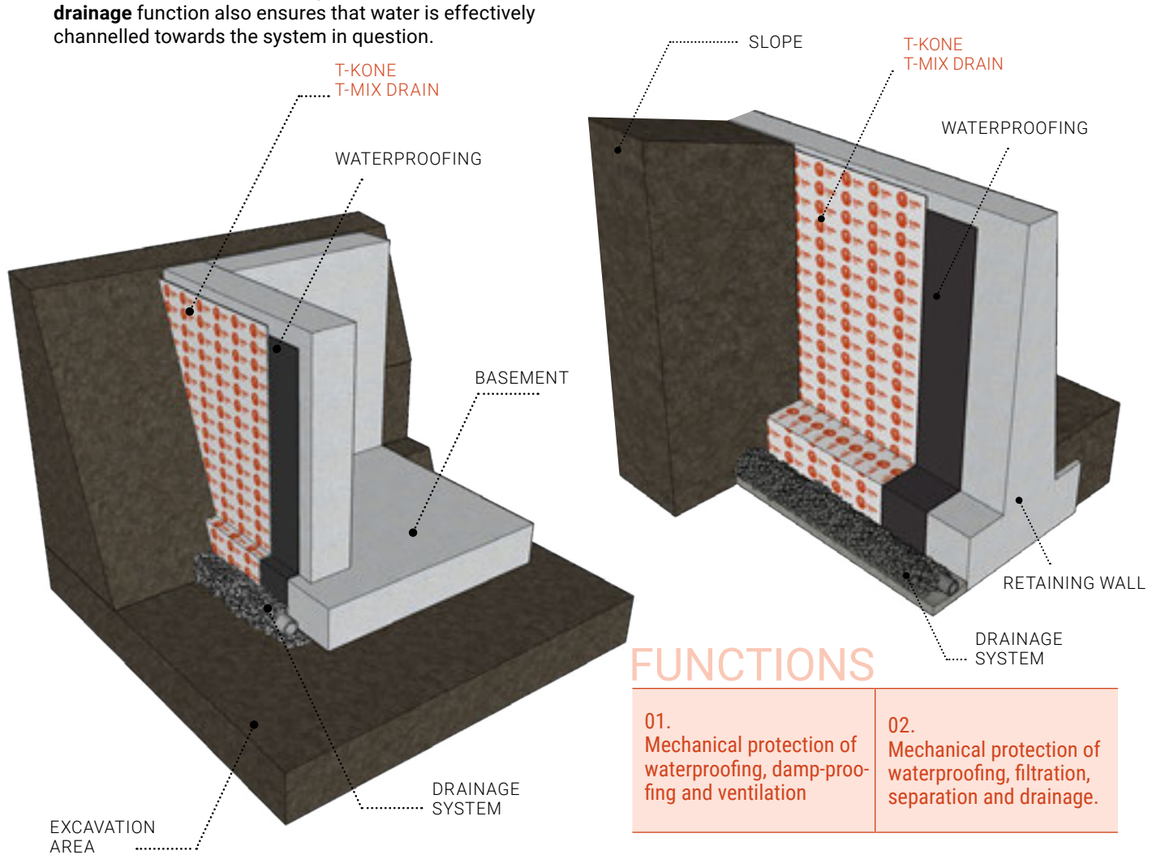
Studded membranes laid with the studs facing in create beneficial **ventilation** across the tiny air gaps created between the structure and the membrane in question. In the event a water collection system is due to be installed around the building, the use of TeMa geocomposites specially designed to provide a **drainage** function also ensures that water is effectively channelled towards the system in question.





DAMP-PROOFING QUALITY CONTROL

T-Kone



FUNCTIONS

01. Mechanical protection of waterproofing, damp-proofing and ventilation	02. Mechanical protection of waterproofing, filtration, separation and drainage.

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 200 kPa	DRAINAGE low loads	DRAINAGE high loads
01. Mechanical protection of waterproofing, damp-proofing and ventilation	**T-KONE STUDDED MEMBRANE**						
	T-Kone S	–				–	–
	T-Kone	–				–	–
02. Mechanical protection of waterproofing, filtration, separation and drainage.	**T-KONE STUDDED MEMBRANE**						
	T-Kone G Drain	1 geotextile					
	T-Kone XL Drain	1 geotextile					
	3D GEO-COMPOSITE made of PP mono-filament coupled with geotextiles						
	T-Mix Drain 20	2 geotextiles					
	T-Mix Drain 20 S	2 geotextiles					
	T-Mix Drain 20 SS	2 geotextiles			–		–

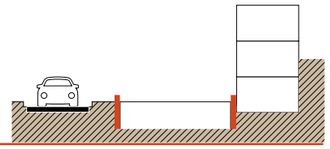
ADVANTAGES

- Used in place of traditional gravel drainage system.
- High drainage capacity.
- Light, non-bulky material.
- Multiple functions in a single product.
- Easy to transport.
- Easy to cut.
- Quick and easy to lay.

BENEFITS

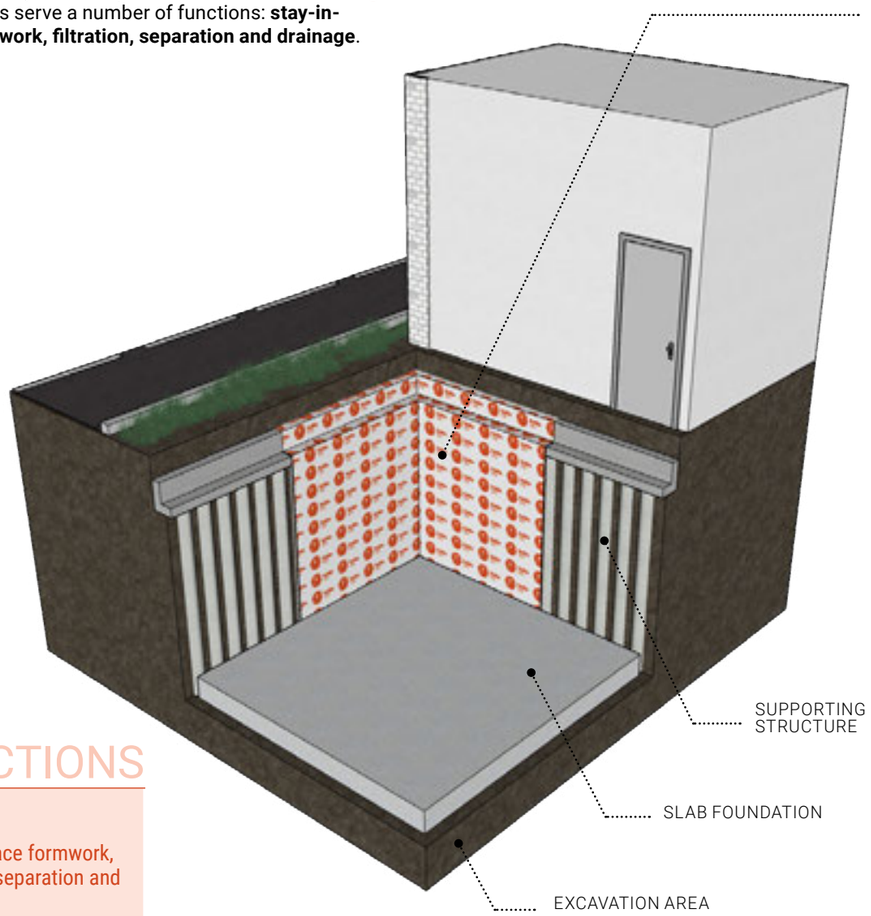
- Reduced installation costs.
- Reduced transport costs.
- Reduced time on site.

Diaphragm walls, soldier pile walls



Diaphragm walls and soldier pile walls are structures widely used in the civil engineering field to counter the pressure of the ground or to provide excavation walls with stability. They are mainly installed in cases where - given the restricted spaces or closeness to other structures - it is not possible to create excavation walls with a suitable slope. They stop soil slipping into the excavation or structures collapsing, and are made up of vertical elements set at intervals (piles) or in a continuous run (sheeting) made from steel or reinforced concrete driven well into the ground.

To solve the hydrostatic pressure issue, TeMa Building membranes serve a number of functions: **stay-in-place formwork, filtration, separation and drainage**.



FUNCTIONS

01.
Stay-in-place formwork, filtration, separation and drainage

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 200 kPa	DRAINAGE low loads	DRAINAGE high loads
01. Stay-in-place formwork, filtration, separation and drainage	**3D GEO-COMPOSITE** made of PP mono-filament coupled with geotextiles						
	Q-DRAIN CA 25 WP LDPE 10T	1 geotextile + 1 geotextile laminated to an LDPE film		|			

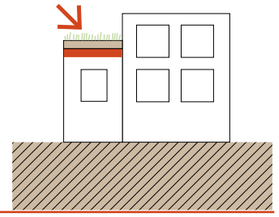
VANTAGGI

- Used in place of traditional gravel drainage system
- High drainage capacity.
- Light, non-bulky material.
- Multiple functions in a single product.
- Easy to transport.
- Easy to cut.
- Quick and easy to lay.

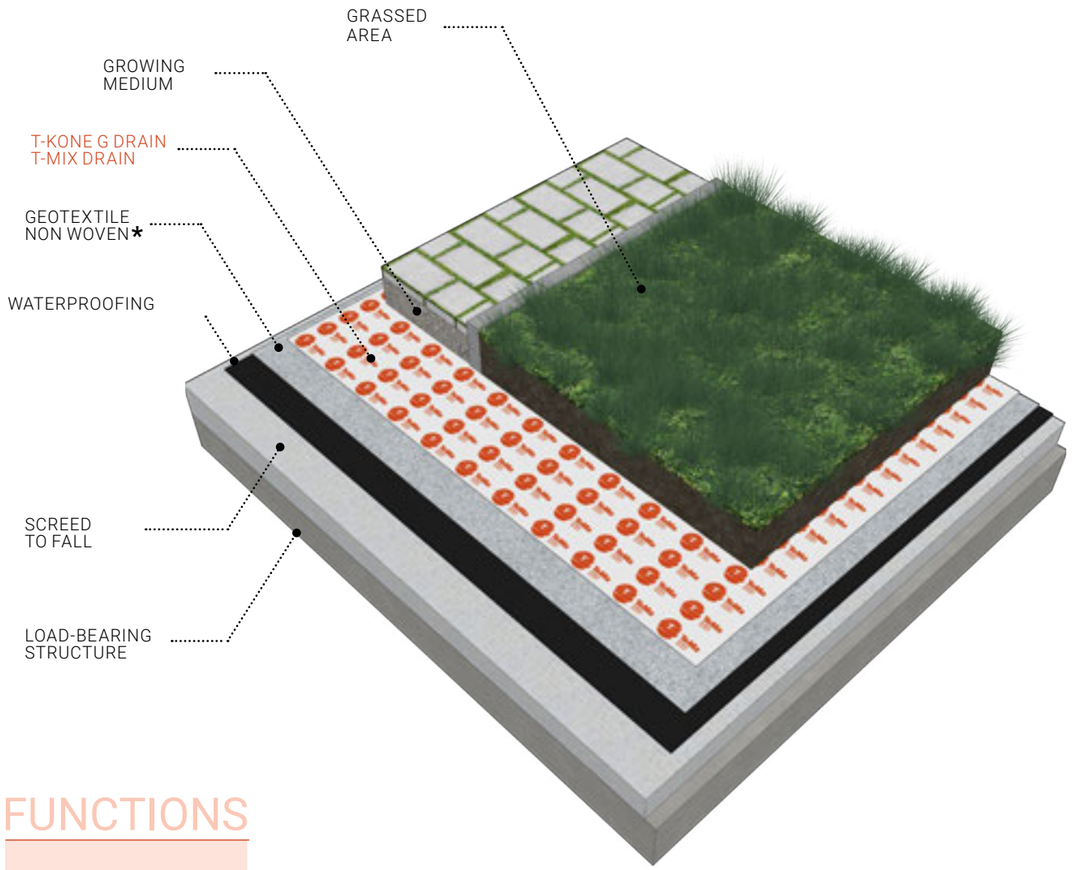
BENEFICI

- Reduced installation costs.
- Reduced transport costs.
- Reduced time on site.

Green surfaces



When it comes to producing a grassed area on top of roofs and other decks, TeMa Building solutions perform admirably in providing **mechanical protection for waterproofing** and, above all, by virtue of the action of the geotextile found on both sides of the T-Mix Drain models - those most specifically suited to this type of application - also serve other functions: **filtration** and **drainage** of rainwater.



FUNCTIONS

01.
Mechanical protection of waterproofing, filtration, separation and drainage.

* *Only required in the event the studded membrane is not laminated to a geotextile on the face in contact with the waterproofing.*

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 200 kPa	DRAINAGE low loads	DRAINAGE high loads
01. Mechanical protection of waterproofing, filtration, separation and drainage.	**T-KONE STUDDED MEMBRANE**						
	T-Kone G Drain	1 geotextile		—			
	3D GEO-COMPOSITE made of PP mono-filament coupled with geotextiles						
	T-Mix Drain 20	2 geotextiles		—			
	T-Mix Drain 20 S	2 geotextiles		—			
	T-Mix Drain 20 SS	2 geotextiles		—	–		–

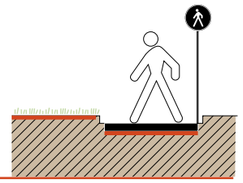
ADVANTAGES

- Used in place of traditional gravel drainage system.
- High drainage capacity.
- Light, non-bulky material.
- Multiple functions in a single product.
- Easy to transport.
- Easy to cut.
- Quick and easy to lay.

BENEFITS

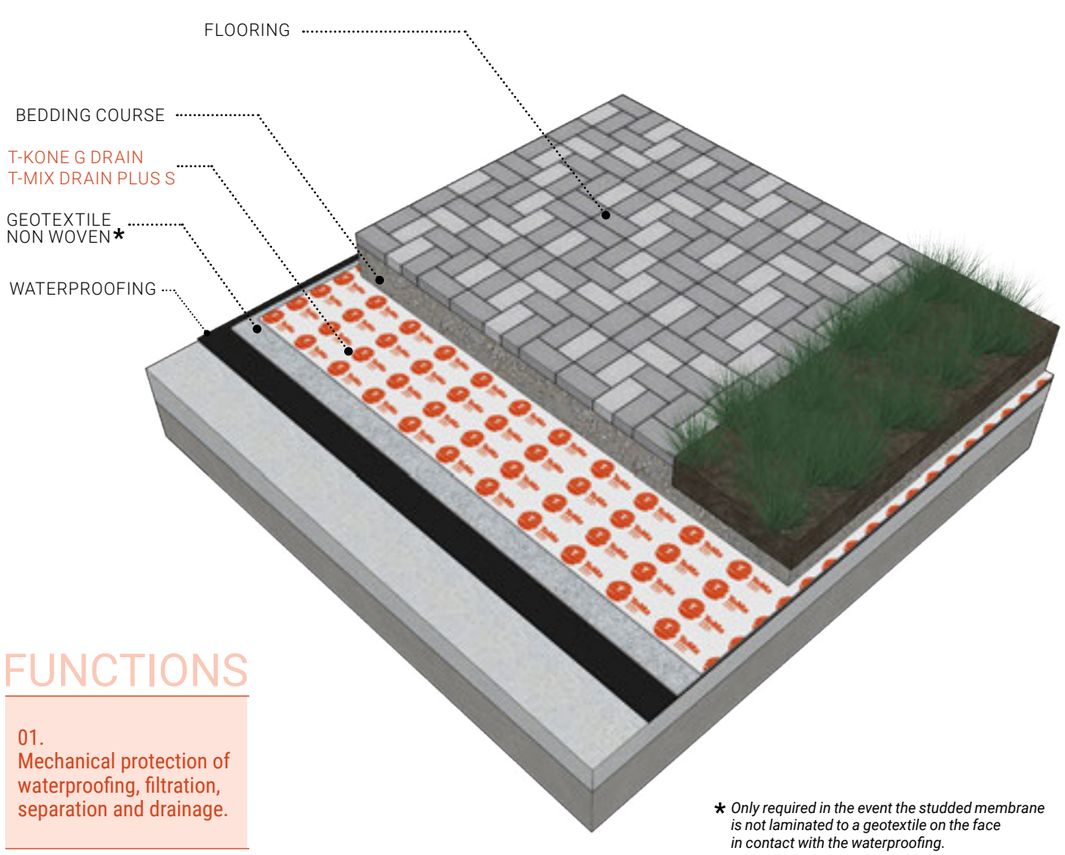
- Mitigates urban microclimate, reducing "heat islands".
- High water retention with reduction in rainwater runoff in the event of downpours.
- Reduced smog and particulate levels, as vegetation absorbs CO2 and filters the finest particles.
- Reduced noise, for occupant comfort in loft bedrooms.
- Natural thermal insulation for guaranteed savings with reduced heating and air-conditioning costs.
- Increased average service life of waterproofing due to: effective protection against UV rays, protection against daily variations in summer and winter temperatures, protection against mechanical stress.
- Absorbs electrosmog.
- Creates lovely green amenity spaces.
- The pleasure of living in a house that is kind to nature.
- Increases the value of the building.

Pedestrian surfaces



In horizontal applications designed to take foot traffic, the performance required can vary depending, for example, on the geographical area of the job – namely, based on the area's specific rainfall levels – and the design (roof over an interior or pedestrian surface at ground level).

TeMa Building products' application versatility makes them effective in a range of different situations.
In addition to providing **mechanical protection for waterproofing**, they cater well to a variety of situations, enabling surface water to **drain** away in the best way possible, thus **avoiding harmful ponding**.



FUNCTIONS

01.
Mechanical protection of waterproofing, filtration, separation and drainage.

* *Only required in the event the studded membrane is not laminated to a geotextile on the face in contact with the waterproofing.*

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 200 kPa	DRAINAGE low loads	DRAINAGE high loads
01. Mechanical protection of waterproofing, filtration, separation and drainage.	**STUDDED MEMBRANE T-KONE**						
	T-Kone G Drain	1 geotextile		—			
	3D GEO-COMPOSITE made of PP mono-filament coupled with geotextiles						
	T-Mix Drain Plus S	2 geotextiles		—			

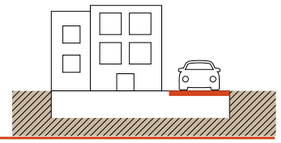
ADVANTAGES

- Used in place of traditional gravel drainage system.
- Light, non-bulky material.
- Multiple functions in a single product.
- Easy to transport.
- Easy to cut.
- Quick and easy to lay.

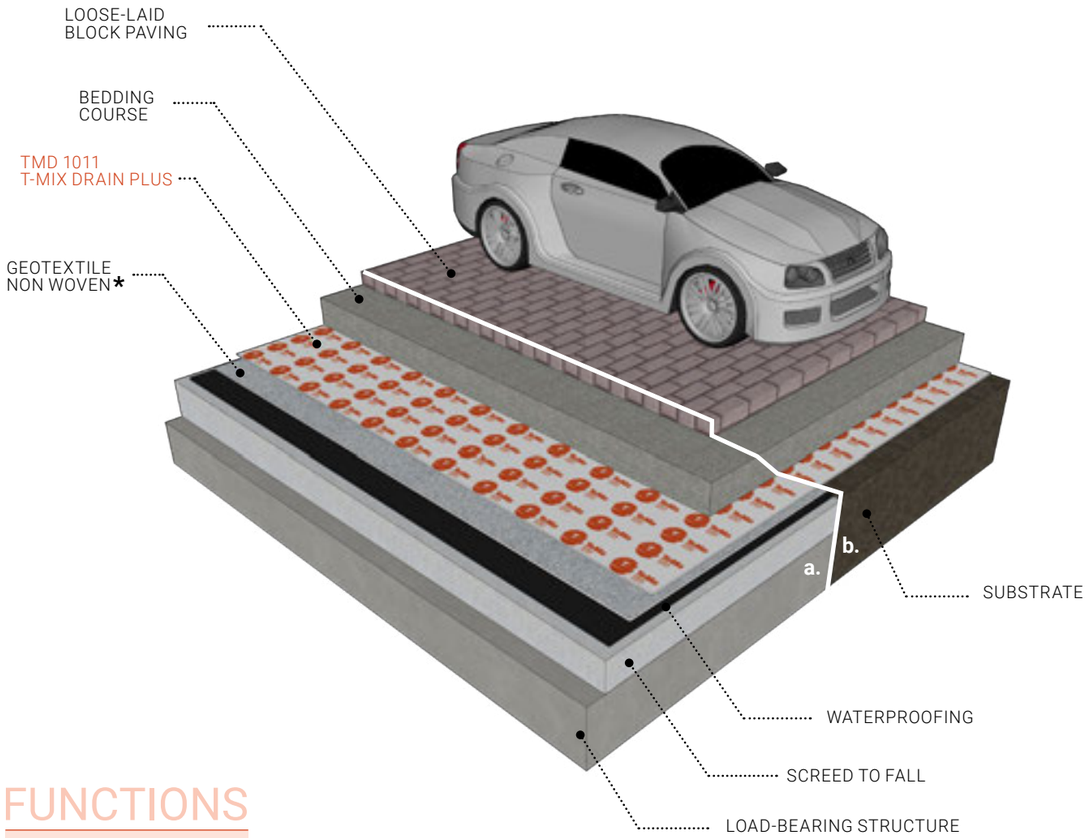
BENEFITS

- Reduced installation costs.
- Reduced transport costs.
- Reduced time on site.
- Stable, durable materials.

Drivable surfaces



TeMa Building can supply studded membranes and structures made from monofilaments that, in applications under drivable areas, deliver compressive strength, **mechanical protection for waterproofing** and rainwater **drainage**. In addition, the geotextile component creates a separating layer, stopping the system becoming clogged.



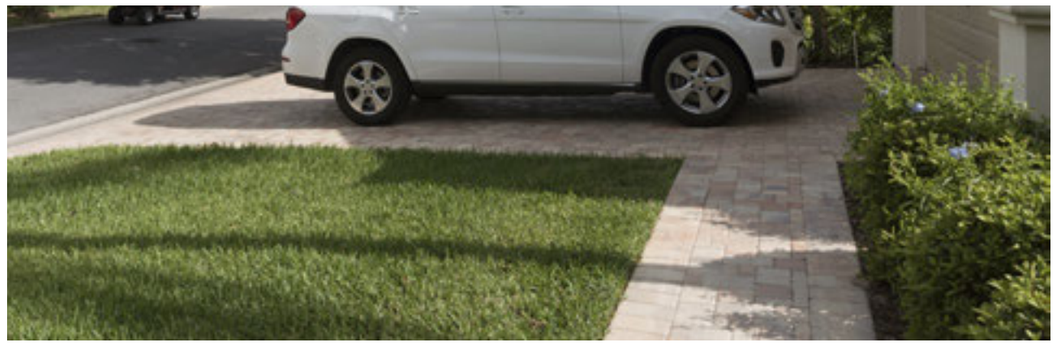
FUNCTIONS

01.
Mechanical protection of waterproofing, filtration, separation and drainage.

* *Only required in the event the studded membrane is not laminated to a geotextile on the face in contact with the waterproofing.*

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 400 kPa	DRAINAGE low loads	DRAINAGE high loads
01. Mechanical protection of waterproofing, filtration, separation and drainage.	**TMD STUDDED MEMBRANE**						
	TMD 1011	1 geotextile		—			
	3D GEO-COMPOSITE made of PP mono-filament coupled with geotextiles						
	T-Mix Drain Plus	2 geotextiles		—			



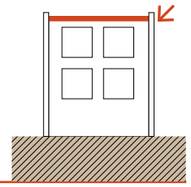
ADVANTAGES

- Used in place of traditional gravel drainage system.
- Drainage, even coping with high loads.
- Light, non-bulky material.
- Multiple functions in a single product.
- Easy to transport.
- Easy to cut.
- Quick and easy to lay.

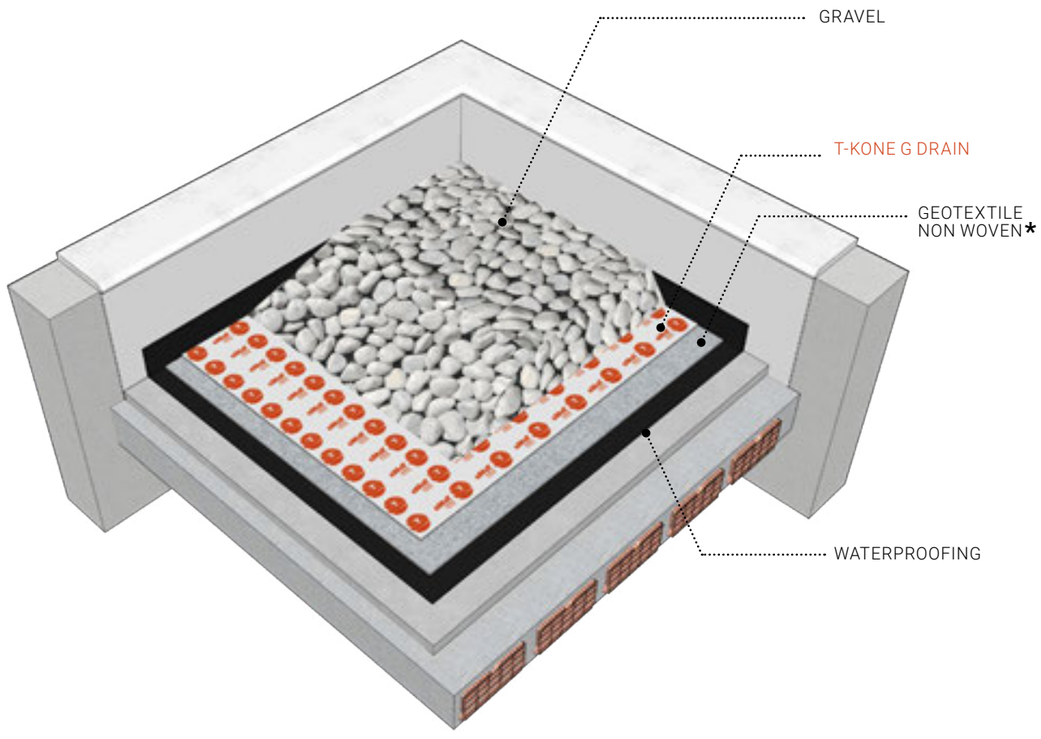
BENEFITS

- Reduced installation costs.
- Reduced transport costs.
- Reduced time on site.

Ballasted flat roofs



For ballasted flat roofs, the TeMa studded membrane laminated to a geotextile offers **multiple functions in a single product: mechanical protection of waterproofing, filtration, separation** and, above all, **drainage** of rainwater. Non-bulky, and easy to transport and cut, T-Kone G Drain goes on quickly and helps reduce job costs and time on site.



FUNCTIONS

01.
Mechanical protection of waterproofing, filtration, separation and drainage.

* *Only required in the event the studded membrane is not laminated to a geotextile on the face in contact with the waterproofing.*

FUNCTIONS

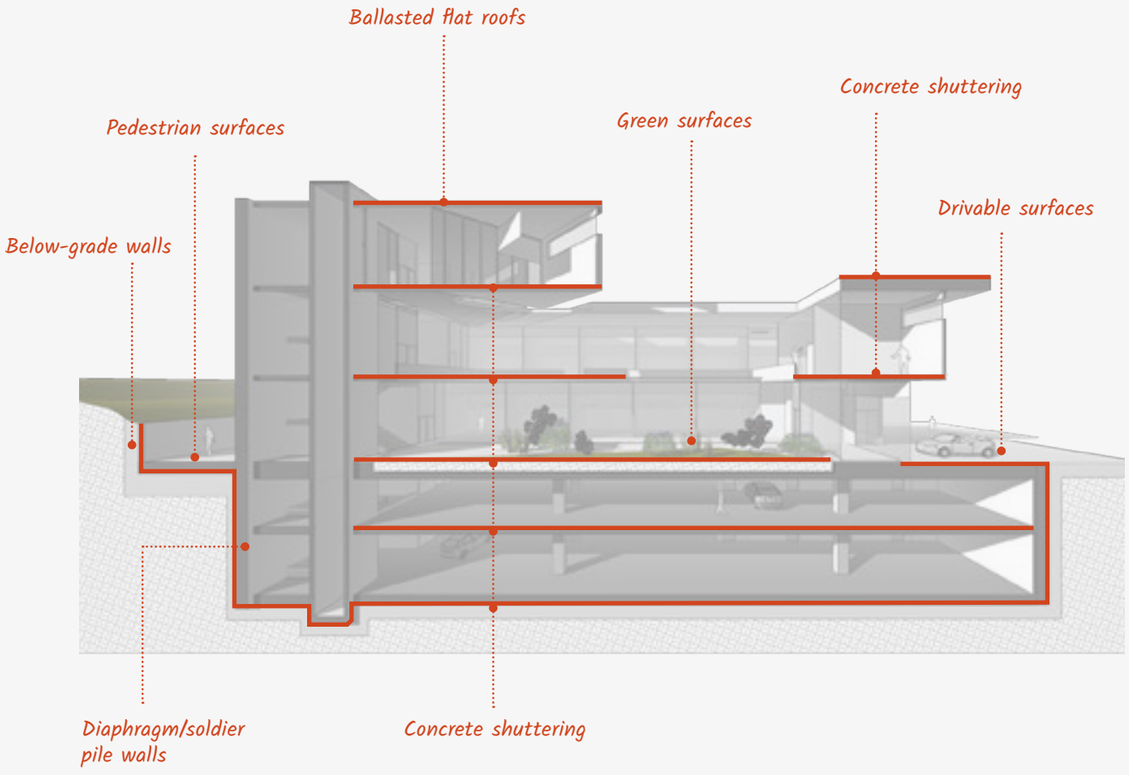
	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 200 KPa	DRAINAGE low loads	DRAINAGE high loads
01. Mechanical protection of waterproofing, filtration, separation and drainage.	**T-KONE STUDDED MEMBRANE**						
	T-Kone G Drain	1 geotextile		—	△△△△	●●●●	●●

ADVANTAGES

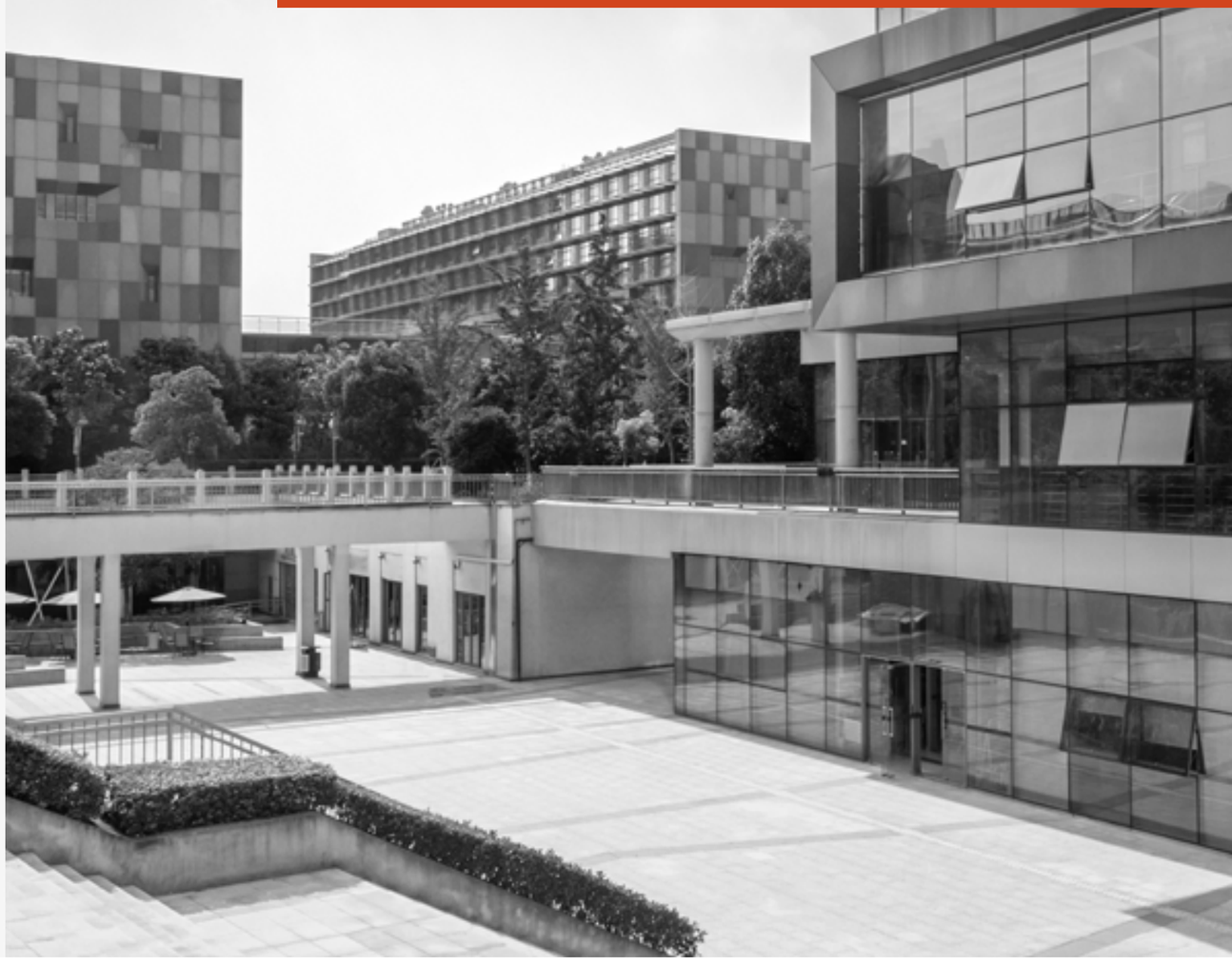
- Used in place of traditional gravel drainage system.
- Light, non-bulky material.
- Multiple functions in a single product.
- Easy to transport.
- Easy to cut.
- Quick and easy to lay.

BENEFITS

- Reduced installation costs.
- Reduced transport costs.
- Reduced time on site.
- Stable, durable materials.



Commercial

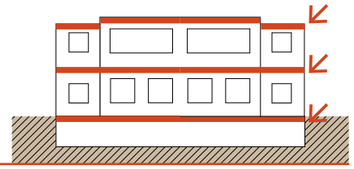


Applications

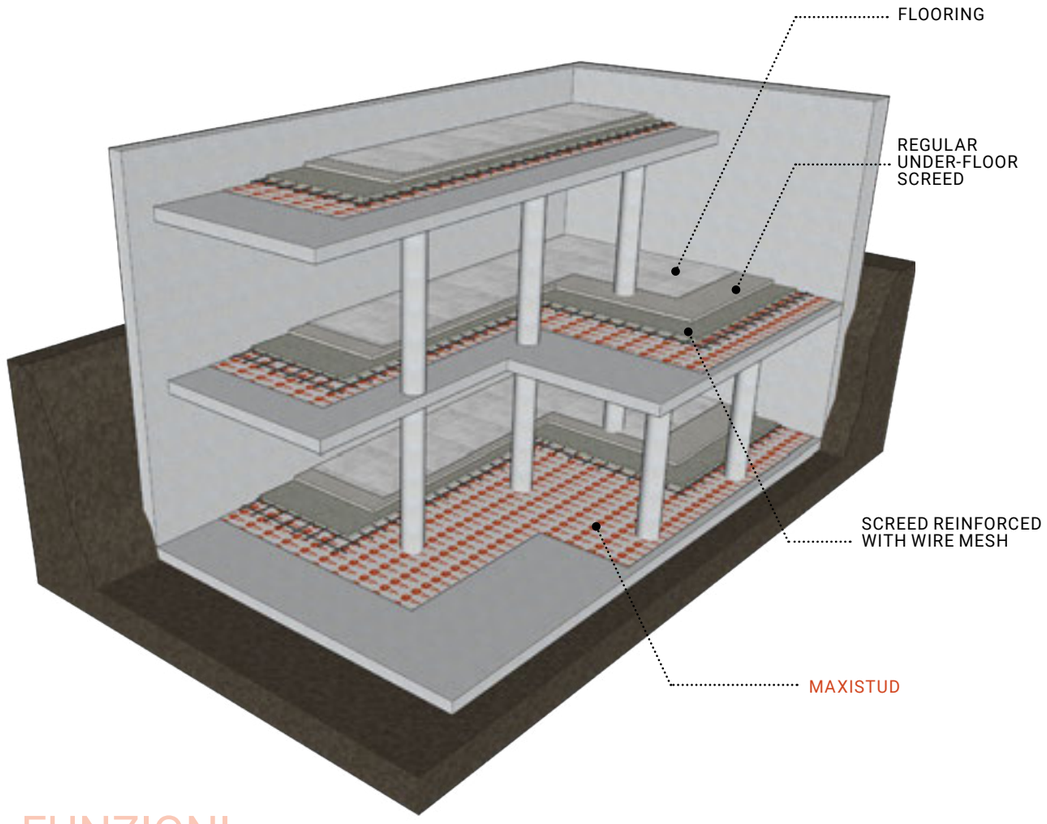
CONCRETE SHUTTERING
BELOW-GRADE WALLS
DIAPHRAGM/SOLDIER PILE WALLS

GREEN SURFACES
PEDESTRIAN SURFACES
DRIVABLE SURFACES
BALLASTED FLAT ROOFS

Concrete shuttering



When producing horizontal structures, loads resulting from the weight of the slabs themselves can be a critical issue. By placing TeMa Building studded membranes under the cast-in-place reinforced screed, the overall weight of the system can be **lightened**, with the added bonus of introducing **ventilation** between the substrate and the reinforced screed.



FUNZIONI

01.
Lighter weight
and ventilation

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICA-TION	COMPRESSIVE STRENGTH up to 150 kPa	DRAINAGE low loads	DRAINAGE high loads
	MAXISTUD STUDDED MEMBRANE						
01. Lighter weight and ventilation	**Maxistud**	–		—		–	–

COMMERCIAL

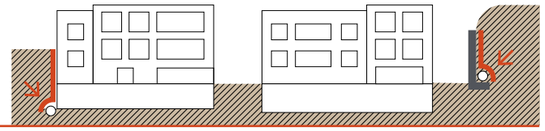
ADVANTAGES

- It can be used in place of the traditional shuttering system.
- Light, non-bulky material, easy to transport.
- Easy to cut.
- Quick and easy to lay.

BENEFITS

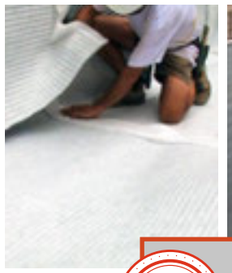
- Reduced installation costs.
- Reduced transport costs.
- Reduced time on site.
- Lighter weight slab.
- Ventilation.

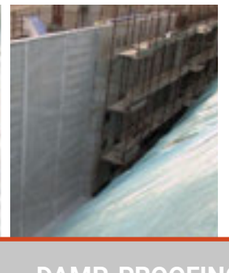
Below-grade walls



BASEMENT WALLS AND RETAINING WALLS

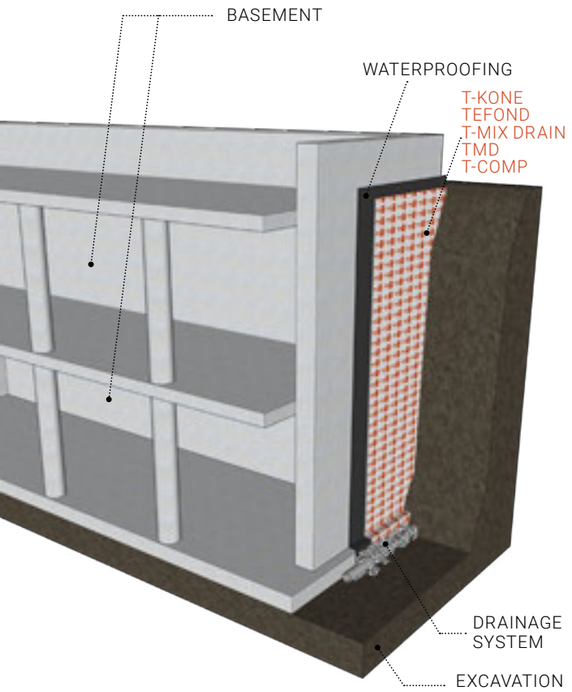
TeMa Building membranes and structures made from monofilaments address the critical issues that can be encountered when building a below-grade wall. The waterproofing membrane may actually be damaged either during the work or as the ground settles afterwards. TeMa takes a preventive approach to dealing with these issues by providing products that, in addition to **mechanical protection**, also serve the function of **damp-proofing** and **drainage**. Thus they make an excellent solution to the problem of hydrostatic pressure that generates seepage. In addition, **ventilation** is created across the tiny gaps between the studs where the studded membrane is positioned with the studs facing in.

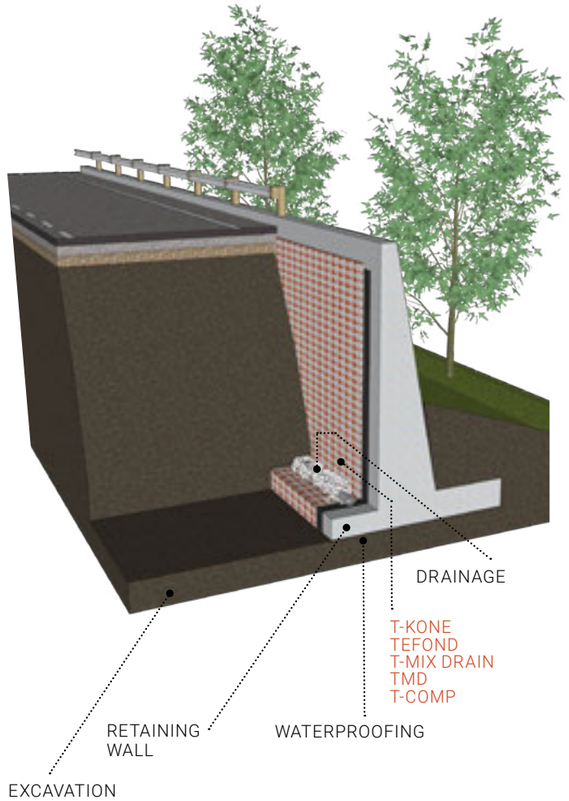




DAMP-PROOFING QUALITY CONTROL

T-Kone

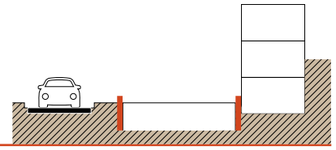




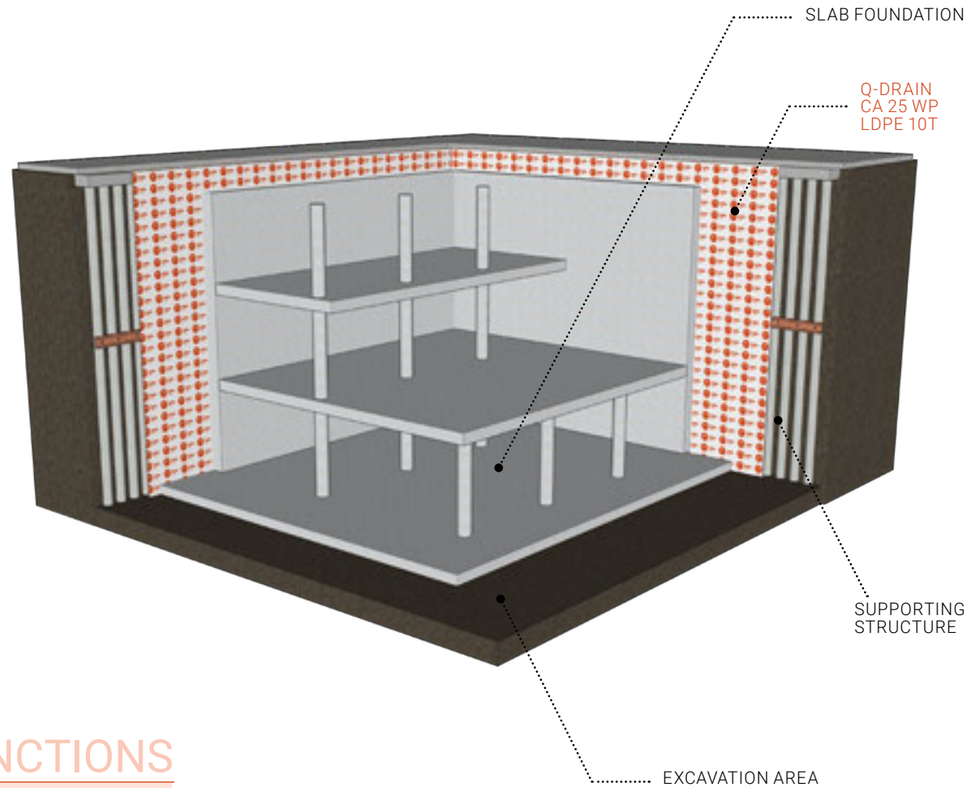
FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICA-TION	COMPRESSIVE STRENGTH up to 350 kPa	DRAINAGE low loads	DRAINAGE high loads
01. Mechanical protection of waterproofing, damp-proofing and ventilation	**T-KONE STUDDED MEMBRANE**						
	T-Kone *(up to 5 m)*	–				–	–
	TEFOND STUDDED MEMBRANE						
	Tefond Star	–				–	–
	Tefond HP Star	–				–	–
	Tefond Plus Star	–				–	–
02. Mechanical protection of waterproofing, filtration, separation and drainage	**T-KONE STUDDED MEMBRANE**						
	T-Kone G Drain *(up to 5 m)*	1 geotextile					
	T-Kone XL Drain *(up to 5 m)*	1 geotextile					
	3D GEOCOMPOSITE made of PP monofilament coupled with geotextiles						
	T-Mix Drain Plus	2 geotextiles			–		
	Drainage Mat CA 25 65 10 T LDPE	1 geotextile + 1 geotextile laminated to an LDPE film			–		
	TMD STUDDED MEMBRANE						
	TMD 1011	1 geotextile					
	TEFOND STUDDED MEMBRANE						
	Tefond Drain Star	1 geotextile					
	Tefond Drain Plus Star	1 geotextile					
	Tefond HP Drain Star	1 geotextile					
03. Spacers for compartmentation between 2 layers of PVC	**3D mat made of PP monofilament**						
	T-Comp	–	–	–	–	–	–

Diaphragm walls, soldier pile walls



In particularly deep excavations, the surfaces of the walls are subjected to considerable stress. The hydrostatic pressure generated by the groundwater is eliminated by TeMa's Q Drain CA 25 WP LDPE 10T geocomposite, by virtue of its **drainage** action. In addition, where dealing with restricted spaces, the product proves effective for use as **stay-in-place formwork**.



FUNCTIONS

01.
Stay-in-place formwork, filtration, separation and drainage

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 200 kPa	DRAINAGE low loads	DRAINAGE high loads
01. Stay-in-place formwork, filtration, separation and drainage	**3D GEO-COMPOSITE** made of PP mono-filament coupled with geotextiles						
	Q-DRAIN CA 25 WP LDPE 10T	1 geotextile + 1 geotextile laminated to an LDPE film					

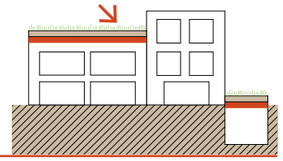
ADVANTAGES

- Used in place of traditional gravel drainage system.
- High drainage capacity.
- Light, non-bulky material.
- Multiple functions in a single product.
- Easy to transport.
- Easy to cut.
- Quick and easy to lay.

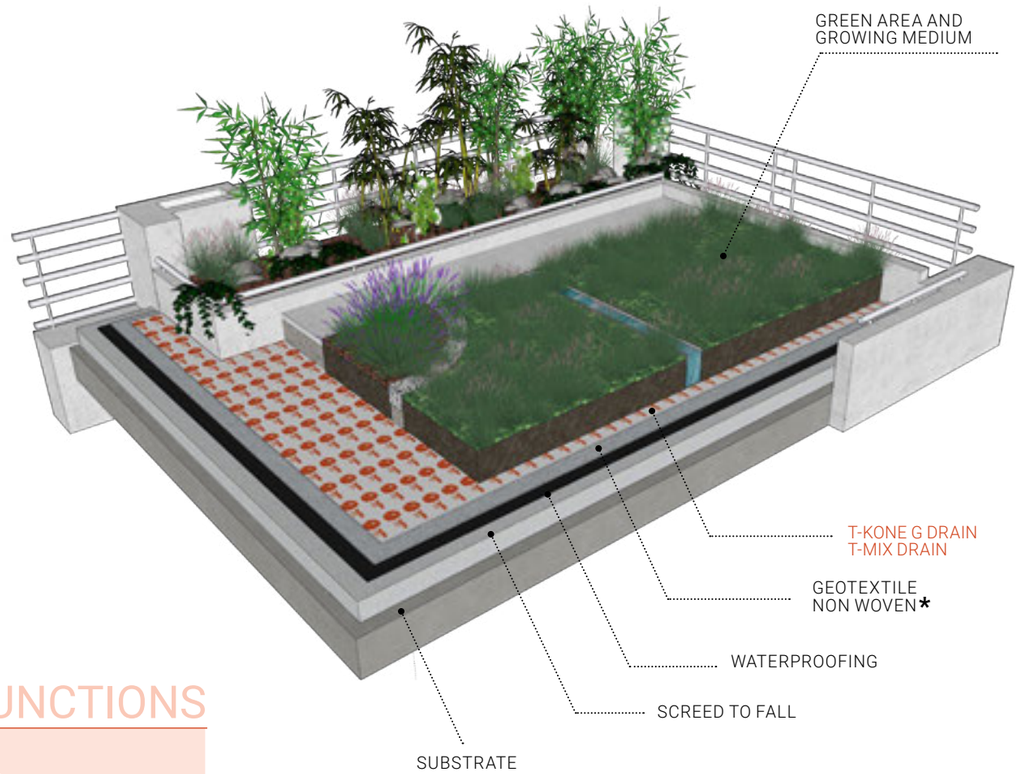
BENEFITS

- Reduced installation costs.
- Reduced transport costs.
- Reduced time on site.

Green surfaces



TeMa Building membranes and geocomposites are particularly suitable when producing green surfaces on top of roofs and other decks on commercial buildings. **Mechanically protect waterproofing**, provide suitable **filtration**, and **are an effective solution in place of the traditional gravel drainage system**. Their inherent properties and ease of installation mean work can be performed perfectly in shorter timeframes and with reduced costs. In addition, the quality of their component materials means the structure lasts longer: hence all the benefits that green areas bring to urban settings are sure to be long lived.



FUNCTIONS

01.
Mechanical protection of waterproofing, filtration, separation and drainage.

* *Only required in the event the studded membrane is not laminated to a geotextile on the face in contact with the waterproofing.*

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 200 kPa	DRAINAGE low loads	DRAINAGE high loads
01. Mechanical protection of waterproofing, filtration, separation and drainage.	**T-KONE STUDDED MEMBRANE**						
	T-Kone G Drain	1 geotextile		—	△△△△	●●	●
	3D GEO-COMPOSITE made of PP mono-filament coupled with geotextiles						
	T-Mix Drain 20	2 geotextiles		—	△△	●●●●	●●
	T-Mix Drain 20 S	2 geotextiles		—	△	●●●●	●
	T-Mix Drain 20 SS	2 geotextiles		—	–	●●●●	–

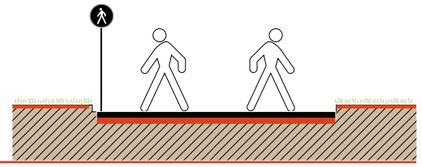
ADVANTAGES

- Used in place of traditional gravel drainage system.
- High drainage capacity.
- Light, non-bulky material.
- Multiple functions in a single product.
- Easy to transport.
- Easy to cut.
- Quick and easy to lay.

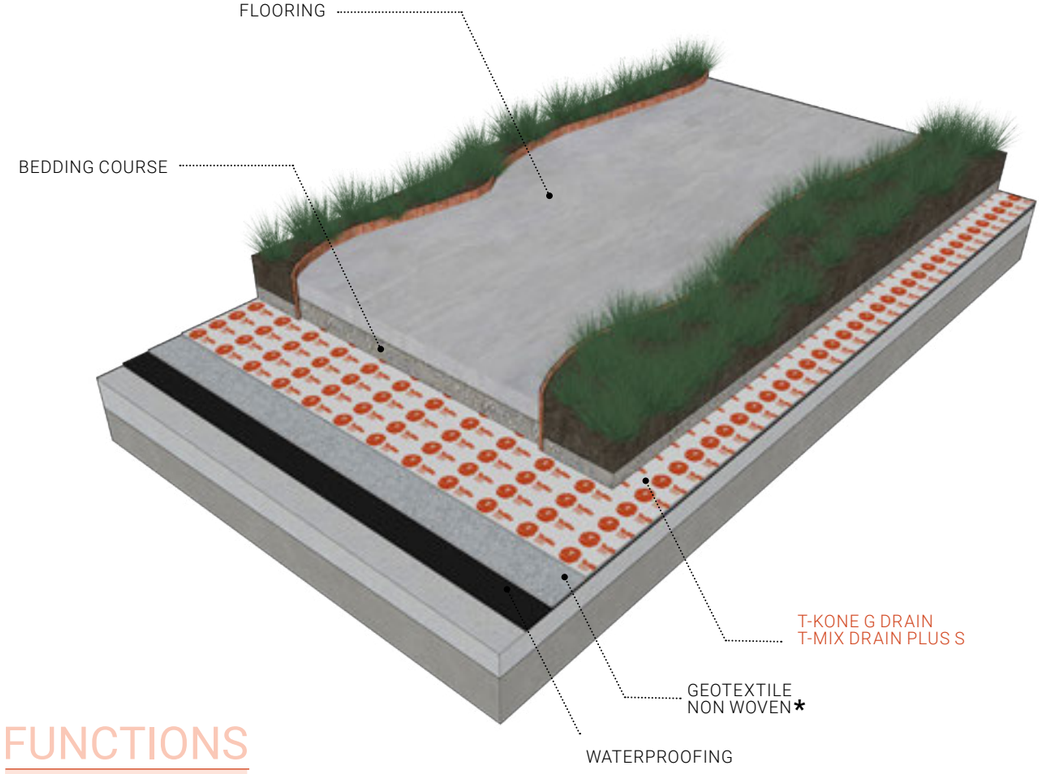
BENEFITS

- Mitigates urban microclimate, reducing "heat islands".
- High water retention with reduction in rainwater runoff in the event of downpours.
- Reduced smog and particulate levels, as vegetation absorbs CO^2 and filters the finest particles.
- Reduced noise.
- Natural thermal insulation for guaranteed savings with reduced heating and air-conditioning costs.
- Increased average service life of waterproofing due to: effective protection against UV rays, protection against daily variations in summer and winter temperatures, protection against mechanical stress.
- Absorbs electrosmog.
- Creates lovely green amenity spaces.
- The pleasure of living in a house that is kind to nature.
- Increases the value of the building.

Pedestrian surfaces



TeMa Building supplies membranes and geocomposites of proven effectiveness that make it easy to introduce appearance-enhancing details that can add value to projects of all kinds. Pedestrian surfaces are one such example, where aesthetics is a key factor. By introducing attractive design features, where well executed, a project of this kind can lift the whole building. Their **perfect water drainage** makes TeMa products the solution best suited to ensuring the building retains its attractive appearance for longer.



FUNCTIONS

01.
Mechanical protection of waterproofing, filtration, separation and drainage.

* *Only required in the event the studded membrane is not laminated to a geotextile on the face in contact with the waterproofing.*

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 200 kPa	DRAINAGE low loads	DRAINAGE high loads
01. Mechanical protection of waterproofing, filtration, separation and drainage.	**T-KONE STUDDED MEMBRANE**						
	T-Kone G Drain	1 geotextile		—	▲▲	●●●	●
	3D GEO-COMPOSITE made of PP mono-filament coupled with geotextiles						
	T-Mix Drain Plus S	2 geotextiles		—	▲▲	●●●	●

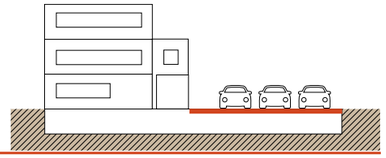
ADVANTAGES

- Used in place of traditional gravel drainage system.
- Light, non-bulky material.
- Multiple functions in a single product.
- Easy to transport.
- Easy to cut.
- Quick and easy to lay.

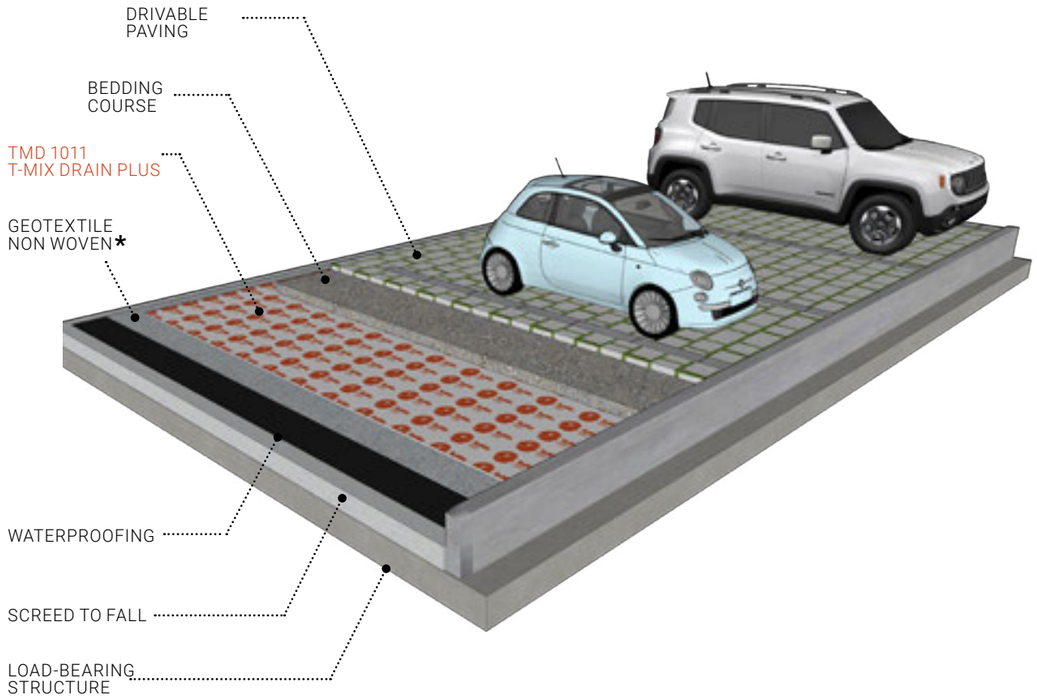
BENEFITS

- Reduced installation costs.
- Reduced transport costs.
- Reduced time on site.
- Stable, durable materials.

Drivable surfaces



Products offered by TeMa Building deliver **long-lasting, reliable paving for drivable use**, even in projects involving large surface areas subjected to high loads and high volumes of traffic. Properly engineered build-ups and correct installation of **suitable, quality materials**, like those from TeMa, become essential to protect structures from failure and cracking that would compromise function and service life.



FUNCTIONS

01.
Mechanical protection of waterproofing, filtration, separation and drainage.

* *Only required in the event the studded membrane is not laminated to a geotextile on the face in contact with the waterproofing.*

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 400 kPa	DRAINAGE low loads	DRAINAGE high loads
01. Mechanical protection of waterproofing, filtration, separation and drainage.	**TMD STUDDED MEMBRANE**						
	TMD 1011	1 geotextile		—	△△△△	●●●●	●●●
	3D GEO-COMPOSITE made of PP mono-filament coupled with geotextiles						
	T-Mix Drain Plus	2 geotextiles		—	△△	●●●	●●

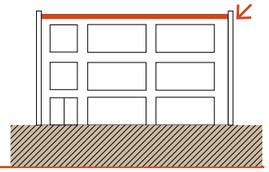
ADVANTAGES

- Used in place of traditional gravel drainage system.
- Drainage, even coping with high loads.
- Light, non-bulky material.
- Multiple functions in a single product.
- Easy to transport.
- Easy to cut.
- Quick and easy to lay.

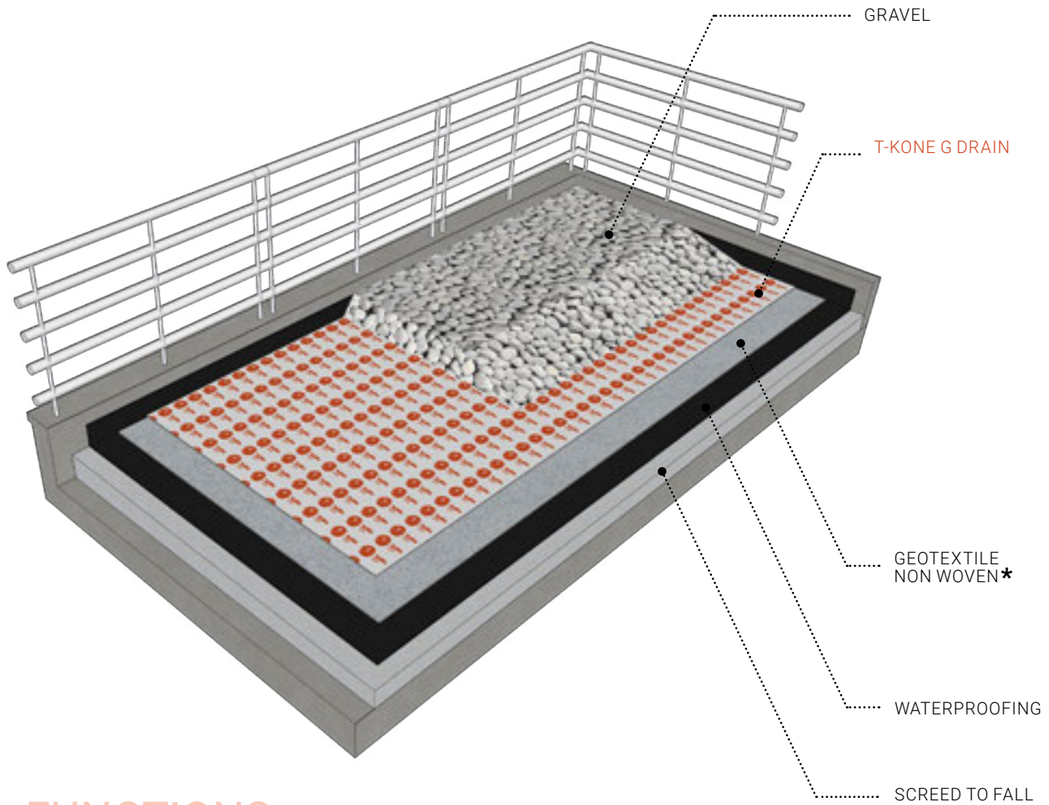
BENEFITS

- Reduced installation costs.
- Reduced transport costs.
- Reduced time on site.

Ballasted flat roofs



TeMa Building also offers the best suited solution for rainwater **drainage** on ballasted flat roofs on large commercial buildings. The studded membrane provides mechanical protection for waterproofing, while the special conformation of the laminated geotextile ensures the ultimate filtration and separation.



FUNCTIONS

01.
Mechanical protection of waterproofing, filtration, separation and drainage.

* *Only required in the event the studded membrane is not laminated to a geotextile on the face in contact with the waterproofing.*

FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 200 KPa	DRAINAGE low loads	DRAINAGE high loads
01. Mechanical protection of waterproofing, filtration, separation and drainage.	**T-KONE STUDDED MEMBRANE**						
	T-Kone G Drain	1 geotextile		—			

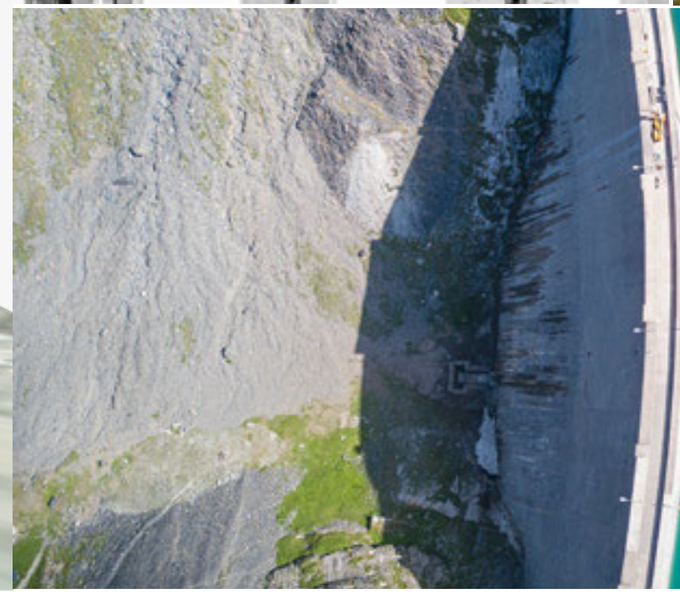
ADVANTAGES

- Used in place of traditional gravel drainage system.
- Light, non-bulky material.
- Multiple functions in a single product.
- Easy to transport.
- Easy to cut.
- Quick and easy to lay.

BENEFITS

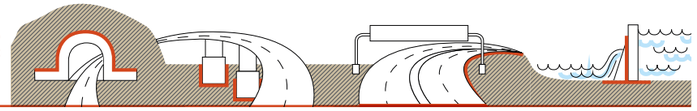
- Reduced installation costs.
- Reduced transport costs.
- Reduced time on site.
- Stable, durable materials.

Civil engineering projects



BELOW-GRADE WALLS

Below-grade walls



In infrastructural engineering projects such as bridges and viaducts - especially in below-grade walls - it is essential to have top-quality products for **damp-proofing, waterproofing protection, and drainage**. To ensure the infrastructure is protected from damage in the long term, these materials must be designed to withstand considerable mechanical stress and hydrostatic loading. The effectiveness and longevity of TeMa Building membranes and geocomposites devised for this kind of application are constantly checked and guaranteed.

DAMP-PROOFING QUALITY CONTROL

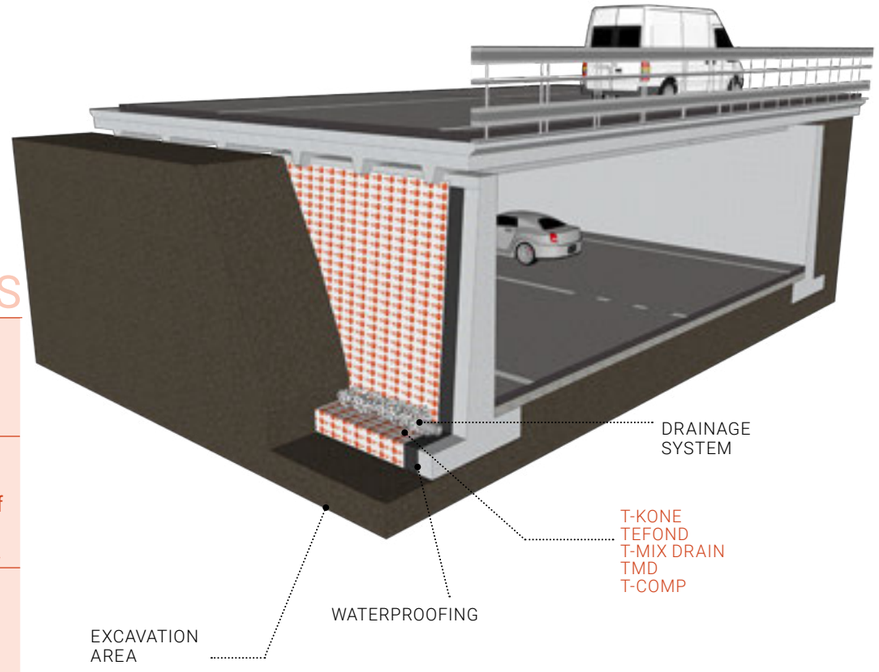
T-Kone

FUNCTIONS

01.
Mechanical protection of waterproofing

02.
Mechanical protection of waterproofing, filtration, separation and drainage.

03.
Spacers for compartmentation between 2 layers of PVC



FUNCTIONS

	PRODUCT	SURFACE FINISHES	BUILD-UP	APPLICATION	COMPRESSIVE STRENGTH up to 350 kPa	DRAINAGE low loads	DRAINAGE high loads
01. Mechanical protection of waterproofing	**T-KONE STUDDED MEMBRANE**						
	T-Kone *(up to 5 m)*	–				–	–
	TEFOND STUDDED MEMBRANE						
	Tefond Star	–				–	–
	Tefond HP Star	–				–	–
	Tefond Plus Star	–				–	–
02. Mechanical protection of waterproofing, filtration, separation and drainage	**T-KONE STUDDED MEMBRANE**						
	T-Kone G Drain *(up to 5 m)*	1 geotextile					
	T-Kone XL Drain *(up to 5 m)*	1 geotextile					
	3D GEOCOMPOSITE made of PP monofilament coupled with geotextiles						
	T-Mix Drain Plus	2 geotextiles			–		
	Drainage Mat CA 25 65 10 T LDPE	1 geotextile + 1 geotextile laminated to an LDPE film			–		
	TMD STUDDED MEMBRANE						
	TMD 1011	1 geotextile					
	TEFOND STUDDED MEMBRANE						
	Tefond Drain Star	1 geotextile					
	Tefond Drain Plus Star	1 geotextile					
	Tefond HP Drain Star	1 geotextile					
03. Spacers for compartmentation between 2 layers of PVC	**3D mat made of PP monofilament**						
	T-Comp	–	–	–	–	–	–

Accessories

T-PROFILE

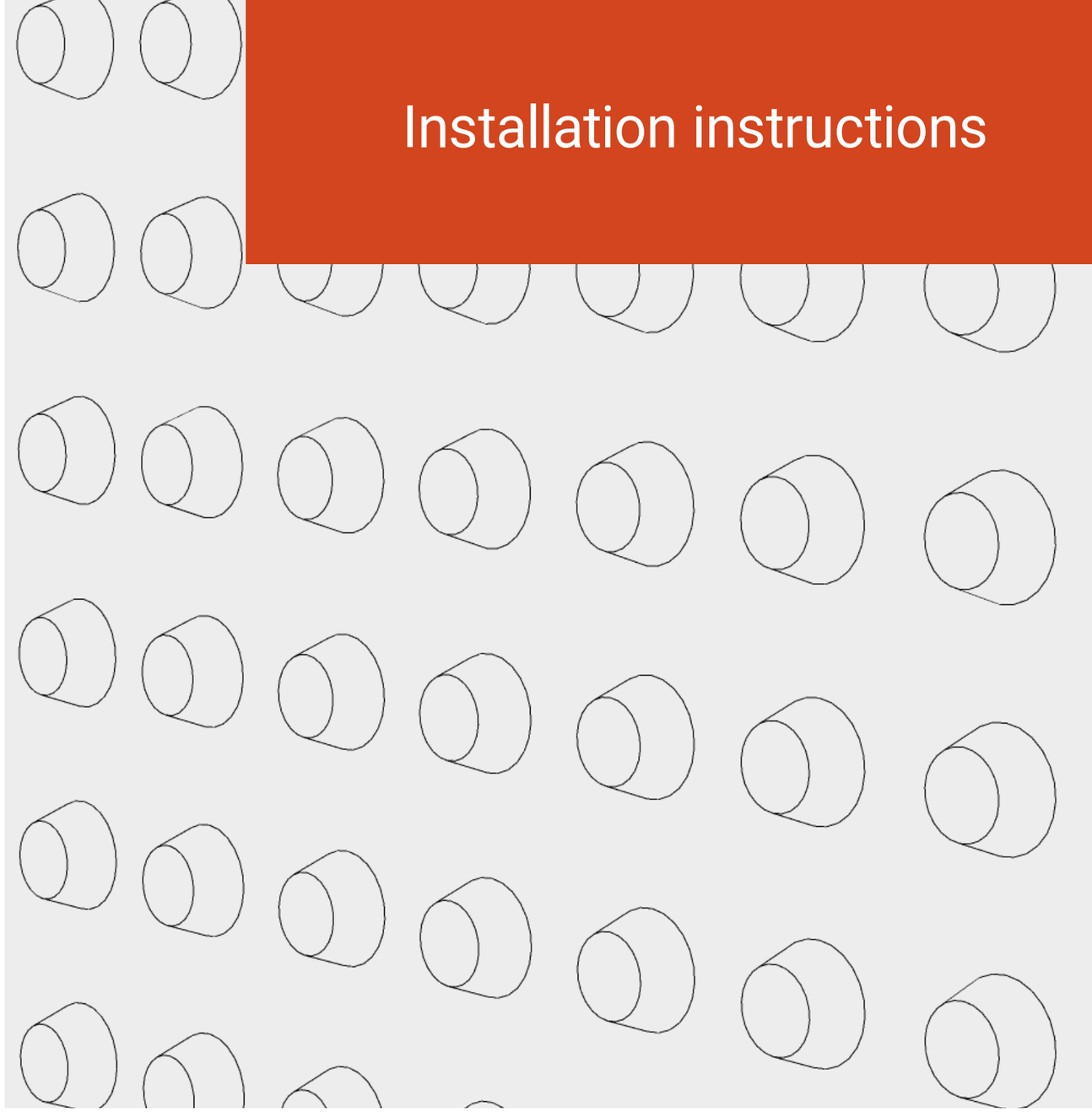
Capping strips with fixing nails.

T-NAILS

Fixing nails.

T-PLUG

Washers with fixing nails.

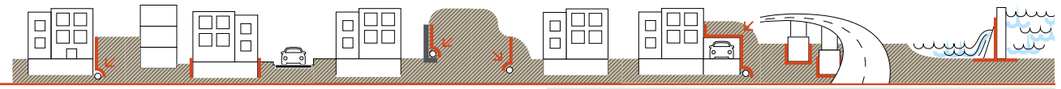


Installation instructions

Installation instructions

T-KONE
TMD

T-KONE



FOR BOTH VERTICAL AND HORIZONTAL RETAINING WALL DAMP PROOFING AND DRAINAGE

The studded membrane serves to mechanically protect retaining wall waterproofing.

Usually a 2 man job for speed and ease of installation:

01 Brush the footing until it is clean are free of debris.

Inspect the wall where the product is to be installed and make good any defects that could damage the materials.

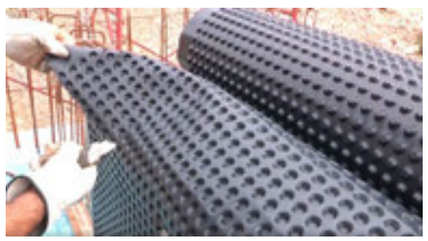
02 Snap a chalk line around the building where the estimated backfill final grade will be, ensuring that the membrane extends over the edge of the footing to where the gravel or crushed rock drainage system is to be installed.

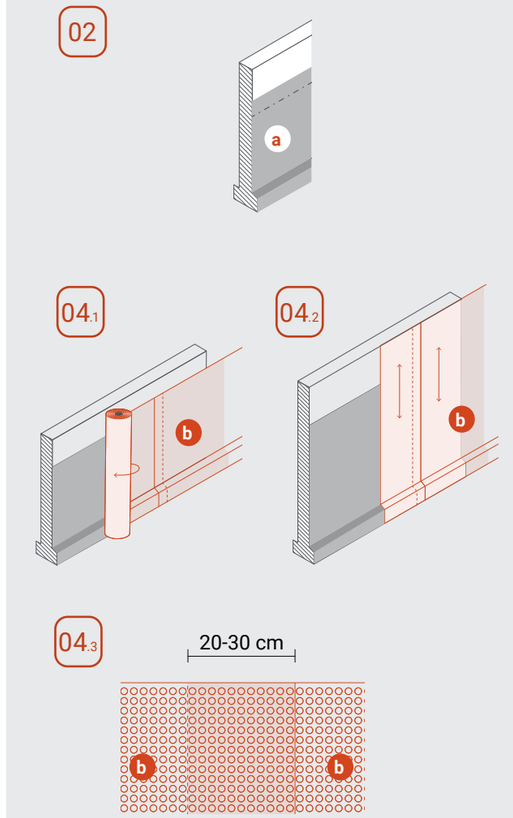
03 Start, preferably towards the center of one wall, by unrolling of T-Kone, with the flat tab (if used) upwards and aligned with the chalk line.

The membrane is best laid with the studs facing the wall, thus leaving a 8 mm areation cavity between the waterproofing and membrane (damp proofing application).

04 Application involves rolling the membrane out and nailing it to the wall, applying the rolls either horizontally (where roll width matches the height of the wall to be protected) or vertically.

If the membrane cannot be applied horizontally due to the height of the wall, the recommended procedure is to cut the roll into suitably tall sections and apply these strips side by side, overlapping them by around 20-30 cm at each side.

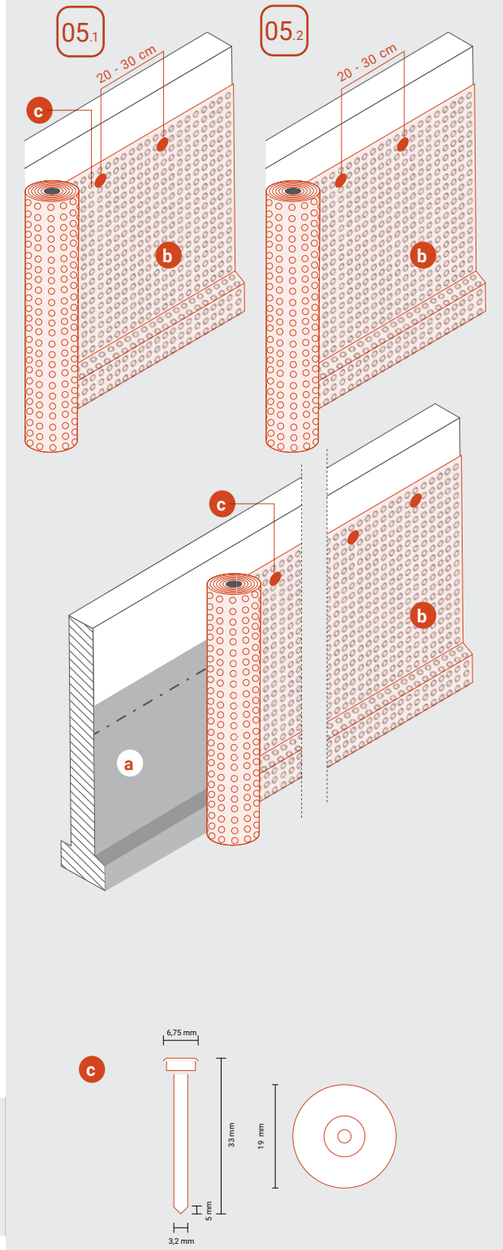




a. Waterproofing
b. **T-Kone** studded membrane
Recommended soil level / chalk mark

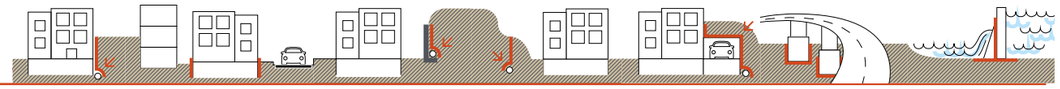
05 Install T-Plug + T-Nails in a staggered pattern as shown in the drawing, 30 cm on centers.

The next row shall be 10 to 15 cm lower than the previous row of T-Plug + T-Nails, staggered 20 cm from those in the row above.



a. Waterproofing
b. **T-Kone** studded membrane
c. Fixing with **T-Plug** and **T-Nails**
Recommended soil level / chalk mark

INSTALLATION INSTRUCTIONS

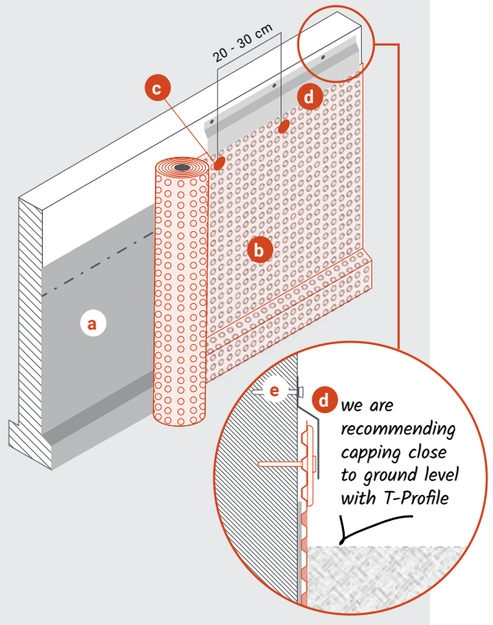


06 Use T-Profile and concrete T-Nails in the flat tab area. Apply a bead of Mastic behind the flat tab area.

The studded membrane must go high enough to cover the waterproofing completely and must then be protected, in turn, by T-Profile to stop the backfill entering the gap between the wall and membrane.

T-Nails at the top must be spaced at 20-30 cm intervals both along the top edge of the studded membrane and along the strip.

06

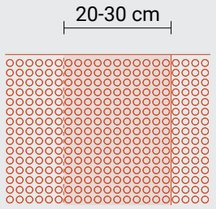


a. Waterproofing
b. **T-Kone** studded membrane
c. Fixing with **T-Plug** and **T-Nails**
d. **T-Profile**
e. **T-Nails** for fixing
- - — - Recommended soil level / chalk mark

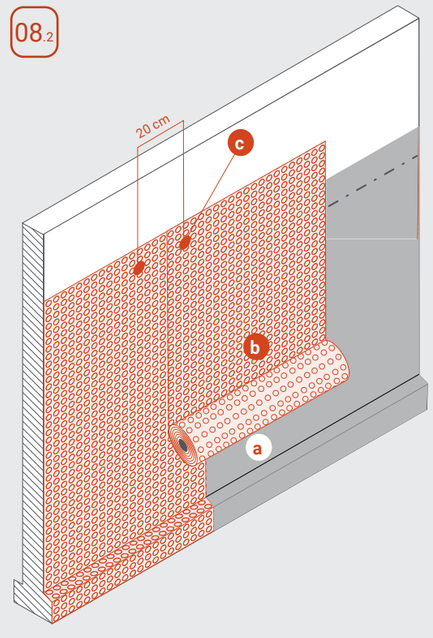
Vertical Jointing

08 The 2 sheets of T-Kone should be overlapped by 20 to 30 cm and the dimples should interlock. No caulking is required but T-Nails should be placed along the overlapped area every 20 cm.

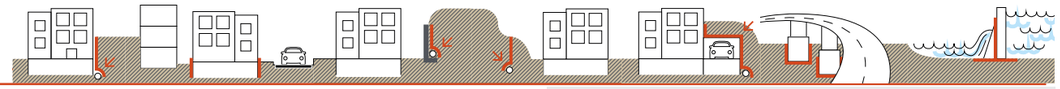
08.1



08.2



a. Waterproofing
b. **T-Kone** studded membrane
c. Fixing with **T-Plug** and **T-Nails**
- - — - Recommended soil level / chalk mark



Service line penetrations such as water, gas, sewage, or similar pipes

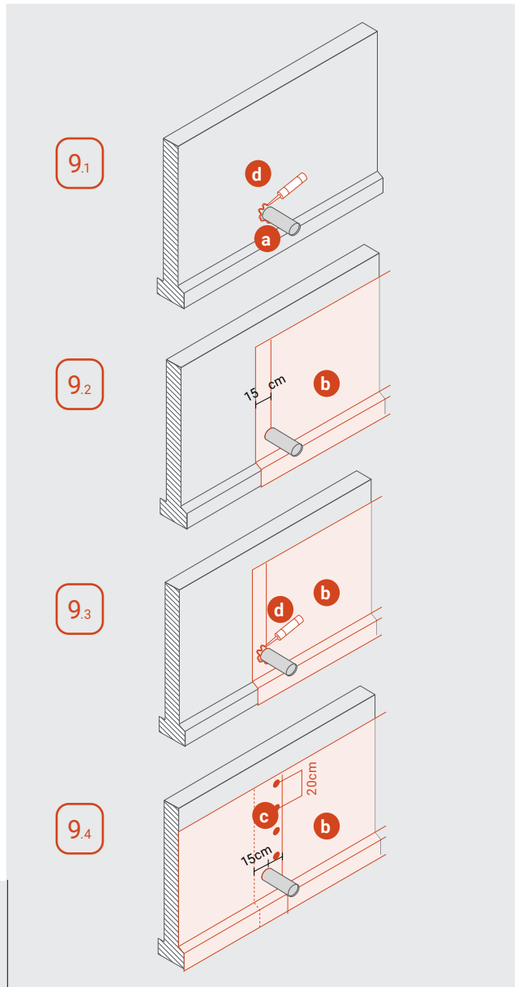
09 Place caulking mastic around the pipe or penetration.

Cut the T-Kone vertically so that it extends 15 cm past the pipe or penetration, trimming the membrane so that it fits as tightly as possible.

Place caulking mastic over the membrane so that there is a layer of mastic both above and below the membrane around the pipe or penetration.

Start the next run of membrane 15 cm before the pipe or penetration so that the total overlap around the pipe or penetration is 30 cm, again trimming around the pipe or penetration for a tight fit.

Install T-Nails every 20 cm along the edge of the overlapped membrane.



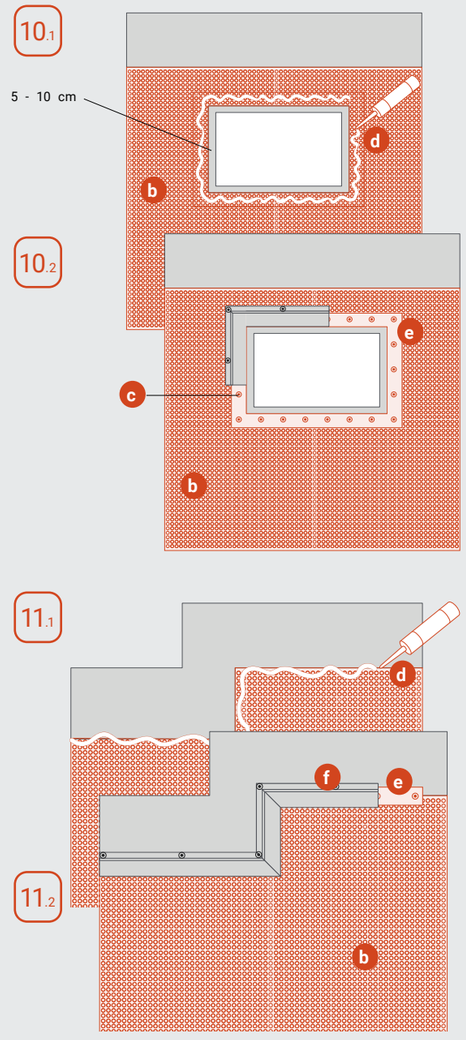
a. Service line penetrations
b. **T-Kone** studded membrane
c. Fixing with **T-Plug** and **T-Nails**
d. Calking with mastic

Basement windows

10 Trim the T-Kone 5 to 10 cm back from the edge of the window and use T-Profile plus T-Nails to seal around the penetration taking care to caulk the area to properly seal it.

11 Change of grade or areas where the flat tab has been trimmed off.

Use T-Profile plus T-Nails to seal the edge, taking care to caulk the area to properly seal it.



a. Service line penetrations
b. **T-Kone** studded membrane
c. Fixing with **T-Plug** and **T-Nails**
d. Calking with mastic
e. Band
f. **T-Profile**

T-KONE G DRAIN

FOR VERTICAL RETAINING WALL MECHANICAL PROTECTION AND DRAINAGE

The studded membrane laminated with nonwoven fabric serves as a drainage layer, both on horizontal surfaces and on sloping or vertical surfaces, at the same time also serving to mechanically protect the waterproofing (if any).

Usually a 2 man job for speed and ease of installation:

01 Brush the footing until it is clean are free of debris.

Inspect the wall where the product is to be installed and make good any defects that could damage the materials.

02 Snap a chalk line around the building where the estimated backfill final grade will be, ensuring that the membrane extends over the edge of the footing to where the gravel or crushed rock drainage system is to be installed.

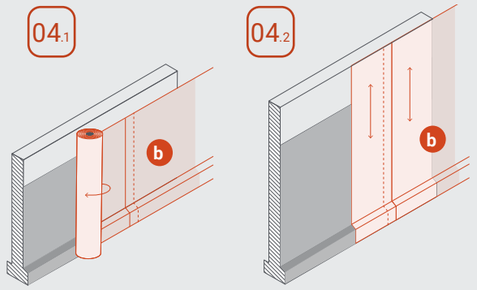
03 Start, preferably towards the center of one wall, by unrolling of T-Kone G Drain , with the flat tab (if used) upwards and aligned with the chalk line.

04 Application involves rolling the membrane out and nailing it to the wall, applying the rolls either horizontally (where roll width matches the height of the wall to be protected) or vertically.

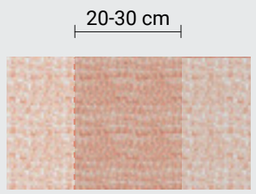
If the membrane cannot be applied horizontally due to the height of the wall, the recommended procedure is to cut the roll into suitably tall sections and apply these strips side by side, overlapping them by around 20-30 cm at each side.

02

04.1 04.2



04.3



a. Waterproofing
b. **T-Kone G Drain** studded membrane with TNT
- - — - Recommended soil level / chalk mark

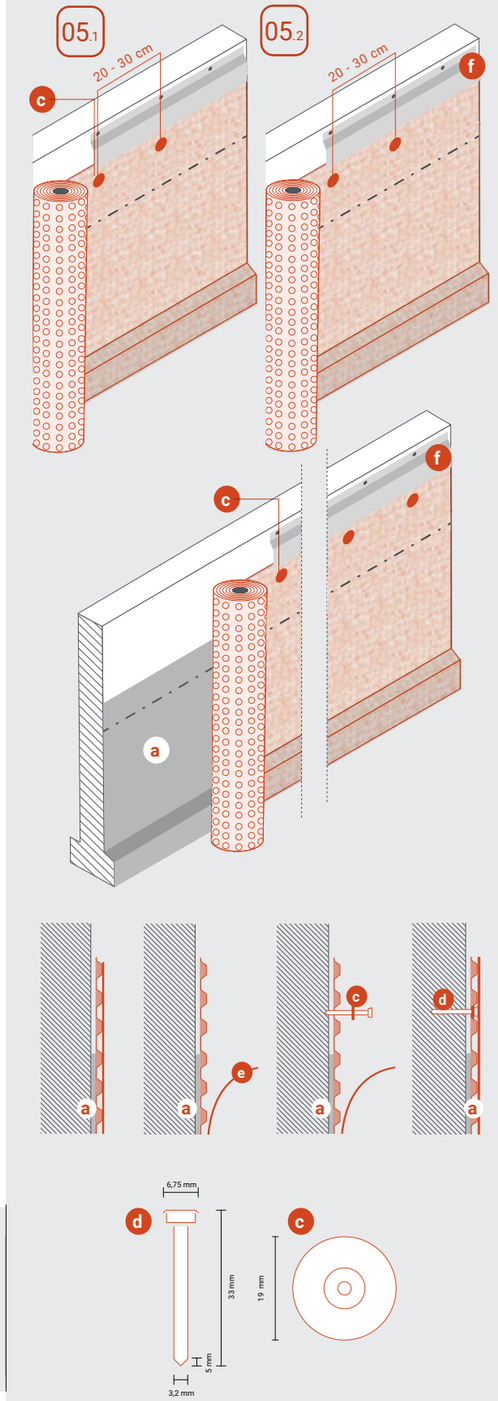
In drainage applications T-Kone G Drain is used with the geotextile facing towards the backfill, i.e. the flat side on the wall.

Install washers (suggested) in a staggered pattern as shown in the drawing, 30 cm on centers.

05 The next row shall be 10 to 15 cm lower than the previous row of washers, staggered 20 cm from those in the row above.

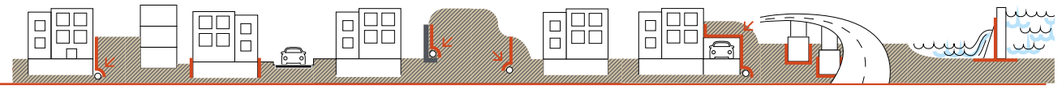
Use T-Profile for finishing.

05.1 05.2



a. Waterproofing
b. **T-Kone G Drain** studded membrane with TNT
c. Fixing with washer (suggested)
d. **T-Nails** for fixing
e. TNT
f. **T-Profile**
- - — - Recommended soil level / chalk mark

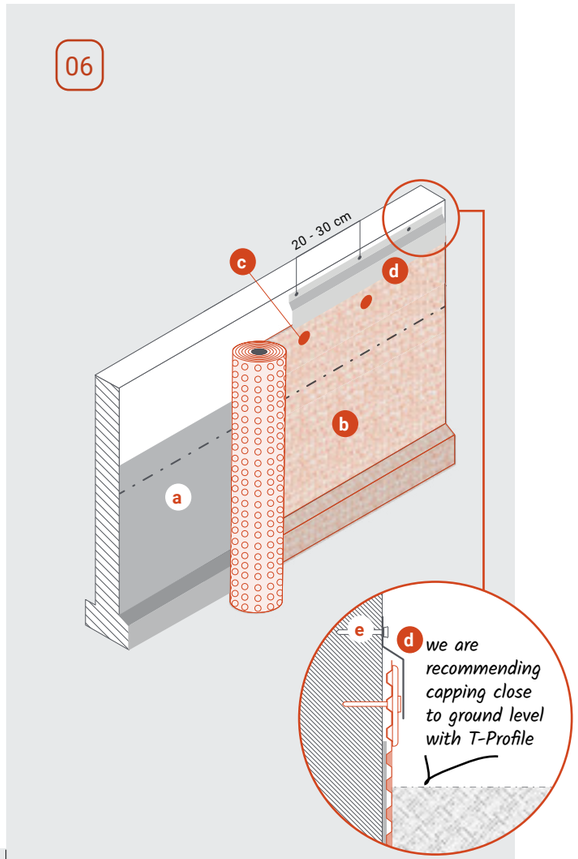
INSTALLATION INSTRUCTIONS



06 Use T-Profile and concrete T-Nails in the flat tab area.

The studded membrane must go high enough to cover the waterproofing completely and must then be protected, in turn, by a strip to stop the backfill entering the gap between the wall and membrane.

T-Nails at the top must be spaced at 20-30 cm intervals both along the top edge of the studded membrane and along the strip.



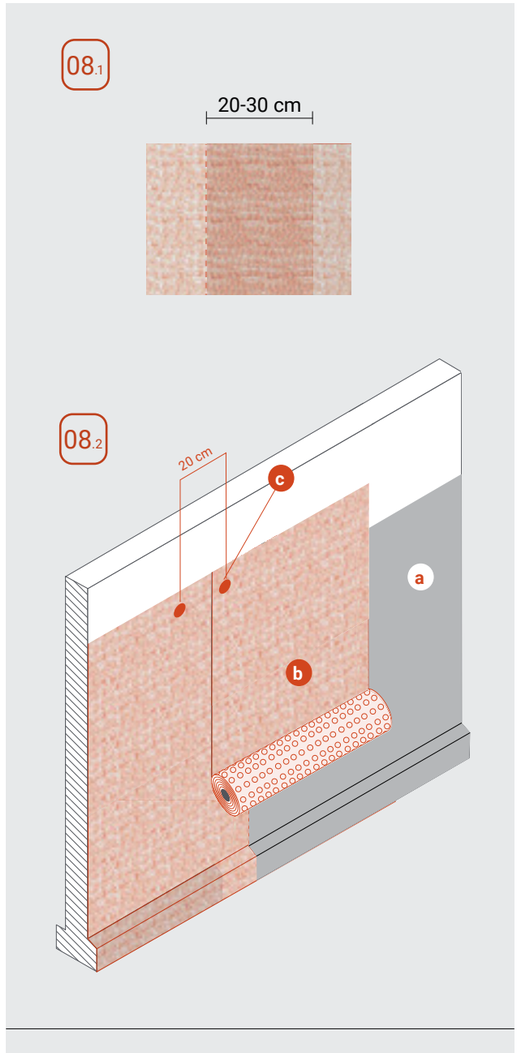
- a. Waterproofing
- b. **T-Kone G Drain** studded membrane with TNT
- c. Fixing with washers and **T-Nails**
- d. **T-Profile**
- e. **T-Nails** for fixing
- - - — - Recommended soil level / chalk mark

Vertical Jointing

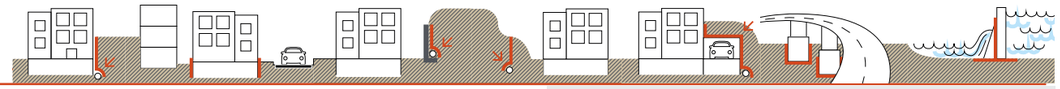
08 The 2 sheets of T-Kone G Drain should be overlapped by 20 to 30 cm and the dimples should interlock. No caulking is required but washers should be placed along the overlapped area every 20 cm.

Horizontal Jointing

If T-Kone G Drain is not wide enough to cover the full installation height, the first course should be installed from the footing upwards, and subsequently having an overlap of at least 15 cm the second course shall be installed overlapping outside, i.e. the side away from the wall, the first course. In the overlap area install washers every 20 cm.



- a. Waterproofing
- b. **T-Kone G Drain** studded membrane with TNT
- c. Fixing with washers and **T-Nails**
- - - — - Recommended soil level / chalk mark



Service line penetrations such as water, gas, sewage, or similar pipes

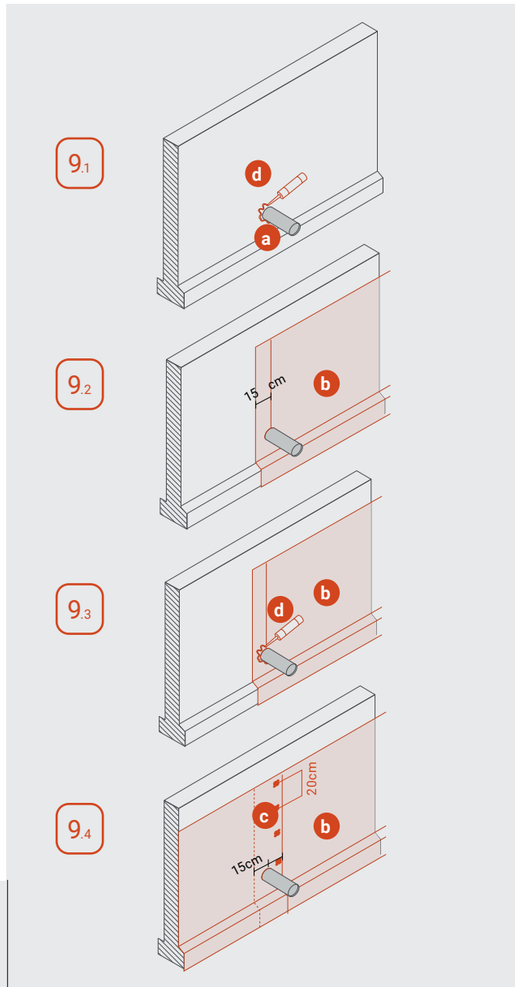
09 Place mastic caulking mastic around the pipe or penetration.

Cut the T-Kone G Drain vertically so that it extends 15 cm past the pipe or penetration, trimming the membrane so that it fits as tightly as possible.

Place mastic caulking mastic over the membrane so that there is a layer of mastic both above and below the membrane around the pipe or penetration.

Start the next run of membrane 15 cm before the pipe or penetration so that the total overlap around the pipe or penetration is 30 cm, again trimming around the pipe or penetration for a tight fit.

Install fasteners every 20 cm along the edge of the overlapped membrane.



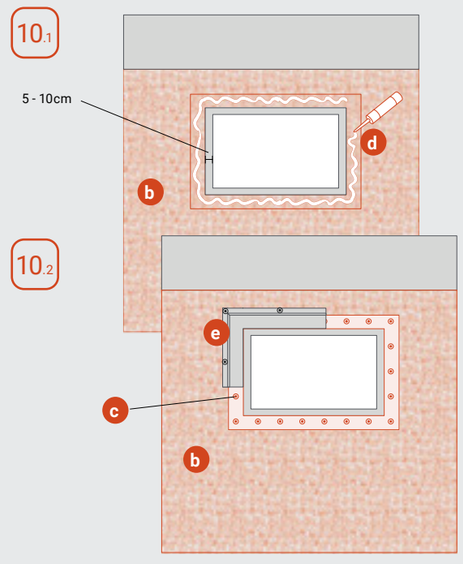
a. Service line penetrations
b. **T-Kone G Drain** studded membrane with TNT
c. Fixing with washers (suggested)
d. Calking with mastic

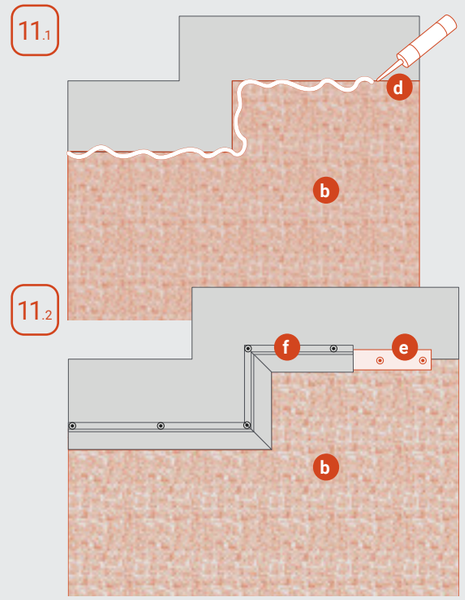
Basement windows

10 Trim the T-Kone G Drain 5 to 10 cm back from the edge of the window and use T-Profile plus T-Nails to seal around the penetration taking care to caulk the area to properly seal it.

Change of grade or areas where the flat tab has been trimmed off

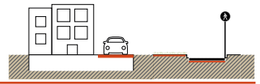
11 Use T-Profile plus T-Nails to seal the edge, taking care to caulk the area to properly seal it.





b. **T-Kone G Drain** studded membrane with TNT
c. Fixing with washers (suggested)
d. Calking with mastic
e. Band
f. **T-Profile**

TMD 1011



FOR HORIZONTAL SURFACE MECHANICAL PROTECTION AND DRAINAGE

In certain applications, the studded membrane laminated with nonwoven fabric is used as a drainage geocomposite on horizontal or sloping surfaces (gardens, parking lots, landfills, etc.). In such cases, the membrane is simply rolled out, leaving the nonwoven fabric facing up (direction that the water to be drained will come from). Adjacent rolls are overlapped by approx. 20 cm both at the sides and between the end of one roll and the start of the next.

Depending on the substrate and whether there is waterproofing under the membrane or not, you will need to determine whether the product can be pegged down, anchored in a trench at the top (where laid on an escarpment) or simply "ballasted" using the soil cover.

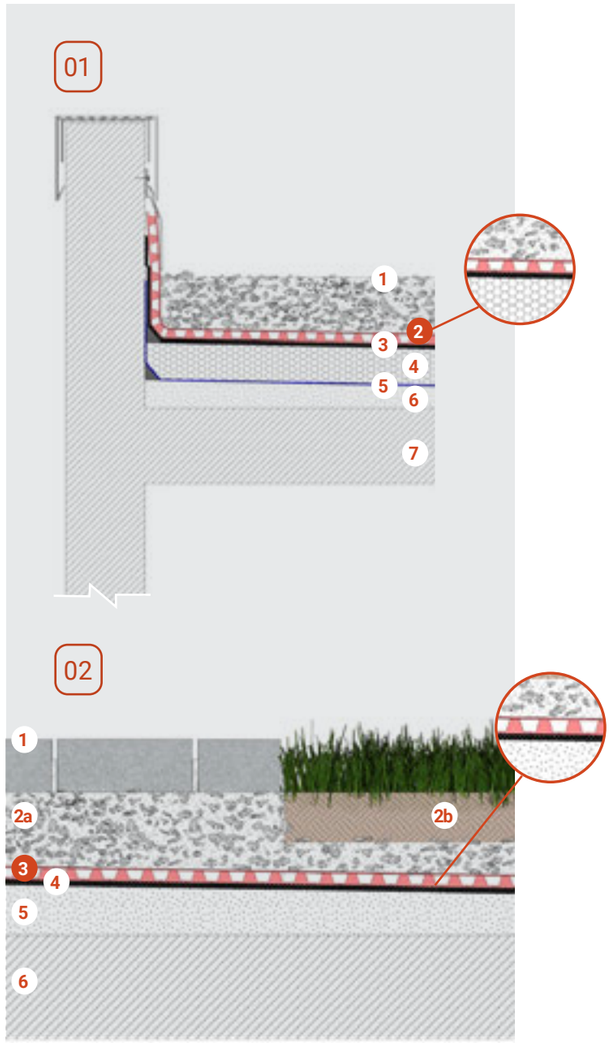
Usually a 2 man job for speed and ease of installation:

01 Flat roof with gravel finish (ballasted)

1 Gravel finish
2 TMD 1011 membrane serving as a drainage layer and to protect waterproofing
3 Waterproofing membrane
4 Thermal and sound insulation
5 Vapor barrier
6 Sloping underlayment
7 Load-bearing structure

02 Walkways and green areas

1 Loose-laid block paving
2a Crushed stone bedding course
2b Growing medium
3 TMD 1011 membrane serving as a drainage layer and to protect waterproofing
4 Waterproofing membrane
5 Vapor barrier
6 Sloping underlayment
7 Load-bearing structure



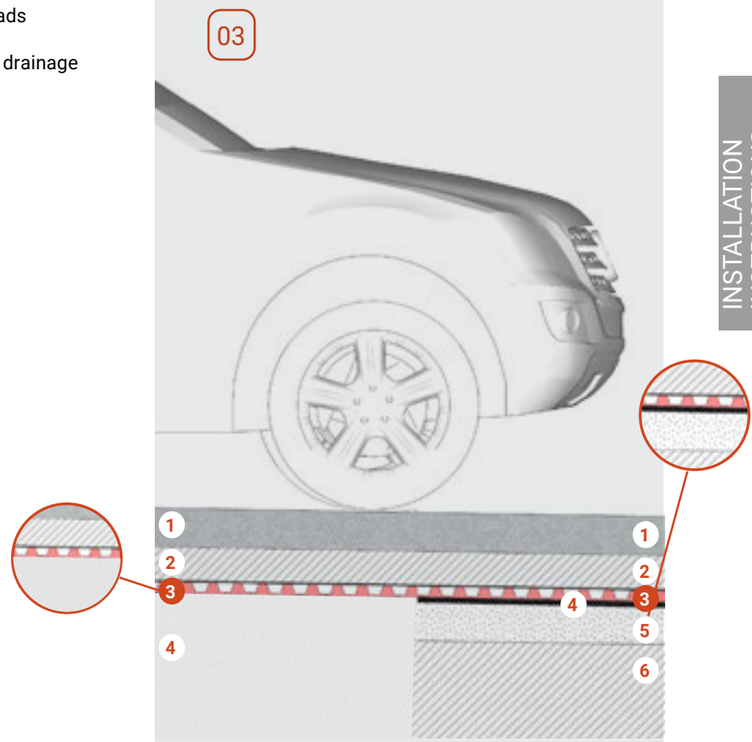
03 Surfaces suitable for vehicle traffic A

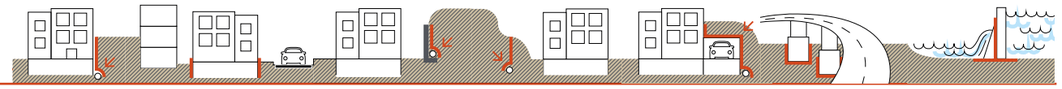
1 Paving designed to take vehicle loads
2 Sand bedding
3 TMD 1011 membrane serving as
- drainage layer
- substrate in place of traditional concrete leveling compound
- separating and leachate (oils or hydrocarbons) containment layer

4 Substructure / ground

Surfaces suitable for vehicle traffic B

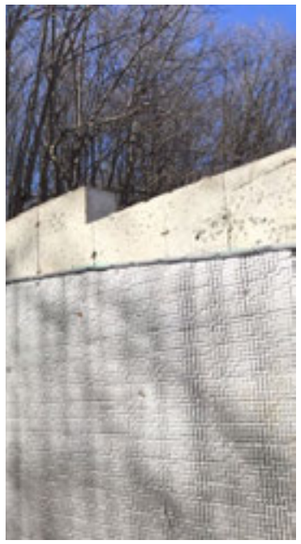
1 Paving designed to take vehicle loads
2 Sand bedding
3 TMD 1011 membrane serving as a drainage layer and to protect waterproofing
4 Waterproofing membrane
5 Sloping underlayment
6 Load-bearing structure



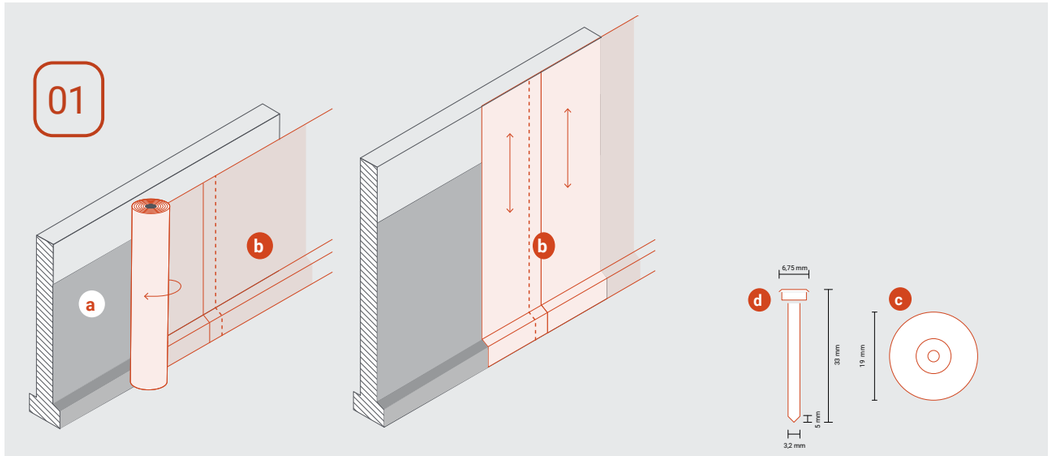


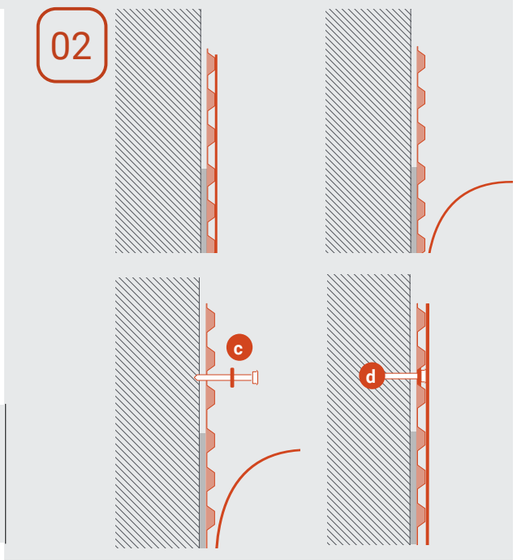
FOR VERTICAL RETAINING WALL PROTECTION AND DRAINAGE

The studded membrane laminated with nonwoven fabric serves as a drainage layer, both on horizontal surfaces and on sloping or vertical surfaces, at the same time also serving to mechanically protect the waterproofing (if any).



TMD 1011





01 Application involves rolling the membrane out and nailing it to the wall, applying the rolls either horizontally (where roll width matches the height of the wall to be protected) or vertically.

02 *Then proceed with installation tips of page 58-63.*

a. Waterproofing
b. **TMD 1011** studded membrane with TNT
c. Fixing with washers (suggested)
d. **T-Nails** for fixing

Environment and circular economy

Environmental responsibility in every region TeMa operates in.

Ever since TeMa was established, almost 30 years ago, we have taken our environmental responsibility very seriously.

In Europe, **TeMa has set up its own collection and recycling plants** (EcoTeMa in Russia and Replastica in Romania) to handle high-density polyethylene, and polypropylene, which come from the post-consumption of bottles, liquid containers, plastic bottle caps and labels, coffee capsules and white espresso cups.

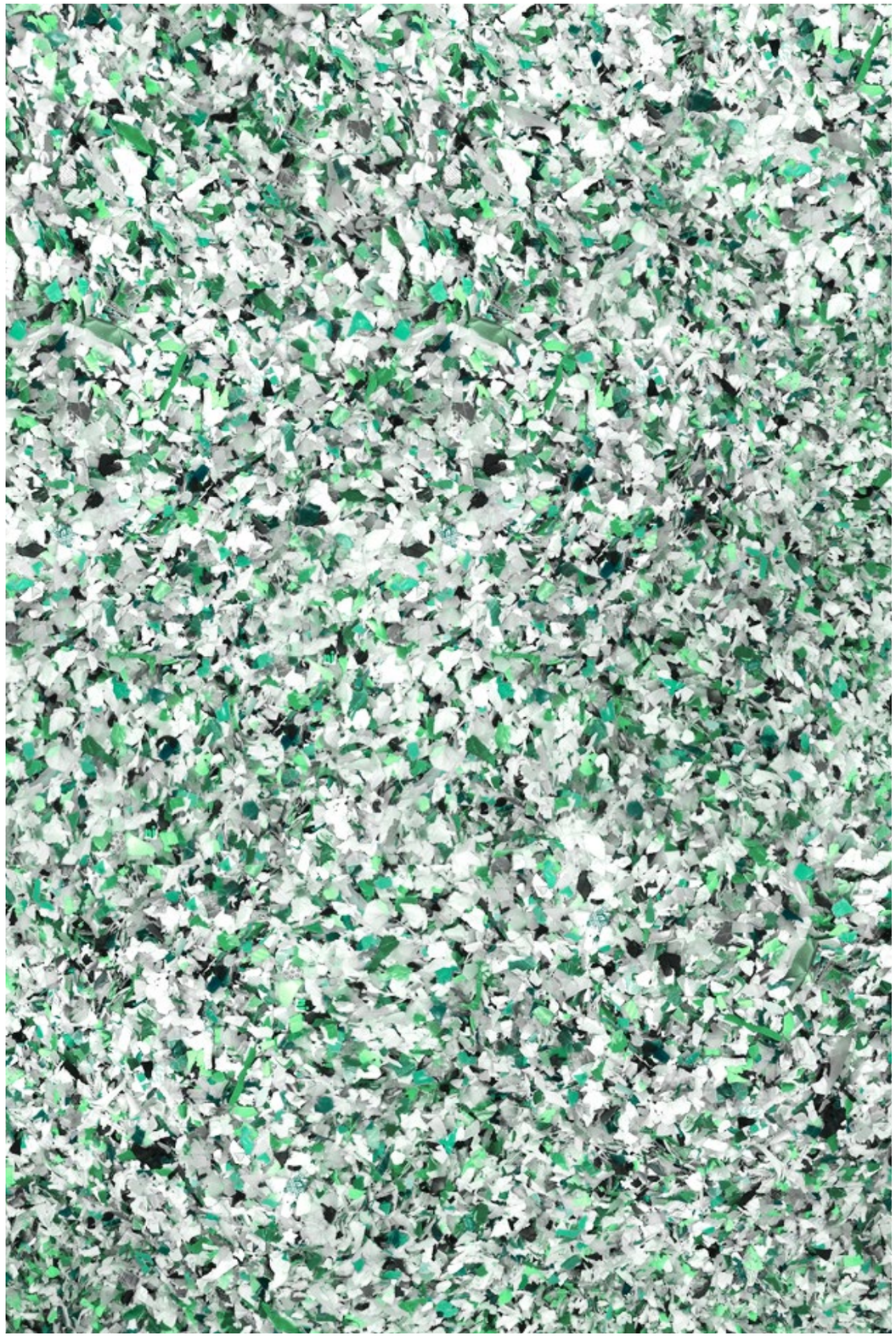
The production process consists in:

- **sorting the materials** - rejecting any that do not meet the strict preset standards in terms of quality and type
- **grinding and washing**
- **second grinding and washing cycle**
- **extrusion**
- **filtration** - to ensure the resulting material is perfectly
- compatible for TeMa products.

The resulting salvaged material is then supplied to the Group's facilities and released onto the market.

As part of this process, **all the washing water** is **treated**, so that it can be **reused**.

The amount of reused plastic in TeMa products is determined in compliance with the standards and certifications in force in the respective countries, meeting the specifications of the customers' individual projects.



The industrial area home to the TeMa Technologies and Materials headquarters and its original factories sits at the foot of the hills that make up a delightful region now recognized as a UNESCO World Heritage Site. Respect and care for the environment have always been a key concern shared by all the people who work at our facilities across the world.

Sustainability

A fundamental value for all companies in the IWIS Holding Group.

Ever since the IWIS Group began manufacturing, its various companies have always ensured their production facilities adopt technologies preventing pollution of the soil, air and water: rather than an award, we regard our ISO 14001 certification as an ongoing commitment to the community, to preserve the environment where we live and work.

Almost 50% of the energy used in our production processes comes from renewable sources: IWIS actually has three photovoltaic systems of its own, with rated outputs of 200 kWp, 150 kWp and 100 kWp.
With a cogenerator producing another 800 kWP.

IWIS HOLDING invests heavily in R&D in order to deliver quality products and further its technological innovation and environmentally friendly efforts.

The IWIS Group also uses recycled materials for some of its production processes, having specific plants at its disposal for recycling plastics.

We preserve the environment we live in

We use renewable sources

We invest in R&D

We use recycled materials

IMPORTANT:
The information provided in this brochure is based on the knowledge and experience gained to date and refers exclusively to our products and their characteristics at the time the brochure was printed. This information provides no guarantee for legal purposes, nor does it establish the product quality agreed upon in the contract. During installation, the specific conditions of use must always be observed, in particular from a physical, technical and legal point of view. All technical drawings are examples that represent a principle and are adapted to each specific case.

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a thinking holding

TeMa
Technologies
and Materials

TeMa | Technologies and Materials

For almost 30 years, the TeMa Technologies and Materials has been involved in environmental and construction engineering projects, making its mark unique and highly competitive application solutions.
Since 2013, the company has been applying its own research in the interior building works sector, developing new high-performance materials in the fields of waterproofing and sound insulation.

Thanks to a modern production system (with branches in Italy, Spain, Turkey, Russia, Romania and the USA) and to a widespread sales network in more than 60 countries. TeMa offers customised solutions for all projects that involve structural elements for protection, maintenance and safety in the residential and civil building sectors and in the field of major environmental works.

TeMa stands out for its ongoing research into new products, the active involvement of designers and customers, and customer assistance during the pre-sale stages and after installation.

TeMa Building Solutions
www.temabuilding.com

TeMa Geo Solutions
www.temageo.com

TeMa Interior Solutions
www.temainterior.com

TeMa Technologies and Materials srl
Via dell'Industria 21
31029 Vittorio Veneto (TV) ITALY
Tel. +39 0438 5031
e-mail: info@temacorporation.com
www.temacorporation.com

TeMa North
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