SOLMAX

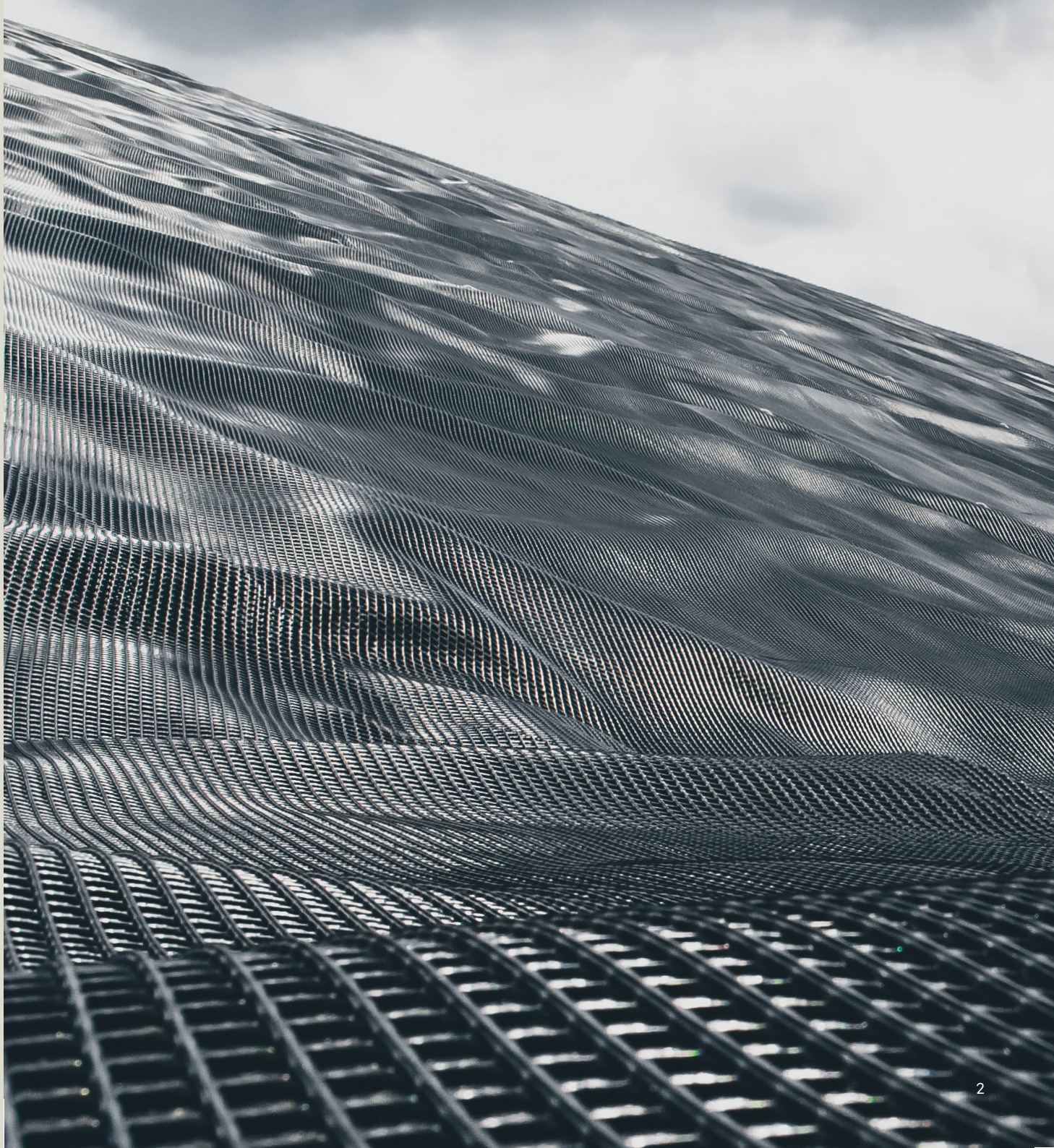
FABRINET

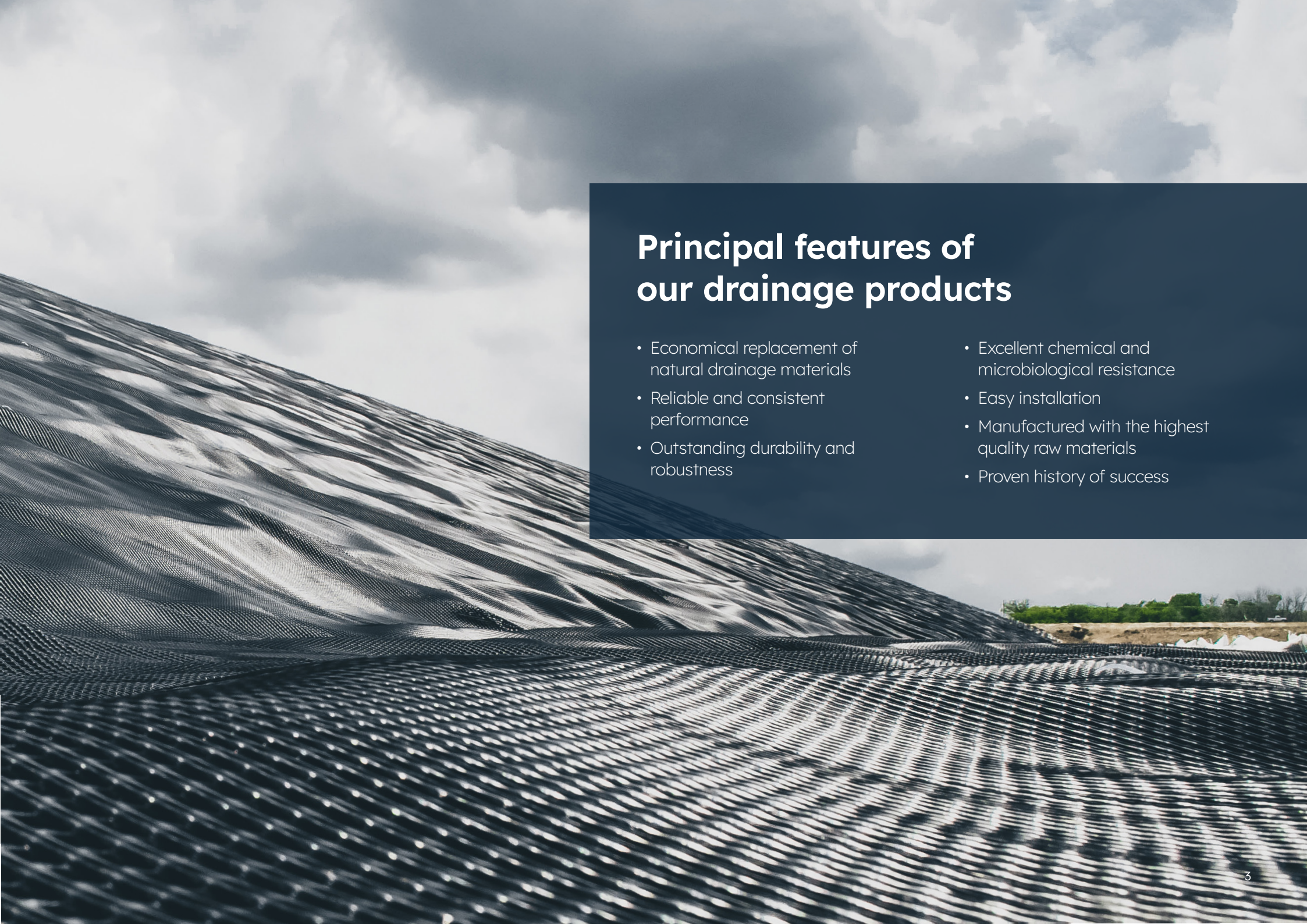
Geosynthetic drainage solutions

Geosynthetic drainage solutions

Geosynthetic drainage products have been used successfully in environmental and civil engineering applications for several decades. Applications once dominated by natural drainage materials have been replaced by geosynthetic drainage products such as geonets and geocomposites.

Geonets and geocomposites are used in environmental applications such as leak detection, leachate collection and removal systems under high loads, collection and discharge of rainwater and landfill gas in landfill capping systems, as well as in a broad range of applications in civil engineering and building construction sectors.

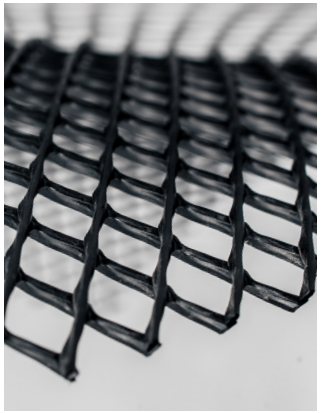




Principal features of our drainage products

- Economical replacement of natural drainage materials
- Reliable and consistent performance
- Outstanding durability and robustness
- Excellent chemical and microbiological resistance
- Easy installation
- Manufactured with the highest quality raw materials
- Proven history of success

FABRINET drainage solutions

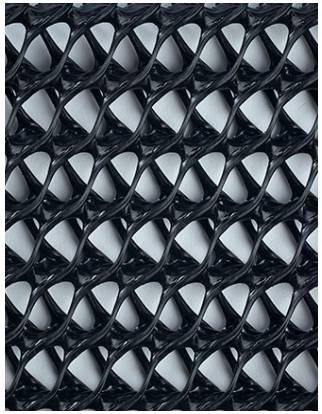


FABRINET DN

FABRINET DN consists of a biplanar geonet made from high density polyethylene (HDPE) that provides high flow in-plane drainage capacity under a variety of field conditions. **FABRINET** DN replaces conventional drainage gravel layers and conserves natural resources. It is an effective and versatile solution for many applications.

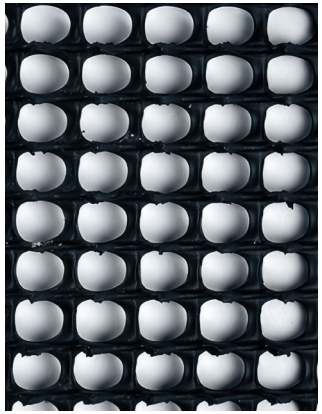
FABRINET DC

FABRINET DC is a drainage composite that consists of a HDPE biplanar geonet bonded with nonwoven geotextiles on one or on both sides of the geonet. **FABRINET** DC offers a combination of drainage and filtration functions. It is characterized by low compressibility, and is therefore used in situations where effective drainage under high overburden pressures is required.



FABRINET DTP

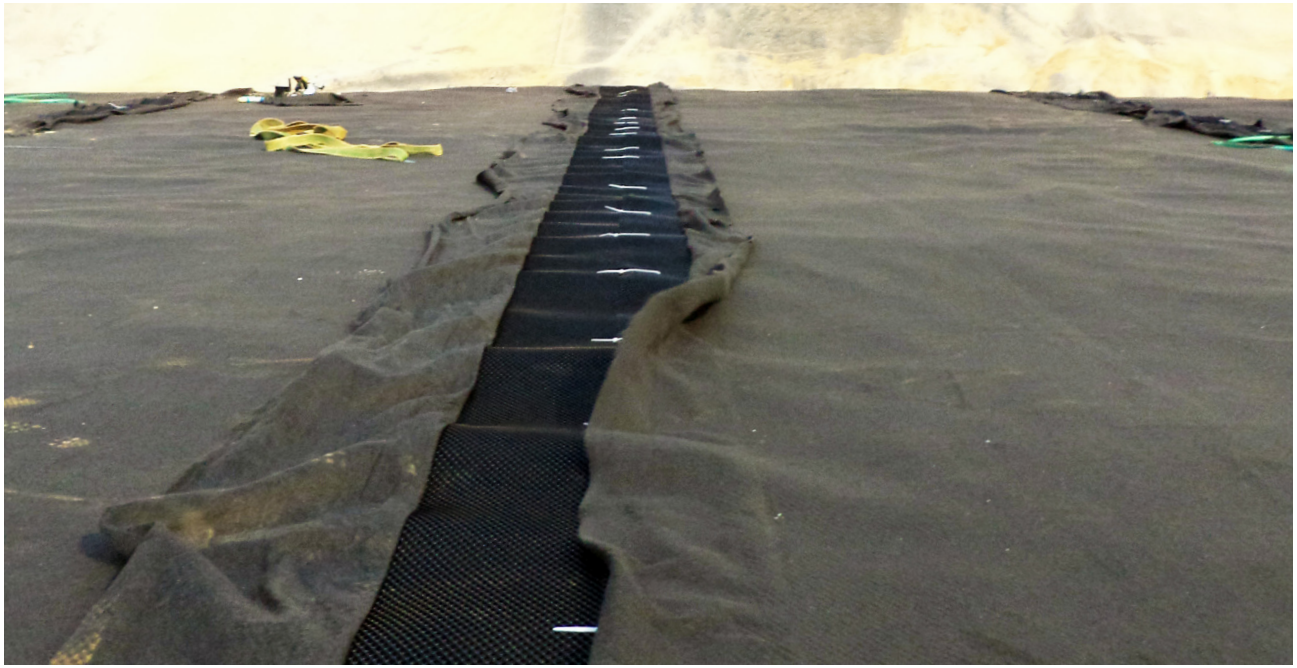
FABRINET DTP consists of a high-density polyethylene triplanar geonet that provides highly channelized transmissivity. The very low compressibility offers high discharge capacity under high surcharge loads and is used in many drainage applications to replace conventional drainage gravel layers and conserve natural resources. The core can be further combined with one or two layers of filter geotextiles.



FABRINET DTX

FABRINET DTX consists of a tri-axial geonet having vertical central HDPE strands with either horizontal top strands (T-shaped) or horizontal top and bottom strands (box-shaped) that provides high transmissivity in soil environments, under variable loading conditions.

FABRINET DN



FABRINET BP biplanar HDPE geonets have been developed to provide drainage function over a broad range of anticipated site loads and gradients, to replace thick mineral drainage layers.

The biplanar core structure is ideal for the multidirectional in-plane conveyance of liquids and gases. Fluids are transmitted uniformly under a variety of field conditions.

The design of the core is optimized to maintain maximum flow under compressive loads over the service life. Designers can be confident that the reduction in drainage performance over time is minimized.

This ensures that the system remain stable and operate efficiently thus minimizing operational and maintenance costs.

Benefits

- Geonet from premium quality HDPE raw material providing outstanding durability and robustness
- Proven long-term resistance to oxidation
- Product performance can be modified to meet project-specific conditions
- High in-plane flow capacity over a broad range of normal loads
- Stable biplanar geonet structure providing high compressive creep performance under overburden loads
- Quality assured consistent performance characteristics enabling professional design
- Enables reliable leak detection in double lining systems in landfill, mining and industrial applications
- Outstanding performance against aggressive chemicals and microbiological resistance

FABRINET DC

FABRINET DC drainage composite offers a combination of drainage and filtration functions are ideal for transmitting fluid. The low compressibility material produces high discharge capacity under high surcharge load, optimizing in-plane flow capacity.

It is an alternative to conventional gravel drainage layers and conserve natural resources. **FABRINET** DC can be used behind retaining walls, in landfill designs as leachate or gas drainage layer, sport fields, garden landscapes, below slab water pressure release and various other applications.

Benefits

- Provides filtration, separation and protection functions
- High compression resistance and high chemical resistance
- Less potential to clogging as compared with conventional drainage gravel
- Easy to construct and low cost especially when aggregates are scarce
- Reduced space requirements and excavation costs
- Quality assured consistent performance characteristics enable professional design
- Significant time and cost savings
- High in-plane flow capacity over a broad range of normal loads
- Enables reliable leak detection in double lining systems in landfill, mining and industrial applications when aggregates are scarce
- Reduced space requirements and excavation costs
- Quality assured consistent performance characteristics enable professional design
- Significant time and cost savings
- High in-plane flow capacity over a broad range of normal loads
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FABRINET DTP

FABRINET DTP triplanar HDPE geonet cores are engineered to have a high void ratio, which means they have a significant open space within their structure relative to their total volume. This high void ratio provides ample space for water to flow through, preventing water buildup and ensuring effective drainage at high loads.

Triplanar geonets have three sets of strands: the primary strand in the middle serves as the drainage direction and the outer ones act as spacers.

The triplanar core structure is ideal for the monodirectional in-plane conveyance of liquids and gases over a broad range of anticipated site loads and gradients. The design of the core is optimized to maintain maximum flow under compressive loads over the service life. The combination of high transmissivity and high loads make this product an alternative for a wide range of known applications.

Benefits

- Efficient flow path for liquids and gases – in-plane flow is equivalent or superior to conventional gravel drains or most available drainage cores on the market
- Provides filtration, separation and protection against puncturing of geomembranes
- The triplanar HDPE core and nonwoven geotextiles provide excellent durability properties
- Resistance to all naturally occurring chemical and biological conditions
- Extremely high flow rates in production direction at low inclinations
- Quality assured consistent performance characteristics enable professional design

FABRINET DTX

FABRINET DTX provides high transmissivity in soil environments, under variable loading conditions.

In applications where the normal load is high, **FABRINET** DTX tri-axial double web geonet is ideal due to its high compressive strength and its ability to maintain rapid, high in-plane water flow under pressure.

It is a suitable drainage system for tunnels and landfills or waste containment applications.

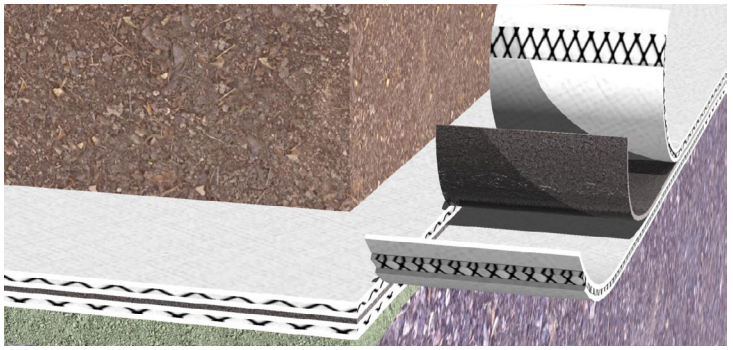
Benefits

- Optimal in-plane drainage in high loading conditions
- Extremely durable and protects structures from damage caused by backfill
- Practical alternative to the conventional construction of thick gravel drainage layers which may be difficult and costly
- Easy and efficient installation

Drainage applications

LANDFILLS

FABRINET typically provide three functions in landfill applications – drainage, filtration and protection – if installed directly on top of the geomembrane. **FABRINET** is resistant to most aggressive liquids and gases. Due to its high shear strength, **FABRINET** can be used on steep side slopes and in capping systems.

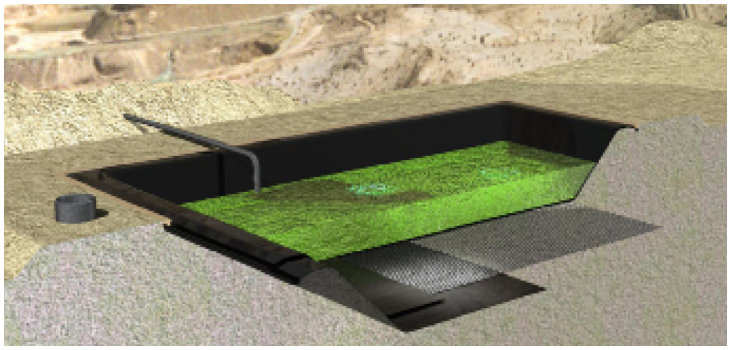


Applications

- Leachate collection and removal
- Leak detection
- Surface water collection and removal above the geomembrane layer
- Gas collection below geomembrane layer

MINING

Today's mining practices require optimal performance from any component of the containment lining system. **FABRINET** installed between two geomembranes of a double-lining system provides a long-term stable and efficient leak detection layer for solution ponds.

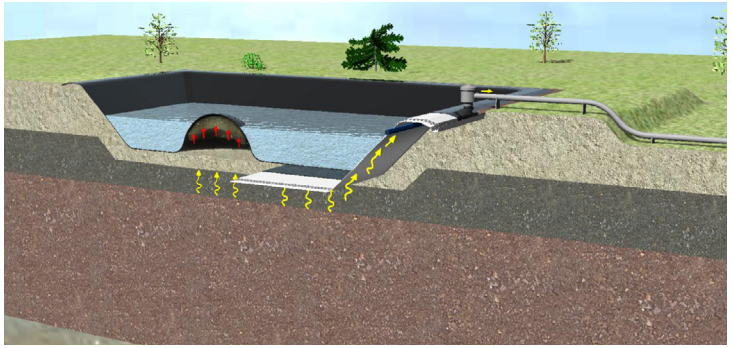


Applications

- Collection of pregnant leachate solutions
- Leak detection

WATER CONTAINMENT SYSTEMS AND RESERVOIRS

FABRINET installed below the geomembrane directs subsurface gas towards drainage pipes in the perimeter, thus avoiding a gas buildup and the floating of the geomembrane. In case of high groundwater levels, **FABRINET** can help to reduce the hydrostatic pressure below the geomembrane. In addition, **FABRINET** protects geomembrane against puncturing caused by angular subsoil.

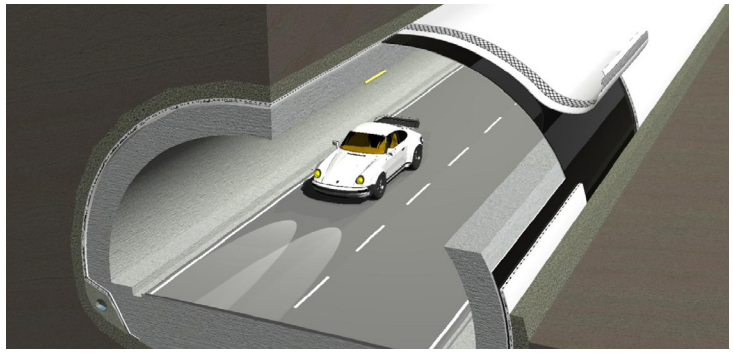


Applications

- Ground water drainage
- Biogas drainage/subsurface gas drainage
- Leachate drainage

TUNNELS

Robust and efficient drainage systems are necessary to overcome water seepage problems in tunnel applications. **FABRINET** intercepts groundwater seepage between the rock face and the inner concrete shell. In cut and cover tunnels **FABRINET** provides external drainage, relieving hydraulic pressure acting upon the tunnel structure.

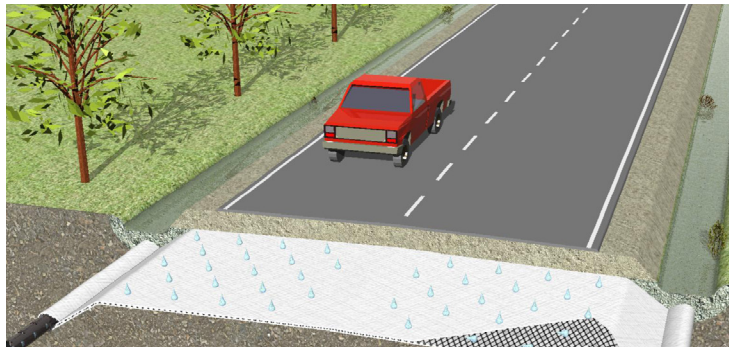


Applications

- Drainage of rainwater and groundwater in cut & cover and rock tunnels

ROADS AND RAILWAYS

One of the principal reasons for premature failure of road or railway foundations is the damage of the bedding caused by water **FABRINET** installed within the foundation is used for fast collection and conveyance of the water to the edge drain trenches. This way **FABRINET** helps to achieve a longer service life of the construction.
Its excellent compressive strength makes it the ideal product for these applications.

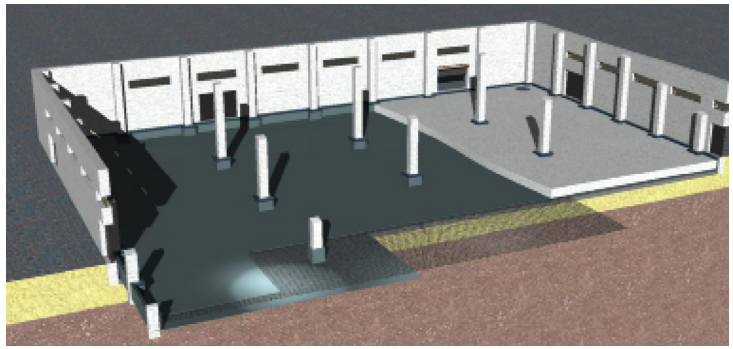


Applications

- Drainage of embankments
- Vertical road edge drains
- Drainage of foundations
- Drainage of railway track beds
- Soil retaining structures
- Bridge abutments

CIVIL WORKS AND BUILDING CONSTRUCTION

FABRINET installed vertically on walls or horizontally under foundations provides an excellent system for the continuous and uniform collection of underground water and rainwater and eliminates the hydrostatic pressure thereby increasing the service life of the building. **FABRINET** is also used for leak detection and gas venting around and beneath basements and underground structures.



Applications

- Foundations / basements
- Parking decks
- Basement walls
- Retaining walls
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- Flat roofs
- Sport fields
- Runways
- Wall and cellar drainage

About Solmax

Solmax is a world leader in sustainable construction solutions, for civil and environmental infrastructure. Its pioneering products separate, contain, filter, drain and reinforce essential applications in a more sustainable way – making the world a better place. The company was founded in 1981, and has grown through the acquisition of GSE, TenCate Geosynthetics and Propex. It is now the largest geosynthetics company in the world, empowered by more than 2,000 talented people. Solmax is headquartered in the province of Quebec, Canada, with subsidiaries and operations across the globe. To find out more, contact infoasia@solmax.com.

Uncompromised quality

Our products are manufactured to strict international quality standards. All our products are tested and verified at our dedicated and comprehensive laboratories which maintain numerous accreditations. We offer our partners a wide scope of testing according to published standards to ensure products delivered to sites meet specified quality requirements.

Let's build infrastructure better

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