

GEOTEXTILES



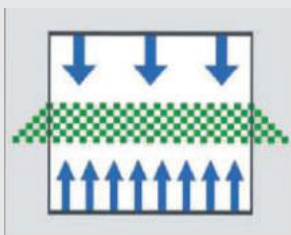
ABOUT GEOTEXTILES

A natural choice in designing, building and constructing works including roads and highways; ground, drainage and filtration systems; hydraulic works, waste disposal sites and water purifying plants. Geotextile has been defined as - A permeable geosynthetic comprised solely of textiles. Geotextiles are used with foundation, soil, rock, earth, or any other geotechnical engineering-related material as an integral part of project, structure, or system” Geotextile now has become integral part of the civil engineering projects, structures and systems worldwide.

FUNCTION
Separation
Filtration
Reinforcement
Drainage
Protection

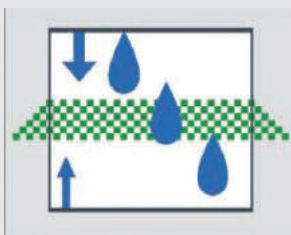
APPLICATIONS
Road Works
Railroads
Dams, Water Reservoirs
Erosion Control
Drainage

Roofing
Silt Fences and Landscpe
Landfills



SEPARATION

TexoFib Geotextile acts as a separator between two layers of soil that have different particle size distributions. TexoFib Geotextiles are used to prevent road base materials from penetrating into soft underlying subgrade soils. thus maintaining design thickness and roadway integrity. Separators also help to prevent fine-grained subgrade soils from being pumped into permeable granular road bases.

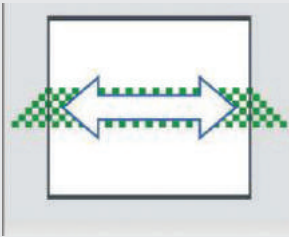


FILTRATION

TexoFib Geotextile acts similar to a sand filter by allowing water to move through the soil while retaining all upstream soil particles. TexoFib Geotextiles are used to prevent soils from migrating into drainage aggregate or pipes while maintaining flow through the system. TexoFib Geotextiles are also used below rip rap and other armour materials in coastal and river bank protection systems to prevent soil erosion.

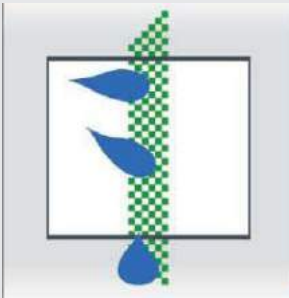
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FUNCTIONS



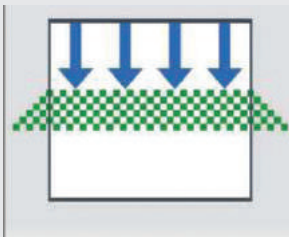
REINFORCEMENT

TexoFib Geotextile acts as a reinforcement element within a soil mass or in combination with the soil to produce a composite that has improved strength and deformation properties over the unreinforced soil. TexoFib Geotextiles are used to add tensile strength to a soil mass in order to create vertical or near vertical reinforced soil walls and steep slopers.



DRAINAGE

TexoFib Geotextile acts as a drain to carry fluid flows through less permeable soils or construction structures. TexoFib Geotextiles are used to dissipate pore water pressures at the base of roadway embankments. The use of geotextile in drainage systems ensures an ongoing drainage of fluids with minimum pressure loss by flowing in-plane of the fabric away from the construction.



PROTECTION

Due to excellent static puncture resistance, TexoFib Geotextiles protect waterproof membranes and other sealing materials from puncture when fill material and loads are applied. When placed between sealing materials and other layers, TexoFib geotextile resists and distributes local pressure from the layer above, ensuring that the protected material is not stressed to failure.

ROAD WORKS

APPLICATION

TexoFib Geotextile is efficiently used in construction and maintenance of Parking Areas, Airport Runways, Industrial Courtyards etc. Paved Primary and Secondary Roads, Unpaved Roads (Industrial or Private Access Roads, Forest Operations & Detours)



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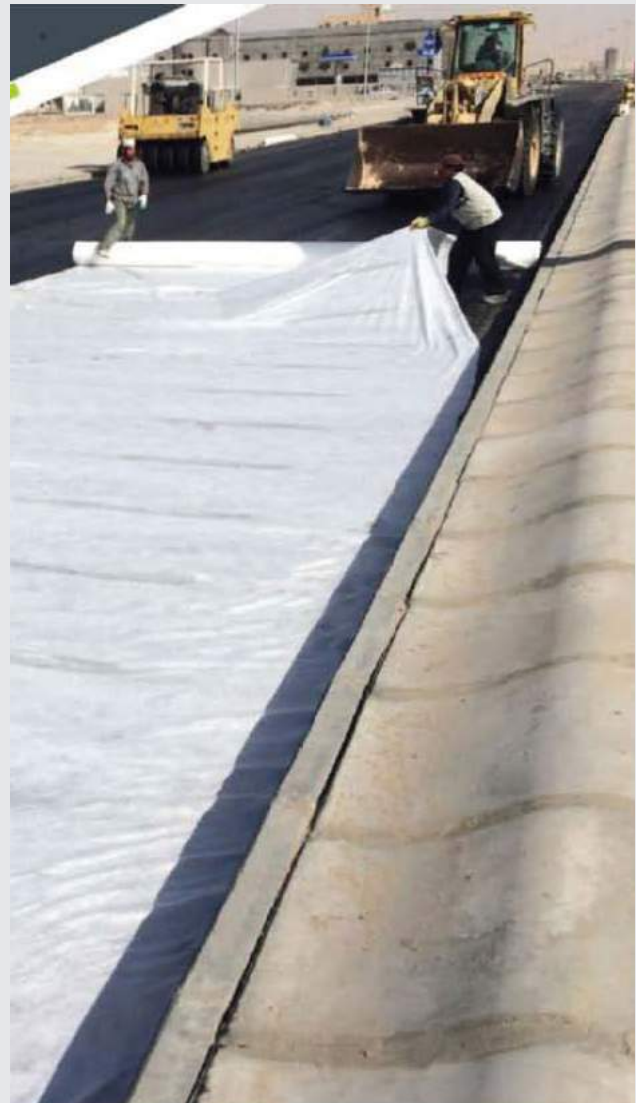
FUNCTION

Primary function of geotextile is the separation between the gravel and the sub-grade soil. Without proper separation, gravel progressively keeps on penetrating into the sub soil and on the other hand due to pumping effect from traffic loads and vibrations, soil migrate in to the gravel. This inter-mixing result into subsequent loss in gravel designed thickness and load bearing capacity. All these conditions destroy the roads base structure and end up with unexpected road failure. When TexoFib Geotextile is applied under the layers of the new pavement, it becomes a vital part of the road section, forming a barrier against water penetration from the cracks on the old surface. Added reinforcement in the road structure is beneficial for delay and reduction of reflection and fatigue cracks on the new surface.

ADVANTAGES

A TexoFib Geotextile laid between the underground and the base/ sub-base foundation leads to numerous advantages, such as:

- It prevents the contamination of sub-base and base levels with fine particles/small material.
- It enables the use of free drainage and open filtration materials, structurally more efficient.
- It increases road drainage.
- It reduces the depth of excavations necessary for the removal of improper materials from the underground.
- It saves weather-caused interruptions as work can be performed in nearly any weather conditions.
- It expands the life of pavement structures.
- It reduces maintenance and repair costs.



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RAILROADS

APPLICATION

TexoFib Geotextile stabilize the foundation, prevent contaminations to the ballast, optimize the drainage capacity of the whole structure and hence enabling it to withstand with required loads.

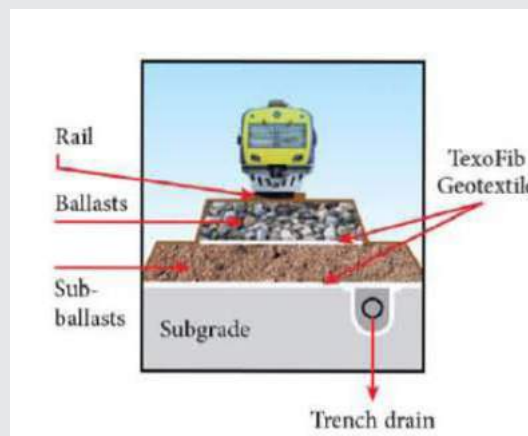
FUNCTION

In railway tracks construction the geotextile is used primarily as a:

- Separator on the basis of embankments or between different types of granular soils
- Base separator between the ground granular embankments and ballast

ADVANTAGES

Texofib Geotextile contribute in multiple ways to the preservation and life extension of railroads. As a separator, maintain the designed thickness and integrity of the base and granular layers. Without Geotextile layer, track structural strength and drainage capacity arc reduced due to sub-soil penetration into the ballast layers As drainage and filtration media. the TexoFib Geotextile maintain water flow through the sub-grade layers and avo ids track deformation due to water accumulation. TexoFib Geotextile also enhance stress bearing capacity of the complete structure by even load distribution.



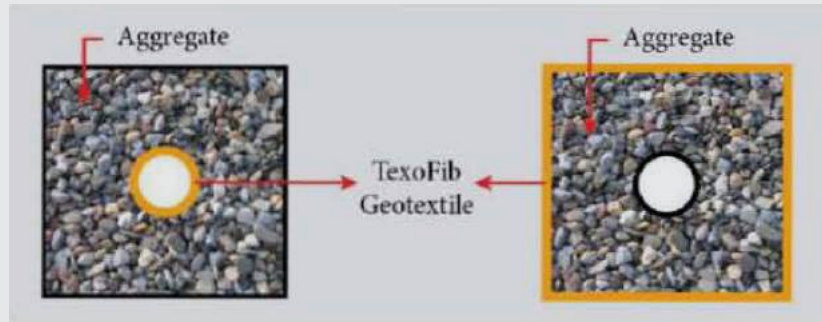
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DRAINAGE

APPLICATION

TexoFib Geotextile is used for

- Water Evacuation Channels
- Sub Drains
- Septic Systems
- Interception Drains
- Pavement Edge Drains
- Drains for Walls
- Drains for Embankments
- Sports Field Drains



FUNCTION

Enable liquids to flow through granular soil or perforated pipe given the durability of the drainage system design. TexoFib Geotextile contain upstream fine soil particles and prevent their migration or their flowing through the pipes into the drainage system. Customized fabric with fine openings size prevent excessive migration of soil and maximum permeability allows liquids to pass through it without Significant reduction in flow. Nonwoven fiber structure has maximum number of pores, if soil particles block or clog a few openings, still the flow through the Geotextile fabric will be greater than the required system permeability. TexoFib Geotextile fabric is produced with excellent strength, chemical and environmental resistance, to prevent it from becoming damaged during installation and ensure long-term operational life of the drainage system.

ADVANTAGES

In comparison with conventional drains, TexoFib Geotextiles provide more advantages, ensuring:

- Compact and continuous filter.
- Reduced excavation.
- Simplified and better quality construction.
- Reduced construction time.
- A substantial reduction as to the cost of the materials.

GEOTEXTILES

EROSION CONTROL

APPLICATION

Typical applications include: shorelines, slope protection, rivers, water channels, coastline protection, shore protection, bridges and embankments.

FUNCTION

The basic function of TexoFib Geotextile in erosion control structures is filtration to curtail erosion of subsoil under the armour, rip-rap, gabions or pre-cast blocks. These structures mostly have an exterior protective and resistant layer to absorb forces of water and wind, and an interior protection layer, a Geotextile to minimize underneath soil erosion. Here geotextile layer has dual role: on one hand, it needs to be fine enough to contain the bank soil, and, on the other hand, to be permeable enough to prevent the maximum differential pressure between the bank and the water levels.



ADVANTAGES

- Non-woven fiber structure perfectly counter erosion of subgrade soil
- Compact and continuous filter
- Equally good drainage characteristics
- Reduced environmental impact
- Durable and strong structure
- Customized and better quality construction
- Easy Installation
- Resistance to rot, microorganisms and chemicals

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ROOFING

APPLICATION

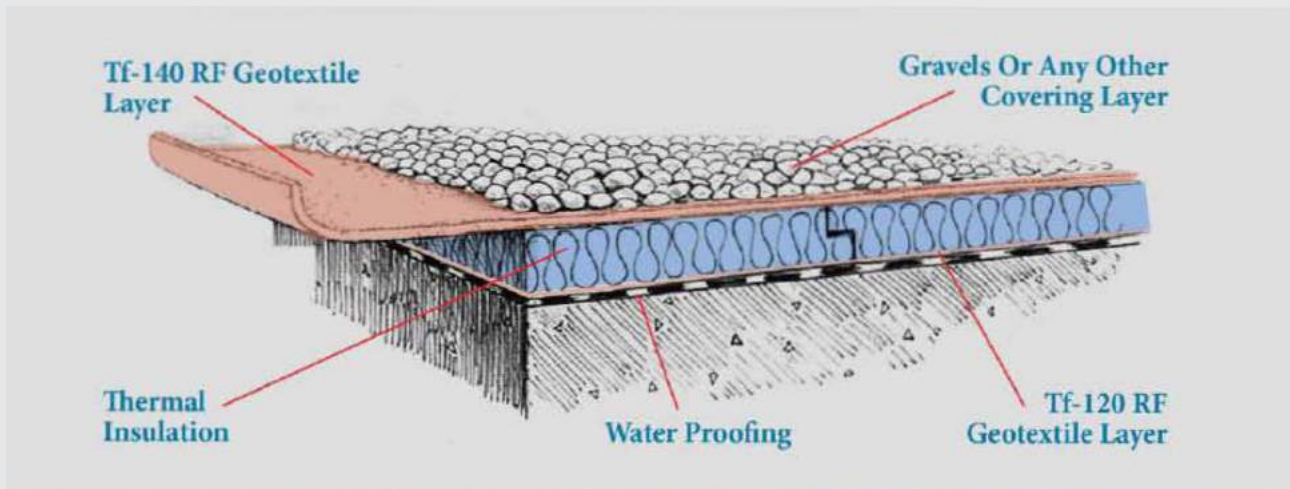
TexoFib Geotextile is used in roofing system, to provide protection and separation layer for both; Thermal insulation, from puncture damage by the gravel and roofing tiles and the Waterproofing membrane. from being damaged by the friction effect due to their direct contact with thermal insulation boards.

FUNCTION

Protection and separation layer for thermal insulation.

Protection layer for waterproofing materials.

Roofing and Re-Roofing (inverted roofing system)



GEOTEXTILES

DAMS / RESERVOIRS

APPLICATION

Facilities such as dams, embankments, artificial channels, water reservoirs, waste water treatment lagoons, waste safety basins, waste reservoirs, tunnels, maintenance etc.

FUNCTION

- Protection of intermediate geo-membrane layers from damage, during the installation of the sealant systems and after construction.
- To release gas and liquids under the intermediate layer in surface and waste embankment systems that need to be drained.
- TexoFib Geotextile with excellent physical properties is useful for surface and waste embankment cleaning projects.

ADVANTAGES

- Excellent drainage characteristics
- Reduced environmental impact
- Durable and strong structure
- Customized and better quality construction
- Easy installation
- Resistance to rot, microorganisms and chemicals.



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SILT FENCES & LANDSCAPE

APPLICATION

TexoFib products are used for separation in landscape preservation application. Silt fences are used in any site that can potentially lead to earth sediment flow in storm water.

FUNCTION

TexoFib Geotextile is applied for weed control in landscapes and under the decks, for soil retention behind the retaining walls and in planter pots, for underground drainage systems and as separation layer under walkways. Wherever surface soil is exposed to storm water erosion and ends up forming overland flows. TexoFib Geotextile silt fences are installed to contain sediment flow.

ADVANTAGES

TexoFib Geotextile acts as a weed-barrier while allowing water and nutrients to reach to the plant roots. In case of slit fences. TexoFib Geotextile provide an economical environmental protection. Geotextile filter and control overland flow, containing silt and allowing water to flow through the fabric. For these applications TexoFib Geotextile is made of needle-punched fibers treated to be UV-resistant.



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LANDFILLS

APPLICATION

Geotextile fabrics are extensively used in the design of both top and bottom layers of landfill facilities. Used for filtration purpose or as cushion to protect the geo-membrane from puncture. A Geotextile protection layer beneath the gravel provides a cushion to protect the primary geo-membrane from puncture by stones in the overlying gravel. Geotextile filter

covers the entire footprint of the landfill and prevents clogging of the leachate collection and removal system. The groundwater level may be controlled at the bottom of the landfill by gradient control drains built using geotextile filters.

ADVANTAGES

- Protect and prevent geo-membrane layers from puncture.
- Provide separation layers to preserve landfill design.
- Facilitate flow through drainage systems and landfill layers.



LOCATION

