

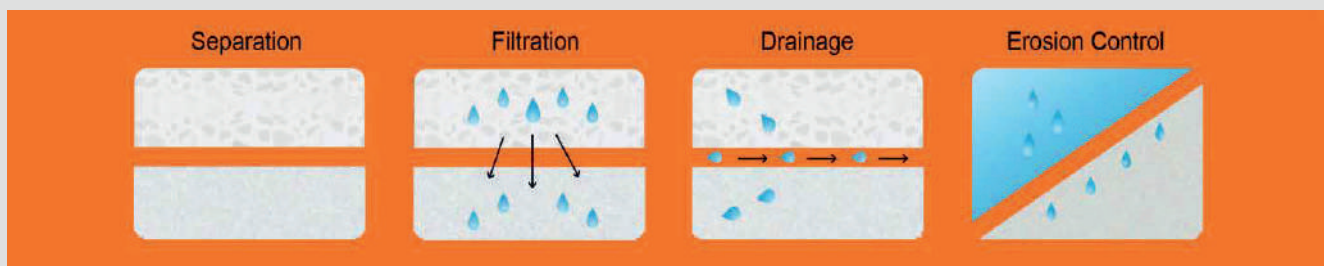


ATGTX

➤ Nonwoven Geotextile

ATGTX are permeable fabrics which, when used in association with soil, have the ability for separation, filtration, protection or drainage. Raw material used for non-woven geotextile is generally polypropylene and polyester.

Functions



SEPARATION - ATGTX is used to separate two layers of soil, which have different particle size distributions. It helps to prevent fine-grained subgrade soils from pumping up into permeable granular road bases. It prevents the two adjacent layers from mixing of a structure. This is **ATGTX** primary function & it necessary to ensure the long-term performance of the structure.

FILTRATION - ATGTX is used to retain fine soil particles. It prevents fine particles from being leached and draining elements.

DRAINAGE - ATGTX is used as a passive element to transport liquids elements or gas elements. **ATGTX** can be used alone for this function and in combination with drainage nets to increase drainage capacity.

EROSION CONTROL - ATGTX acts both as a separator and as a drainage layer. But when its basic function is to aid in erosion control it is placed in special category. A much bigger possible market for **ATGTX** exist in the soil erosion control.



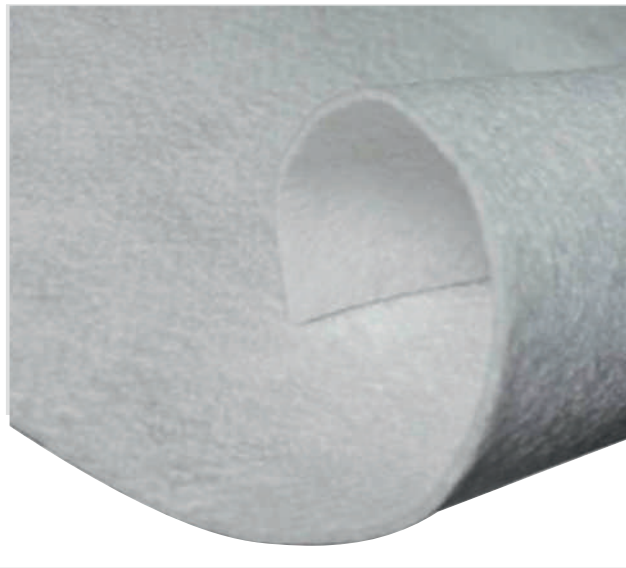
➤ Process of formation



Why **ATGTX**?

- We have most advanced fully automated state of the art manufacturing facility.
- Complete testing laboratory to adhere all standards worldwide.
- We deliver top quality products and services to our customers all over the world.
- We use best quality of raw material for all our products.
- Our Production capacity of 350 tonnes per month and on time delivery.
- Reliable & committed to supply quality products.
- Competitive pricing & top quality service.
- Maximum width upto 6.0 m.





Nonwoven Polypropylene

ATGTX (PP) is a non-woven polypropylene geotextile made with PP staple fibres which are thermally bonded through needle punching to form a strong, flexible and dimensionally stable fabric structure with optimum pore sizes and high permeability. These are UV resistance. These perform separation and filtration functions hence prevents intermixing of 2 different materials. Their usage in stabilization and drainage applications ensure an enhanced performance and design life of granular layers.

➤ Features of ATGTX (PP)

- Highly durable in all soil conditions.
- Highly resistant to damage from construction equipment.
- Ensures separation, drainage and filtration when subjected to loads.
- High tensile strength.
- Prevents intermixing of two different materials hence improving pavement life.

➤ Applications of ATGTX (PP)

- Highways and roads.
- Railways.
- Erosion control over slopes.
- Canals
- Tunnels



Nonwoven Polyester

ATGTX (PET) is a non-woven polyester geotextile made with high quality of polyester staple fibres and needle punching. These are UV resistant, effective in reinforcing and protecting granular layers. It performs various functions such as soil retention, filtration and drainage.



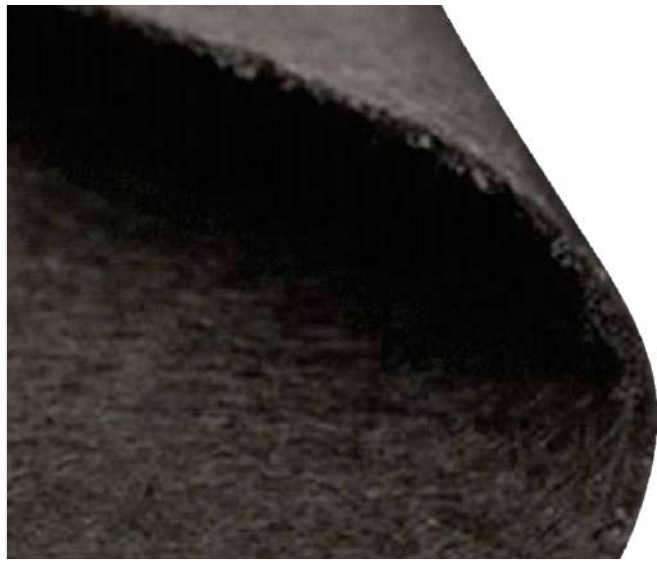
► Features of ATGTX (PET)

- Resistant to UV rays, extreme temperature and chemicals.
- Can be used in aggressive environments.
- High tensile strength.
- Provides cushion protection in roads.
- Highly permeable that allow high water flow during soil retention.

► Applications of ATGTX (PET)

- Highways and roads.
- Embankments.
- Landfills.
- Sports construction projects.





Paving Fabric

This is made by non-woven geotextile coated with bituminous layer which acts as a moisture barrier and stress relieving membrane between existing pavement and asphalt overlay and extends the service life of the overlay.

► Features of Paving Fabric

- Prevention of surface water ingress into pavement layers.
- Acts as a stress relief interface that retards reflective cracking.
- Improvement in fatigue resistance.
- Suitable for different grades of tack coat, including polymer modified tack coats.
- Have different weights for varying degrees of maintenance needs.

► Applications of Paving Fabric

- Useful for bituminous pavements and overlays.



Geo Bag (Nonwoven)

ATBag is a sand filled geotextile bag used for river protection and offshore breakwater. It is a soft and flexible technology against conventional hard structures for shore protection. Due to numerous strengths it reinforces existing coastal structures. It is designed to provide wide-width tensile strength, elongation, seam length, abrasion resistance, tear strength, puncture resistance and UV stability.



➤ Features of ATBag

- Doubly stitched to provide higher seam strength and durability.
- Onsite filling of soil makes it a far more convenient.
- Eco friendly and environmentally safe
- Economical solution in terms of manufacturing and installation.
- Custom size available according to site requirements.
- Mobilization is easy during emergencies

➤ Applications of ATBag

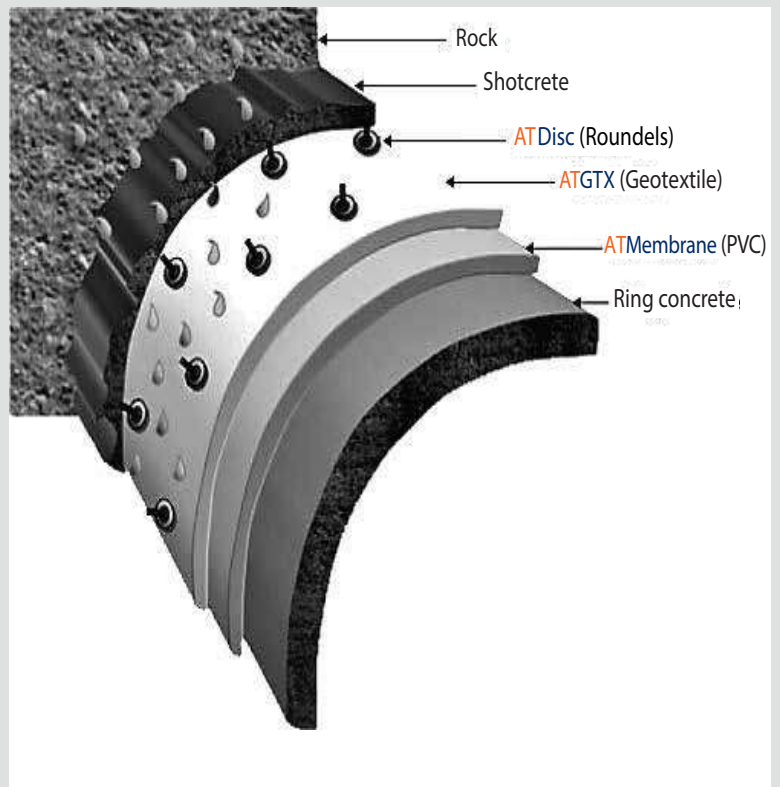
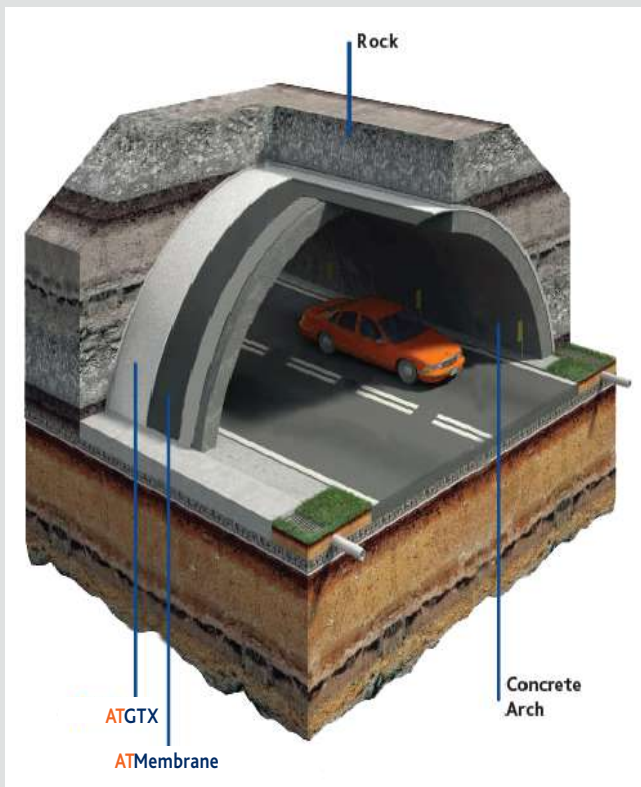
- Coastal protectio.
- Dams & Levees.
- Inland waterways protection.
- Ports & harbors.



Application of Geosynthetics in tunnel engineering

➤ Benefits of using Geosynthetics in tunnel engineering

- Low permeability of geosynthetics is long-term & efficient solution for waterproofing.
- Easy to install in any configuration, horizontal, vertical, or overhead, and with high elongation strength, they bridge old and new cracks.
- Provide resistance to swelling, rotting, aging, puncture and chemicals.
- They combat various weather conditions.
- There is no cross-sectional area reduction since geosynthetics can be folded to any dimension and do not compromise the tunnel diameter.
- Highly durable and reliable even under high hydraulic pressure.
- Geosynthetics also help with the rehab and repair of old tunnels.
- They are light weight and requires no skilled labour for installation.



ATGTX

These are non-woven polypropylene geotextiles made with PP staple fibres which are mechanically bonded through needle punching to form a strong, flexible and dimensionally stable fabric structure with optimum pore sizes and high permeability. These perform protection & drainage functions, hence prevents puncture of geomembrane (ATMembrane) & ingress of groundwater in the tunnels.



► Benefits of ATGTX in tunnelling

- Protects geomembrane (ATMembrane) from puncture during shotcreting process
- Highly resistant to damage from construction equipment
- Ensures protection & drainage when subjected to loads



Geomembrane

ATMembrane is made of thermoplastic polyvinyl chloride (PVC, polyvinyl chloride) by machine pressing. It has good weather resistance and aging resistance. It also has excellent toughness, perforation resistance, and high-temperature resistance.

The **ATMembranes** are spot wise fixed with **ATDISC** (Rounds) @ 1 piece/m² on vertical areas and 2 to 3 pieces/m² on overhead areas (tunnel crown).



➤ Benefits of ATMembrane in tunnelling

- It provides waterproofing in tunnels.
- PVC **ATMembranes** are easy to install (they remain flexible even at a low temperature), resistant to UV radiation and other weather impacts, and they offer both high mechanical resistance and exceptional dimensional stability.
- They have a high tear resistance, and are used to waterproof underground constructions and tunnels.
- It consists of thin continuous polymeric sheets.
- Unreinforced membranes are more flexible than reinforced membranes.



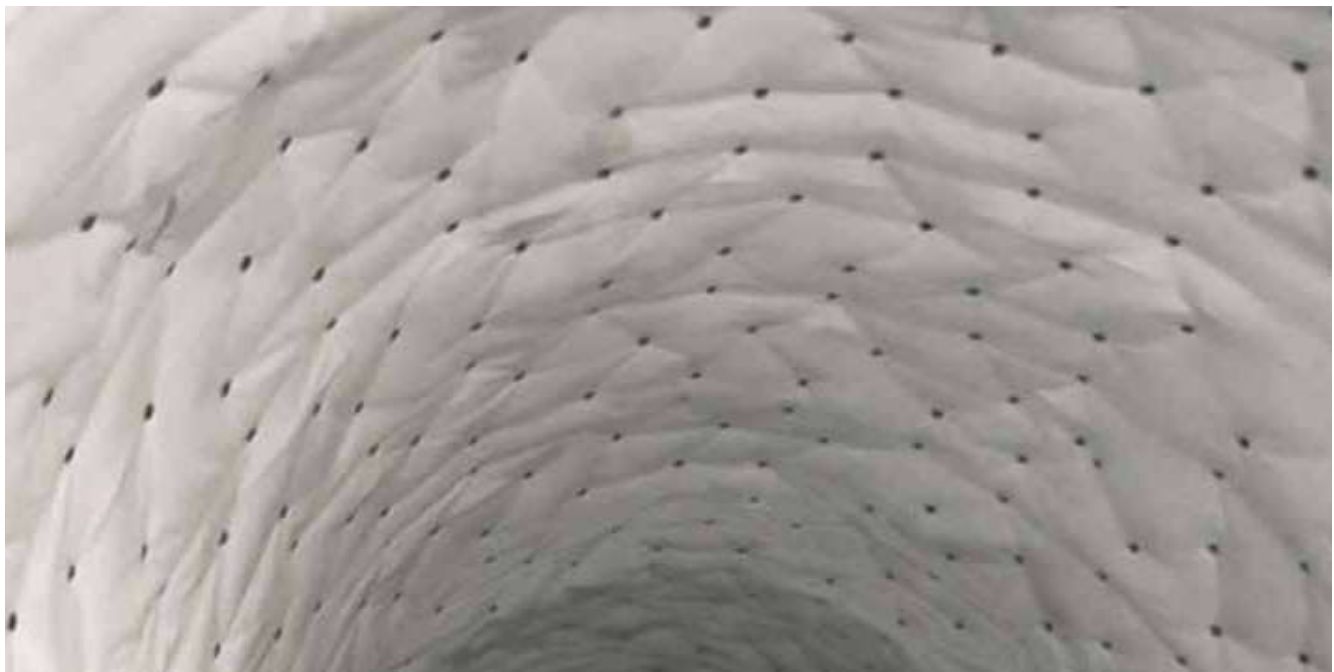
Roundels

ATDISC is finishing elements for synthetic liner made of polyvinyl chloride. It is fixing element for anchoring PVC synthetic membranes in tunnel, basement and underground structures system. It is round shaped with smooth surface on top and center hole for nails with washer.



► Benefits of Roundels in tunnelling

- High puncture resistance.
- Flexible to low temperatures.
- Can be installed on wet substrates.
- Heat weld-able to all PVC Geomembranes.
- Compatible for fixing with nailing system into shortcrete and concrete surface.





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