Drainage systems with filter stable geotextiles

Secudrän®

Secudrän®...

Secudrän® WD geosynthetic drainage system is a three-dimensionally extruded polypropylene (PP) drainage product manufactured of wave structured monofilament 3D mesh. Attached needle-punched Secutex® filter nonwovens are engineered such that the mechanical filter effectiveness as well as the hydraulic filter effectiveness (water discharge without loss of pressure) are both achieved. Secudrän® is a high efficient drainage system, with high compressive stability. All layers are uniformly bonded together to maintain a high shear stength. Secudrän® solves liquid and gas drainage problems.

...is multifunctional

Secudrän® is used extensively to drain water or gas in various applications. In landfill engineering, Secudrän® serves three functions at once (filtration, protection and drainage) when installed directly above a geomembrane. Secudrän®'s ability to passively relieve water pressure makes it ideal for drainage over buried structures and for road-edge strip-drain applications. The filter geotextiles and the drainage core can be efficiently dimensioned to meet the required drainage capacity. Secudrän® is also used successfully as a drainage layer in the construction of buildings, tunnels and roofs.

...is safe

Secudrän® is properly dimensioned durable and robust; it handles mechanical loads with ease. It is resistant to all naturally occurring chemical and biological factors in the soil. The needle-punched nonwovens long-term filter efficiency allows for safe design of passive drainage and thus ensures the system's longevity. The use of needle-punched nonwovens leads to a high interfacial friction angle, especially important on steep slopes. The regular bonding between the geotextile and drainage core ensures transmission of shearing forces through the Secudrän® system.

In landfill applications, Secudrän® completely drains leachate or precipitation

Secudrän® in a tunnel application (Pustertal, Italy). Precipitation and groundwater are drained

Secudrän® for drainage of structure

Installation of Secudrän® on the landfill Wolfsburg, Germany

Installation of Secudrän® prefabricated vertical drains to accelerate consolidation

...is economical

Since the filter, drainage, and protection layer comprise one unit, Secudrän® can be installed rapidly. The use of Secudrän® in earth construction requires less excavation of in-situ material and, in the case of a landfill liner, the containment volume is increased. Using Secudrän® saves time and natural resources since 10,000 m² of the Secudrän® system can replace the extraction, transport, and installation of approximately 3,000 m³ of granular drainage material. Secudrän® keeps your costs lower than conventional methods.

...is simple

One or two people can carry and unroll the lightweight rolls of Secudrän® without problem and it can be installed in most weather conditions. Complicated connections are easy with Secudrän® and it readily fits to the contours of the job site.

Conclusion:

Secudrän® excels by its versatility. The installation is simple and straightforward. Secudrän® is extremely resistant to environmental factors and its use saves natural resources. ■