afitex GROUP GEOSYNTHETICS | GEOQUEST

DRAINTUBE™

FOR SPORTS FIELD APPLICATIONS

A Low-cost and Environmentally Friendly Drainage Solution.

For many years, 150mm (6″) of washed stone aggregates protected by two layers of geotextile have been considered as state of the art drainage solution for synthetic sports fields.

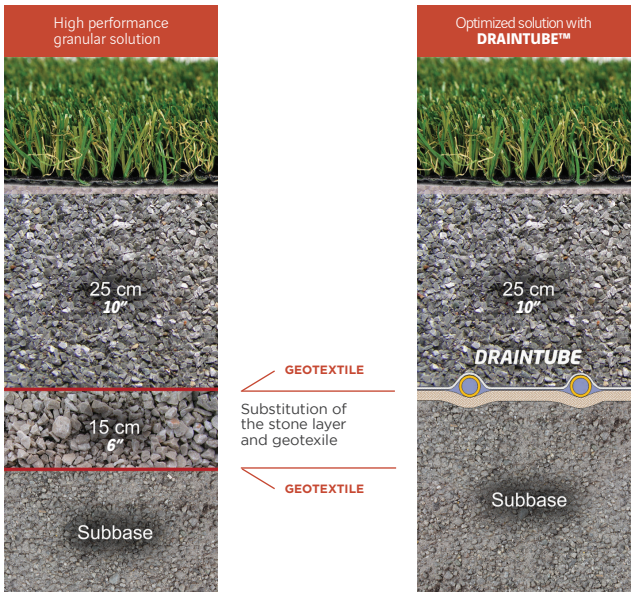
Today, **DRAINTUBE™** drainage geocomposite offers a better and more effective solution for drainage with the following advantages:

Significant cost reductions,
Simple installation,
Customised design options,
Improved performance,
A better environmental footprint through a significant reduction of GHG.

DRAINTUBE™ the Drainage you want!

Comparison Between a Stone Aggregates Layer and the DRAINTUBE™

Tests were conducted to compare the hydraulic behavior of **DRAINTUBE™** with 150mm of clean stone aggregates under various gradient pressures and loads. The results indicate that **DRAINTUBE™** is equal in performance for a 0.01 gradient. Clean stone aggregates = **DRAINTUBE™** = 10^{-2} $m^3/s/m$.



Performance Comparison
(Defargo-Sagéos bench test - January 2007)

Large scale rainfall bench tests were conducted in January 2007. The results indicate equivalent Flow Rate capacity under continuous flow. Hence, there is no saturation of the systems despite significant rainfall events.

Calculated Performance
(Using Lymphéa® Software)

The Lymphéa® software was developed in association with the University of Grenoble and le Laboratoire des Ponts et Chaussées (France) to calculate the requirements for **DRAINTUBE™** in civil applications. The performance of both systems was compared in a typical hydraulic conditions for standard sports applications.

Quality Control

Natural Resources

The variability of granular material is well-known. Even the same batch of material from the same location can be different. This type of inconsistency may not meet the drainage expectation and can impact the overall performance criteria.

Vs

Manufactured Resources

The quality of **DRAINTUBE™** is assured at the factory. The product ordered is the product delivered. Quality Assurance and Quality Control both are easier and more certian.

Cost Control

Natural Resources

Cost depends on how far the gravel pit is situated. The cost may also vary according to the availability of resources and the time of the year.

Vs

Manufactured Resources

Minimal transportation expenses means cost saving. With abundant resources, **DRAINTUBE™** is available throughout the year.

Environmental Balance
(Sustainable Development)

Natural Resources

NON-RENEWABLE

The excavation and replacement of 150mm (6″) of material over a 10,000 m^2 (108,000 ft^2) area requires 240 trucks.

Vs

Manufactured Resources

RENEWABLE

The installation of 10,000 m^2 (108,000ft^2) **DRAINTUBE™** requires only 1 truck.

Replacing 150 mm (6”) of stone aggregates with DRAINTUBE™ drainage geocomposite can :

SAVE 15% OR MORE ON THE COST OF BUILDING A GRANULAR FOUNDATION

REDUCE CONSTRUCTION DELAYS, SOCIAL DISRUPTIONS (TRAFFIC, NOISE, DUST)

SIGNIFICANTLY REDUCE GREENHOUSE GAS EMISSIONS

DRAINTUBE™ OFFERS:

3 perforated pipes size options: 16, 20 and 25 mm
4 perforated pipe spacing options: 2 m, 1 m, 1/2 m, 1/4 m (80”, 40”, 20”, 10”)
Multiple geotextile options
Available transmissivity between 2.5 x 10^{-4} to 4 x 10^{-3} m^2/s at i=0.1
No change in transmissivity up to 2500 kPa (50,000 psf)
Low creep reduction factor
No geotextile intrusion
Standard roll size: 3.98 m x 75 m (13.1’x246’)
Faster and easier to install than other types of geocomposites, no tying required!
Consistent QA/QC
Cost Optimisation

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A Geoquest-Afitex Consortium for Asia
July, 2022