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G E O S Y N T H E T I C S

PROJECT CASE

Philharmonie
Paris (75)

Drainage on waterproofing layer and under esplanade concrete slab

Date 2014/2015	**Surface area** 22,000 m²	**Project Owner** Ministry of Culture
Product(s) SOMTUBE FTB	**Project manager** SOCOTEC	**Company** Bouygues IDF (general) AMC (installer)

Description of the project

The construction of the Philharmonie involves many outdoor circulation areas. These access areas essentially correspond with pedestrian areas with vehicle access ramps.

Issue

Stormwater run-off must be drained to limit contact with the slab waterproofing layer. In addition, the waterproofing membrane must be mechanically protected.

Solution

The SOMTUBE FTB geocomposite was used to:

- Do away with the use of granular material
- Do away with the filtering geotextile
- Pour the concrete slab directly onto the product (PE film integrated)
- Provide the waterproofing layer with mechanical protection.

A collector drain is placed on the periphery of these areas to recover drained water.

Design based on geometry and constraints was used to define the appropriate geocomposite.
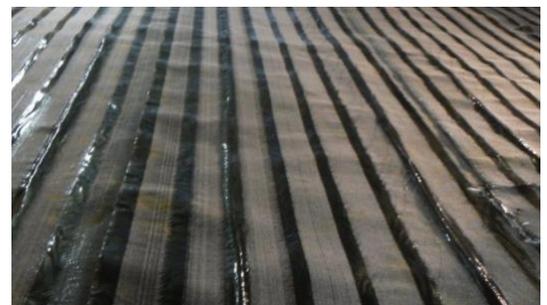
Description and purpose of the product

SOMTUBE FTB consists of a non-woven needled filtering geotextile made of PP, a non-woven needled drainage layer made of PP, ringed mini-drains made of PP with regular perforations, 20 mm in diameter, as well as a PE film. The components are coupled together by needling. Mini-drains are inserted into the geocomposite during assembly.
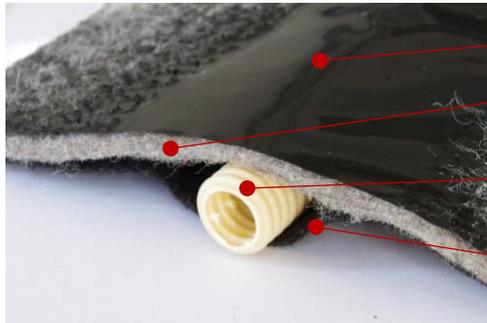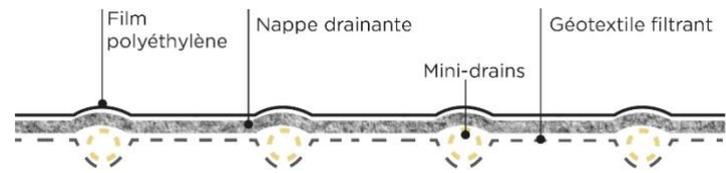
PE film

Drainage layer

Mini-drain

Filtering

Work progress

Installation of steel reinforcements

Pouring of the slab

Advantages of the proposed solution

- No use of granular materials (reduced carbon footprint)
- Limited weight on the slab
- No use of geotextile filter or PE film
- Protection and drainage in a single product
- Quickly installed
- DTA (technical application document) of the CSTB.

Contacts

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