

PROJECT CASE

Stabilisation of eroded slopes MOMBASA airport (KENYA)

Date

June 2019

Surface area

1,000 m² test section

Product(s)

ALVEOTER AT30-15
SOMTUBE 550 FTF1 D20

Companies

SOGEA-SATOM
RAZEL-BEC

**Implementation
assistance by
AFITEXINOV**

Issue(s)

Further to the erosion and collapse of slopes around the Mombasa airport in Kenya, AFITEXINOV was asked to propose draining and load-bearing mask solutions for the stabilisation of 1:1 slopes. The context of torrential rain during wet periods in the region requires high drainage and stabilisation potential to which a geosynthetic solution was most suited.

Solution(s)

The solution envisaged was to combine a high-capacity draining geocomposite with an earth retention system for stabilisation and eventual revegetation.

- SOMYUBE 550 FTF2 D20 draining geocomposite designed in accordance with meteorological data;
- Mechanically designed ALVEOTER AT30 earth retention system, anchored at the top;

Description and purpose of the product

The alveolar geotextile consists of 100% PET non-woven needled geotextile strips, with a tensile strength of 15 kN/m. The strips are sewn together by triple threads over 10 mm. The structure of the SOMTUBE FTF geocomposite consists of the following elements, which are assembled by needling:

- A non-woven needled polypropylene filter,
- Polypropylene mini-drains
- A non-woven needled drainage layer made of polypropylene,
- A non-woven needled polypropylene filter.



Collapse of slopes after a wet period



*Unrolling the SOMTUBE FTF in the slope
and anchor trench*

Packaging

The great strength of the ALVEOTER solution lies in its packaging on pallets, which can contain up to 1,600 m² of surface area per pallet. The entire surface area of this project was shipped on a single pallet!
SOMTUBE FTF comes in the form of rolls 3.90 m wide and 50 m long.



Packaging of the various products on site

Work progress



Deployment in slopes and anchor trenches



Final view and backfilling

Advantages of the proposed solution

This solution helps:

- Retain earth and vegetate slopes with a gradient of up to 1:1
- Receive a stabilisation solution on site with optimised packaging and delivery

Contact

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