

PROJECT CASE

Municipality Waste Landfill Expansion HBALINE JUBEIL - LEBANON

Date

March 2017

Surface Area

7 200 m²

Product(s)

DRAINTUBE 400 FT1 D16
Geomembrane 2mm smooth,
GCL

Company

BATCO Group

Project Owner

Municipality Union Of Jubeil,
Ministry of Interior

Project management

About Consultancy

Description of Project

The Municipality Union of Jbeil has decided to trust AFITEX Middle East by using its geosynthetic products as part of the construction of a Municipality waste Landfill in the valley of Hbaline City.

The mission of this site will be to collect municipal waste from all the towns under the Municipality Union and was built next to a waste recycling plant.

Solution(s)

To ensure drainage and efficient collection of leachate from sanitary waste and precipitation, a drainage solution with the DRAINTUBE 400 FT1 D16 geocomposite has been proposed. This product is used to replace the traditional draining material solution and limit the use of granular materials . In addition to being very expensive, gravel has become a scarce resource.



View of Hbaline Landfill And Waste recycling Plant



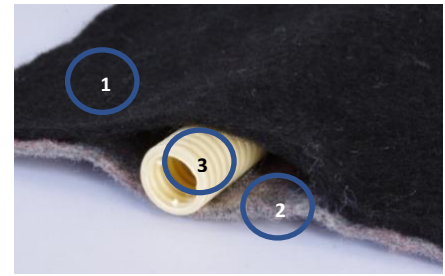
DRAINTUBE 400 FT1 D16 is installed above the Geomembrane

Description and Funtion of the Product

The DRAINTUBE FT drainage geocomposite is made up of :

- non-woven needled filter mat (1)
- non-woven needled drainage layer (2)
- Corrugated and perforated polypropylene mini-drains - diameter 16 mm with regular perforations along 2 alternating axes at 90deg to each other.

It replaces the upper protection geotextile, a layer of granular draining materials 0.50 m thick and the filtration geotextile.



Installation and welding of Geomembrane PEHD 2 mm on GCL



Perforated Collector Drain 160mm at bottom of cell

Implementation

The different installation steps :

- 1- Laying of bentonitic geosynthetics (GCL) on the subgrade.
- 2- Laying of 2 mm smooth HDPE geomembrane with a total surface area of 7,200 m2.
- 3- Installation of the DRAINTUBE FT1 geocomposite for collecting and draining leachate at the bottom and slope of the cell.

The leachate drained by the mini drains of the DRAINTUBE was collected by perforated main collector Pipe drains placed in the middle of the bottom cell and evacuated to a leachate collector sump at the bottom end of the cell.

Work Progress



Installation of Geosynthetique Bentonitique (GCL)



Installation of Géomembrane PEHD 2mm on GCL



Installation of DRAINTUBE FT1 D16 on Geomembrane at slope

Avantages of the Proposed Solution

- Protection of the Geomembrane sealing system against puncturing
- Efficient leachate drainage
- An economical and beneficial solution for the environment
- Improving sealing performance by limiting the hydraulic loads on it

CONTACT

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