

Product Evaluation

Product ID: 8150-7-6
Initiation Date: January 2011
Revision Date: January 20, 2011

RE: Review of Wick Drain (Nilex NuDrain MD7407 and Layfield Wick Drain Type 1)

PRODUCT

Wick Drain is manufactured by American Wick Drain and distributed by Layfield and Nilex Inc. located in Edmonton under private labels Nilex NuDrain MD7407 and Layfield Wick Drain Type 1.

VENDOR CLAIMS AND INFORMATION

CLAIMS:

Wick drain is used in both vertical and horizontal applications. In the vertical application, the wick drain is installed with specialized equipment which drives the wick drain into the ground. Vertical drain, in conjunction with a preload, provides a drainage path for water saturated areas to speed up settlement. This can save the project the time and money compared to a preload alone or having to use piles. Horizontal wick drain offers advantages over a sand blanket for providing lateral drainage. Corporate websites: www.geomembranes.com and www.nilex.com.

DESCRIPTION:

The filter material uses a strong, permeable non-woven filter fabric of 100% polypropylene specifically designed for drainage. The core is a strong structural member extruded from 100% polypropylene. Longitudinal grooves provide discharge passages for water flowing to the surface. The core is dimensionally stable when wet, has good puncture and collapse resistance and will not shrink or rot.

POTENTIAL USAGE:

Can be used in embankment construction, underwater consolidation, tank farm foundation and material storage areas and landfill area.

STANDARDS:

ASTM D5199 Core thickness
ASTM D638 Core tensile strength
Filter properties:
ASTM D5261 Filter mass
ASTM D4632 Filter grab tensile strength
ASTM D1621 Filter grab elongation
ASTM D4833 Puncture strength
ASTM D4533 Trapezoidal tear
ASTM D4491 Permittivity
ASTM D4751 AOS
ASTM D4491 Water flow
ASTM D4716 Discharge capacity

ALBERTA TRANSPORTATION COMMENTS

EXPERIENCE:

Alberta Transportation has used this product at bridge sites and interchanges where approach fills are constructed.

APPLICATION STANDARDS:

Alberta Transportation does not have a standard for wick drain.

RECOMMENDATIONS:

Wick drain lists as a Proven Product under Alberta Transportation Products List, Geosynthetics – Geonet & Geocomposite – Proprietary, based on the information provided.

TRIAL PROJECTS

Construction at bridge sites and interchanges

Fred Cheng

cc New Product Evaluation Standing Committee – Roger Skirrow