

Product Evaluation

RE: Review of Deltalok Soil Erosion and Retaining Wall System

PRODUCT

The Deltalok Soil Erosion and Retaining Wall System is manufactured by Deltalok Inc. and distributed in Alberta by Trexiana Wholesale and distribution located in Vancouver, BC.

VENDOR CLAIMS AND INFORMATION

CLAIMS:

The Deltalok System is an ecological engineered system that incorporates geotextile soil bags interconnected by polypropylene units that mechanically join the components of the system together to give structural strength. Product web link: <http://www.deltalok.com/profile.htm>

DESCRIPTION:

The Deltalok System makes it possible to interlock soil bags and increase the shear strength. The system is also able to provide a mechanical connection between the self-standing wall and reinforced soil backfill to achieve a uniform structure.

POTENTIAL USAGE:

The Deltalok System is used in a variety of applications, including retaining walls, slope stabilization, erosion control, culvert headwalls and streambank protection.

STANDARDS:

Deltalok units are manufactured from Hival 2420 polypropylene or equivalent. Tested under: ASTM D792, D1238, D638, D720 and D256.

Deltalok geotextile bags are manufactured from Armtec non-woven geotextile tested under:

ASTM D4632 Elongation/grab tensile strengths

ASTM D4533 Trapezoidal Tear

ASTM D4833 Puncture Strength

ASTM D3786 Mullen Burst

ASTM D4751 AOS

ASTM D4491 Permittivity

ASTM D4355 UV resistance

Deltalok Inc. provides installation instructions and design drawings for the system.

ALBERTA TRANSPORTATION COMMENTS

EXPERIENCE:

Alberta Transportation has one experience with the Deltalok System (installed at H16:18/Broadmoor Boulevard in November 2006).

APPLICATION STANDARDS:

Alberta Transportation has no standard for the Deltalok System.

RECOMMENDATIONS:

The Deltalok System be listed as a Proven Product under Alberta Transportation Product List, Erosion Control Systems – Earth Retaining Systems – Reinforced Soil System (Wall) – Proprietary, based on the information provided.

It is also recommended that when Deltalok is engaged as part of a retaining wall system the design should be done by a professional engineer. The maximum height should be limited and no structures be built on the top of this system.

TRIAL PROJECTS

Hwy. 16:18 – Broadmoor Boulevard in November 2006

Fred Cheng

cc New Product Evaluation Standing Committee – Roger Skirrow