

RE: Review of Erosion Control Composite Turf Reinforcement Mats – North American Green P550

PRODUCT

Composite turf reinforcement mats (C-TRM) – North American Green P550. It is distributed by Nilex Inc. of Edmonton.

VENDOR CLAIMS AND INFORMATION

CLAIMS:

The composite turf reinforcement mats are used to prevent erosion of soil on side slopes, channels and ditches.

DESCRIPTION:

The P550 composite turf reinforcement mats shall be a machine-produced mat of 100% UV stabilized polypropylene fibre matrix incorporated into a permanent 3-dimensional netting structure. The matrix shall be evenly distributed across the entire width of the matting and stitch bonded between 3 super heavy duty UV stabilized nettings with 1.27 x 1.27 cm opening. The middle, dramatically corrugated (crimped) netting shall form prominent closely spaced ridges across the entire width of the mat. The three nettings shall be stitched together on 3.81 cm centres with UV stabilized polypropylene thread to form a permanent 3-dimensional structure. The blanket shall be manufactured with a coloured thread stitched along both outer edges (5 to 12.5 cm) to ensure proper material overlapping.

POTENTIAL USAGE:

The blankets or mats may replace heavy armour such as rock riprap.

STANDARDS:

North American Green has slope and channel design data and physical specifications for the P550.
ECTC Guidelines Porosity, Open volume per unit area, Light penetration
ASTM D5199/ECTC Thickness
ASTM D1388/ECTC Stiffness
ASTM D792 Density
ASTM D3776 Mass per unit area
ASTM D4355 UV stability
ASTM D5035 Tensile strength, Elongation

ALBERTA TRANSPORTATION COMMENTS

EXPERIENCE:

Alberta Transportation have tried a large variety of erosion control mats in the past and might have some experience with this product but there is no documentation of its actual use and performance.

APPLICATION STANDARDS:

Alberta Transportation have a performance specification for this product.

RECOMMENDATIONS:

North American Green P550 for erosion control be listed as a Proven Product under Alberta Transportation Product List, Erosion Control Systems, Rolled Erosion Control Blanket – Composite Turf Reinforcement Mats – Proprietary, based on the information provided.

TRIAL PROJECTS

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Fred Cheng

cc New Product Evaluation Standing Committee – Roger Skirrow