

RE: Review of Erosion control Composite Turf Reinforcement Mats – North American Green P300

PRODUCT

Permanent erosion control / turf reinforcement mats – North American Green P300. It is distributed by Nillex Inc. of Edmonton.

VENDOR CLAIMS AND INFORMATION

CLAIMS:

The erosion control blankets and mats are used to prevent erosion of soil on side slopes, channels and ditches.

DESCRIPTION:

The P300 shall be a machine-produced mat of 100% UV stable polypropylene fibre. The matting shall be consistent thickness with synthetic fibres evenly distributed over the entire area of the mat. The blanket shall be covered on the top with black heavy weight UV stabilized polypropylene netting having ultraviolet additives to prevent breakdown and an approximate 1.27 x 1.27 cm mesh size. The bottom net shall also be UV stabilized polypropylene, with a 1.57 x 1.57 cm mesh size. The blanket shall be sewn together on 3.81 cm centres (50 stitches/roll width) with UV stable polypropylene thread. The blanket shall be manufactured with a coloured line or 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 P300.
ECTC Guidelines Porosity, Open volume per unit area, Light penetration
ASTM D5199/ECTC Thickness
ASTM D1777/ECTC Resiliency
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 has 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 has a performance specification for this product.

RECOMMENDATIONS:

North American Green P300 for erosion control be listed as a Trial Product under Alberta Transportation Product List, Erosion Control Systems, Rolled Erosion Control Blanket – Composite Turf Reinforcement Mats – Proprietary, based on the information provided. Final acceptance as a proven product will be based on field performance.

TRIAL PROJECTS

Fred Cheng

cc New Product Evaluation Standing Committee – Roger Skirrow