

## Product Evaluation

Product ID: 8133-3-5  
Initiation Date: September 5, 2002  
Revision Date: December 15, 2003  
Expiry Date: July 2009

### RE: Review of Tenax Multimat 100 Permanent Turf Reinforcement Mat

#### **PRODUCT**

Multimat 100 TRMs are manufactured by Tenax Corporation and distributed by Cascade Geotechnical Inc. of Edmonton.

#### **VENDOR CLAIMS AND INFORMATION**

##### **CLAIMS:**

The erosion control blankets are used for permanent erosion protection for steep slopes, turf reinforcement and channel lining systems.

##### **DESCRIPTION:**

Tenax Multimat 100 is a 3-dimensional structure formed by mechanically securing 2 high strength, high modulus biaxially oriented nets above and below a corrugated centre netting. The 3 layers of netting are secured with multiple rows of polypropylene stitching. This creates a porous, thick and resilient structure that is extremely resistant to deformation and damage during installation, yet flexible enough to provide the intimate contact between the soil and the geosynthetic matrix that is necessary to prevent undercutting and uplift. The balanced porosity and thickness of Multimat 100 allows soil to be easily filled into the matrix where it will then be physically retained by the overall structure of the matrix. Tenax Multimat 100 provides excellent performance as a TRM due to its high tensile strength which firmly holds vegetation and resists applied shear stresses. Additionally, Multimat 100's high modulus ensures that tensile reinforcement is provided at very low elongations to keep deformation to an absolute minimum. When placed above seeded soil and used as an ECRM, Multimat 100's complex design – with its corrugated centre, top and bottom nets – affords optimum ground cover to provide excellent erosion protection from raindrop impact and surface flow without inhibiting the growth of vegetation. Used as TRM or ECRM, Tenax Multimat 100 provides long-term stability and performance since it is manufactured from select UV stabilized polypropylene that is resistant to chemical and biological breakdown. Additionally, Multimat 100 will not absorb moisture, which would rob the soil and inhibit the establishment of vegetation.

##### **POTENTIAL USAGE:**

The erosion control blankets can be used for erosion control for channels and moderate to severe slopes.

##### **STANDARDS:**

#### **Alberta Infrastructure and Transportation Comments**

##### **EXPERIENCE:**

Alberta Infrastructure and 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 Infrastructure and Transportation have a performance specification for this product.

##### **RECOMMENDATIONS:**

Multimat 100 TRMs be listed as a Potential Product under Alberta Infrastructure and Transportation Product List, Erosion Control Systems – Rolled Erosion Control Blanket – Turf Reinforcement Mats - Proprietary, based on the information provided. Final acceptance as a proven product will be based on field performance.

#### **TRIAL PROJECTS**

Hwy. 88:16 - Wabasca

Hwy. 63 – Suncor, North of Fort McMurray

Fred Cheng

cc New Product Evaluation Standing Committee – Terry Willis  
Roger Skirrow