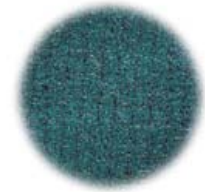




## SUPPLEMENTAL SPECIFICATION

# P300



The North American Green P300 permanent turf reinforcement mat shall be constructed of 100% UV stabilized 565 denier polypropylene fiber sewn between a black UV stabilized 0.50 x 0.50 inch (1.27 x 1.27 cm) mesh polypropylene netting on the top (5 lbs/1,000 ft<sup>2</sup>) and a black UV stabilized 0.625 x 0.625 inch (1.59 x 1.59 cm) mesh polypropylene netting on the bottom (3 lbs/1,000 ft<sup>2</sup>). The P300 is sewn together using UV stable polypropylene thread stitched on 1.50 inch (3.81 cm) centers. The mat is highly resistant to ultraviolet and biological degradation. The following list contains further physical properties of the P300 erosion control/turf reinforcement mat.

| <u>Property</u>           | <u>Test Method</u> | <u>Typical</u>   |
|---------------------------|--------------------|--|
| Thickness                 | ASTM D6525         | 0.54 in (13.72 mm)   |
| Resiliency                | ASTM D1777         | 91.50%   |
| Density                   | ASTM D792          | 0.513 oz/in <sup>3</sup> (0.890 g/cm <sup>3</sup> )                            |
| Mass per Unit Area        | ASTM D6566         | 11.46 oz/yd <sup>2</sup> (389 g/m <sup>2</sup> )                               |
| Porosity                  | ECTC Guidelines    | 95.89%   |
| Open Volume per Unit Area | ECTC Guidelines    | 872 in <sup>3</sup> /yd <sup>2</sup> (11,952 cm <sup>3</sup> /m <sup>2</sup> ) |
| Stiffness                 | ASTM D1388/ECTC    | 97.24 oz-in (1,085,378 mg-cm)  |
| Light Penetration         | ECTC Guidelines    | 15%  |
| UV Stability              | ASTM D4355**       | 90 %   |
| MD Tensile Strength       | ASTM D6818 [D5035] | 481 lbs/ft (7.02 kN/m) [379 lbs/ft (5.53 kN/m)]                                |
| MD Elongation             | ASTM D6818 [D5035] | 20 % [26 %]  |
| TD Tensile Strength       | ASTM D6818 [D5035] | 426 lbs/ft (6.22 kN/m) [403 lbs/ft (5.88 kN/m)]                                |
| TD Elongation             | ASTM D6818 [D5035] | 23 % [27 %]  |

\*\*ASTM D1682 (4 inch strip) Tensile Strength and % Strength Retention of material following 1000 hrs exposure in Xenon-Arc Weatherometer.  
 MD – Machine direction  
 TD – Transverse direction

### Bench Scale Testing<sup>†</sup>

| Test Method - Description   | Parameters  | Results  |
|---|---|--|
| ECTC Method 2 – Determination of unvegetated RECP's ability to protect soil from rain splash and associated runoff  | 50 mm (2 in)/hr for 30 min  | Soil loss ratio* = 11.92                       |
|   | 100 mm (4 in)/hr for 30 min   | Soil loss ratio* = 10.79                       |
|   | 150 mm (6 in)/hr for 30 min   | Soil loss ratio* = 10.17                       |
| ECTC Method 3 – Determination of unvegetated RECP's ability to protect soil from hydraulically-induced shear stress.<br><b>Failure criteria = 0.50 inch soil loss</b> | Shear: 2.73 lbs/ft <sup>2</sup> for 30 min  | Soil loss: 383g                                |
|   | Shear: 3.40 lbs/ft <sup>2</sup> for 30 min  | Soil loss: 451g                                |
|   | Shear: 4.06 lbs/ft <sup>2</sup> for 30 min  | Soil loss: 557g                                |
|   | <b>Shear at 0.50 inch soil loss (450g)</b>  | <b>3.30 lbs/ft<sup>2</sup></b>                 |
| ECTC Draft Method 4 – Determination of temporary RECP performance in encouraging seed germination and plant growth  | Top soil; Fescue (Kentucky 31); 21 day incubation 27° C ± 2° & approximately 50% RH | Percent improvement = 263% (increased biomass) |

\* Soil Loss Ratio = Soil Loss with Bare Soil / Soil Loss with RECP (NOTE: Soil loss based on regression analysis)

### <sup>†</sup>Bench Scale Performance Testing

Bench scale tests are index property tests. These tests are not indicative of field performance and therefore should not be used in design to establish performance levels for rolled erosion control products. Bench scale tests are performed according to methods developed by the Erosion Control Technology Council (ECTC).