



**LANDLOK**<sup>®</sup> 450 turf reinforcement mat (TRM) *features X3<sup>®</sup> technology* that consists of a dense web of crimped, interlocking, multi-lobed polypropylene fibers positioned between two biaxially oriented nets and mechanically bound together by parallel stitching with polypropylene thread. The TRM is designed to accelerate seedling emergence, exhibit high resiliency, and possess strength and elongation properties to limit stretching in a saturated condition. Every component of **LANDLOK 450** is stabilized against chemical and ultraviolet degradation which are normally found in a natural soil environment. Furthermore, the TRM contains no biodegradable components.

**LANDLOK 450** conforms to the property values listed below<sup>1</sup> and is manufactured at a Propex facility having achieved ISO 9001:2000 certification. Propex performs internal Manufacturing Quality Control (MQC) tests that have been accredited by the Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP). This product NTPEP approved for AASHTO standards.

MARV<sup>2</sup>

| PROPERTY                                 | TEST METHOD          | ENGLISH                 | METRIC               |
|--|----------------------|-------------------------|----------------------|
| <b>ORIGIN OF MATERIALS</b>               |                      |                         |                      |
| % U.S. Manufactured Inputs               |                      | 100%                    | 100%                 |
| % U.S. Manufactured                      |                      | 100%                    | 100%                 |
| <b>PHYSICAL</b>                          |                      |                         |                      |
| Mass/Unit Area                           | ASTM D-6566          | 10.0 oz/yd <sup>2</sup> | 340 g/m <sup>2</sup> |
| Thickness                                | ASTM D-6525          | 0.40 in                 | 10.1 mm              |
| Light Penetration (% Passing)            | ASTM D-6567          | 20%                     | 20%                  |
| Color                                    | Visual               | Green or Tan            |                      |
| <b>MECHANICAL</b>                        |                      |                         |                      |
| Tensile Strength (Grab)                  | ASTM D-6818          | 400 x 300 lb/ft         | 5.8 x 4.3 kN/m       |
| Elongation                               | ASTM D-6818          | 50% (max)               | 50% (max)            |
| Resiliency                               | ASTM D-6524          | 90%                     | 90%                  |
| Flexibility                              | ASTM D-6575          | 0.026 in-lb (avg)       | 30,000 mg-cm (avg)   |
| <b>ENDURANCE</b>                         |                      |                         |                      |
| UV Resistance<br>% Retained 1000 hrs     | ASTM D-4355          | 80%                     | 80%                  |
| <b>PERFORMANCE</b>                       |                      |                         |                      |
| Velocity <sup>3</sup> (Vegetated)        | Large Scale          | 18 ft/s                 | 5.5 m/s              |
| Shear Stress <sup>3</sup> (Vegetated)    | Large Scale          | 10 lb/ft <sup>2</sup>   | 479 Pa               |
| Manning's "n" <sup>4</sup> (Unvegetated) | Calculated           | 0.025                   | 0.025                |
| Seedling Emergence <sup>4</sup>          | ECTC Draft Method #4 | 409%                    | 409%                 |
| <b>ROLL SIZES</b>                        |                      | 6.5 ft x 138.5 ft       | 2.0 m x 42.2 m       |

**NOTES:**

1. The property values listed are effective 04/2011 and are subject to change without notice.
2. MARV indicates minimum average roll value calculated as the typical minus two standard deviations. Statistically, it yields a 97.7% degree of confidence that any sample taken during quality assurance testing will exceed the value reported.
3. Maximum permissible velocity and shear stress has been obtained through vegetated testing programs featuring specific soil types, vegetation classes, flow conditions, and failure criteria. These conditions may not be relevant to every project nor are they replicated by other manufacturers. Please contact Propex for further information.
4. Calculated as typical values from large-scale flexible channel lining test programs with a flow depth of 6 to 12 inches.



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