

# Recyclex<sup>®</sup> TRM & Recyclex<sup>®</sup> TRM-V

Product Description

## Permanent Turf Reinforcement Matting

Recyclex - the first family of permanent turf reinforcement mats (TRM) with fibers made from 100% recycled post-consumer goods - "green or brown bottles". That's right, approximately 18 bottles are diverted from landfills with every pound of Recyclex fibers. American Excelsior Company invented the first biodegradable blanket, and we have done the same with recycled fibers to create Recyclex. Not only is Recyclex environmentally responsible, it is designed to meet your most difficult erosion control challenges. For long-term, permanent erosion control, Recyclex is the answer.

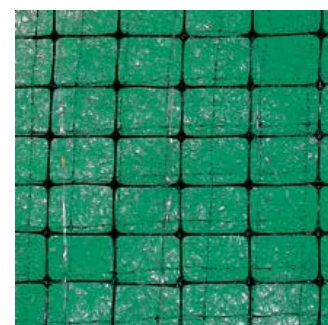
### MATERIAL CHARACTERISTICS

Recyclex is made from 100% recycled fibers with 80% or more 5 inches in length or greater. The fibers are crimped to allow a strong, curled, interlocking fiber matrix. Sound familiar to Curlex<sup>®</sup> excelsior fibers? Absolutely! Just as Curlex fibers have been the most successful biodegradable matrix since we invented erosion control blankets, we applied the same concept to our permanent Recyclex Turf Reinforcement Matting. Our crimped fibers conform to terrain details and train water flow to follow the Recyclex curled fiber matrix. In turn, water flow velocity is reduced. Recyclex fibers have a specific gravity of greater than one, meaning the matrix will not float during a hydraulic event. Recyclex fibers are stitched together by two strong layers of UV resistant polypropylene netting to form a three dimensional matrix that is designed to provide permanent surface support for vegetation and structural root systems. Recyclex can be installed similar to an erosion control blanket by placing it over grass seed and topsoil or it can be soil filled and seeded to allow a structural root system to grow directly into the permanent turf reinforcement matting. Recyclex is available in aesthetically pleasing green or earth tone brown.



### PERFORMANCE CAPABILITIES

|                      | Recyclex TRM  | Recyclex TRM-V                     |
|----------------------|---|------------------------------------|
| <b>Channels</b>      |   |                                    |
| Shear Stress Rating: | 480+ Pa (10.0+ lb/ft <sup>2</sup> )                     | 384+ Pa (8.0+ lb/ft <sup>2</sup> ) |
| <b>Slopes</b>        |   |                                    |
| Steepness:           | Unlimited gradient, but relative to geotechnical review |                                    |



### TYPICAL APPLICATIONS

Recyclex TRM's are designed to allow revegetation and provide permanent protection in areas of concentrated flow:

- Ditch bottoms, channel bottoms, swales & slopes
- Steep, reinforced slope veneers
- Landfill down chutes & let down structures
- Pond, small lake, and stream bank shoreline stabilization
- Urban stormwater drainage channels & waterways
- Concentrated flow areas as a TRM component with Curlex Sediment Log<sup>®</sup>
- Typical Rip Rap or Hard Armor applications



American  
Excelsior  
Company<sup>®</sup>



Earth Science Division

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## SUGGESTED SPECIFICATIONS

### General

Recyclex Turf Reinforcement Matting (TRM) is a unique, patented (US 6,855,650 B1), permanent, rolled erosion control products (RECP) with fibers made from 100% recycled post-consumer goods - "green or brown bottles".



### Product

Turf Reinforcement Mat shall be manufactured from recycled fibers with 80% or more 5 inches in length, crimped and curled to allow fiber interlocking, which is critical to a strong matrix. The fibers shall be encased between two layers of heavy UV stabilized polypropylene netting and stitched top to bottom to form a three-dimensional matrix. The unique recycled polyester fibers have a memory of 95% of its original crimp after load or hydraulic events. The fibers shall have a specific gravity of greater than 1, which means they will not float during a hydraulic application unlike other polypropylene fibers.

Its three-dimensional matrix is specifically designed to provide permanent surface support and/or structural support for vegetation root systems. Therefore, it is a Turf Reinforcement Matting or Turf Reinforcement matrix in blanket form. Typically, it is installed as a soil filled and seeded TRM that allows the germination of vegetation above, and it provides a permanent structural matrix for the root system to grow into. In addition, it may be installed as a "stand alone" rolled erosion control products (RECP) over the top of soil and seed, which allows vegetation to grow up through its permanent matrix.

Recyclex family TRMs will conform to the following typical physical (Index) properties:

| Index Property          | Test Method                 | Recyclex TRM Values                                | Recyclex TRM-V Values                              |
|-------------------------|-----------------------------|--|--|
| Mass per Unit Area      | ASTM D 6566                 | 0.63 lb/yd <sup>2</sup> (0.342 kg/m <sup>2</sup> ) | 0.50 lb/yd <sup>2</sup> (0.271 kg/m <sup>2</sup> ) |
| Thickness               | ASTM D 6525                 | 0.37 in (9.4 mm)                                   | 0.29 in (7.5 mm)                                   |
| Light Penetration       | ECTC Guidelines             | 55%  | 57%  |
| Resiliency              | ASTM D6524, ASTM D1777/ECTC | 85%  | 86%  |
| MD Tensile Strength Max | ASTM D 6818                 | 387.6 lb/ft (5.66 kN/m)                            | 295.2 lb/ft (4.31 kN/m)                            |
| TD Tensile Strength Max | ASTM D 6818                 | 340.8 lb/ft (4.97 kN/m)                            | 194.4 lb/ft (2.84 kN/m)                            |
| MD Elongation           | ASTM D 6818                 | 21.2%  | 32.2%  |
| TD Elongation           | ASTM D 6818                 | 20.3%  | 40.8%  |
| Ultraviolet Stability   | ASTM D 4355 (1,000 hr)      | 90% (min)  | 80% (min)  |
| Fiber Memory            | WLM-TM RC-17                | 95%  | 95%  |
| Specific Gravity        | ASTM D 792                  | 1.28   | 1.21   |
| Porosity                | Calculated                  | 97.6%  | 97.5%  |

### Roll Properties

#### Recyclex TRM

|         |   |   |
|---------|---|---|
| Width:  | 8.0 ft (2.4 m)                              | 16.0 ft (4.9 m)                               |
| Length: | 90.0 ft (27.4 m)                            | 90.0 ft (27.4 m)                              |
| Area:   | 80.0 yd <sup>2</sup> (66.9 m <sup>2</sup> ) | 160.0 yd <sup>2</sup> (133.8 m <sup>2</sup> ) |
| Weight: | 50.0 lb (22.7 kg)                           | 100.0 lb (45.4 kg)                            |
| Color:  | Green or Brown                              |   |

#### Recyclex TRM-V

|         |  |   |
|---------|--|---|
| Width:  | 8.0 ft (2.4 m)                               | 16.0 ft (4.9 m)                               |
| Length: | 112.5 ft (34.3 m)                            | 112.5 ft (34.3 m)                             |
| Area:   | 100.0 yd <sup>2</sup> (83.6 m <sup>2</sup> ) | 200.0 yd <sup>2</sup> (167.2 m <sup>2</sup> ) |
| Weight: | 50.0 lb (22.7 kg)                            | 100.0 lb (45.4 kg)                            |
| Color:  | Green or Brown                               |   |

### Manning's n

Unvegetated

.035 - .040

Vegetated

Consult SCS Vegetal Curve

Disclaimer: Recyclex TRM & Recyclex TRM-V are systems for erosion control and re-vegetation on slopes and channels. American Excelsior Company (AEC) believes that the information contained herein to be reliable and accurate for use in erosion control and re-vegetation applications. However, since physical conditions vary from job site to job site and even within a given job site, AEC makes no performance guarantees and assumes no obligation or liability for the reliability or accuracy of information contained herein for the results, safety, or suitability of using Recyclex TRM or Recyclex TRM-V, or for damages occurring in connection with the installation of any erosion control product whether or not made by AEC or its affiliates, except as separately and specifically made in writing by AEC. These specifications are subject to change without notice.



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