



# Recyclex® TRM

Permanent Turf Reinforcement Matting

## Recycling Today to Produce Vegetation For Tomorrow

## Recyclex® Tech Note

Volume 1, Issue 2

We at American Excelsior Company are certain of one thing: Quality sells no matter what. Historically, products and companies of integrity tend to survive adverse times much more successfully than those of lesser “character.” Savvy consumers understand that value is not achieved by mere proclamation, but rather through the exercise of character, integrity, and the relentless pursuit of excellence. We not only exercise this philosophy at American Excelsior Company, but we actually set the standard for excellence in the industry. We pledge to continue to offer the kind of superior quality that people want by maintaining our unprecedented drive to provide superior erosion control products such as Recyclex®.

### PRODUCT FEATURES AND BENEFITS

Recyclex is the first permanent Turf Reinforcement Mat (TRM) made from 100% recycled post-consumer goods “green soda bottles”. The importance of recycling our resources is understood by many. Federal Executive Order 12873 - *Acquisition of Environmentally Preferable Products and Services* states that all federal agencies must give preference to products manufactured from post-consumer goods. Recyclex fits this environmentally friendly category of products by keeping soda bottles out of the land fill. *Table 1* summarizes Recyclex’s unique properties and their resulting benefits.

**Table 1.** Unique physical properties and resulting benefits of Recyclex TRM.

Physical Property	Resulting Benefit
Crimped, curled polyester plastic fibers with 80% of the fibers a minimum of 5” (12.7cm) long	Allow a strong, curled, interlocking fiber matrix similar to Curlex. The crimped fibers conform to terrain details and train water flow to follow the Recyclex curled fiber matrix, which results in reduced water flow velocity.
Green Color	Aesthetically pleasing appearance of Recyclex does not inhibit germination like darker TRMs may do.
Specific Gravity of 1.38	Means the product will not float during a hydraulic event.
Fiber Memory of 95%	Means the product returns to form following temporary deformation caused by water flow or equipment traffic.

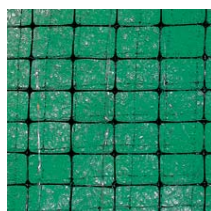
### RECYCLEX MATERIAL SPECIFICATIONS

*Recyclex is manufactured to meet or exceed the following specifications:*

**Fiber** 100% Recycled post consumer polyester, **Fiber Size** 80% of the crimped, curled fibers are a minimum of 5” (12.7 cm) long, **Fiber Weight** 400 Denier Polyester, **Mass Per Unit Area** - .625 lb/yd<sup>2</sup> (.339 kg/m<sup>2</sup>) ±10%, **Top Netting** Extra Heavy Duty Black Polypropylene with openings of 3/4” wide by 1” long (19.0 mm by 25.4 mm), **Bottom Netting** Heavy Duty Black Polypropylene with openings of 3/4” wide by 3/4” long (19.0 mm by 19.0 mm).



Raw Material



Recyclex TRM



ASTM Testing



Reinforced Vegetation



## **APPLICATION/INSTALLATION**

The ultimate goal of Recyclex, or any other TRM, is to establish and reinforce vegetation. Recyclex's three dimensional matrix and uniqueness allow the product to be very versatile in the field. Recyclex is designed to provide permanent structural support for vegetation root systems (root reinforcement) and/or surface support underneath vegetation (stem reinforcement). Recyclex may be installed, soil filled, and seeded to allow the germination of reinforced vegetation above, and a permanent, structural root system to grow into its matrix below. In addition, Recyclex may be installed as "stand alone" over top soil and seed, which allows vegetation to grow up through its matrix. Recyclex's versatility allows it to be installed by either method, which can be an especially important economic factor in a waterway or let down structure.

**NOTE:** Your local American Excelsior Company Representative should be contacted for site specific applications of Recyclex® TRM. Please visit [www.curlex.com](http://www.curlex.com) or call us at 1-800-777-SOIL for more information.

## **RESEARCH AND DEVELOPMENT**

Recyclex was not created overnight. Extensive research and development processes yielded the reliable Recyclex TRM we know today. The fibers, density, and netting were perfected based on extensive testing. Recyclex was subjected to numerous repetitions of large scale performance testing that followed procedures outlined in ASTM D 6460, "Standard Test Method for Determination of Erosion Control Blanket (ECB) Performance in Protecting Earthen Channels from Stormwater-Induced Erosion." Based on the testing, a Manning's "n" value of 0.035 should be used to evaluate channels lined with unvegetated Recyclex to estimate the maximum anticipated velocity. In addition, a value of 0.040 should be used to assess channel capacity. Once a channel is vegetated (as in the vegetated Recyclex tests), the Manning's "n" for the channel lining is equal to that of the vegetation in the channel. Part of the extensive Recyclex test series included two separate 48 hour long flows over the vegetated product. Measured soil loss from vegetated Recyclex tests was only about 1% of that exhibited under bare soil conditions. Lastly, Recyclex TRM has been tested and successfully passed the maximum shear stress capabilities (12 lb/ft<sup>2</sup>) of two of the nation's premier hydraulic testing laboratories.

## **WHY RECYCLEX?**

Recyclex is the environmentally friendly product of choice for many jobs. Recyclex is an environmentally friendly product because it keeps plastic bottles out of landfills by transforming them into a TRM that has proven to be reliable. Recyclex's unique physical properties (e.g. crimped-curved fibers, aesthetically pleasing green color, specific gravity of 1.38, fiber memory of 95%, etc.) result in a TRM that works. The extensive research and development of Recyclex helps ensure the best product will end up at the job site. Lastly, Recyclex is produced by a company that is based on integrity, character, and an unprecedented drive to provide superior erosion and sediment control products.



If you would like to receive more information or consult with one of our Customer Care Center Specialists, please call us toll free at (888-352-9582)  
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