

Curlex®

ENFORCER™

Bio-Composite Soil Reinforcement For Long-Term Protection Against Erosion

When conventional erosion control blankets and vegetation alone are inadequate for the job of erosion control and, when heavy armor systems cost more than necessary and are not aesthetically pleasing, Enforcer™ provides the optimal solution.



Material Characteristics

Enforcer combines the durability of two layers of special heavy-duty synthetic netting with our unique Curlex aspen excelsior fiber. This stitched composite provides the benefits of long-term root reinforcement for increased erosion protection and the ideal micro-climate for seed germination and establishment of vegetation.

Performance Capabilities

Enforcer can stabilize a soil veneer layer on steep slopes and rivals heavy rip-rap for lining channels, but with the improved aesthetics of a “green” solution.

Shear Stress Limits:

Channels (vegetated) -

Short duration: 0.38kPa (8 psf)

Long duration: 0.29kPa (6 psf)

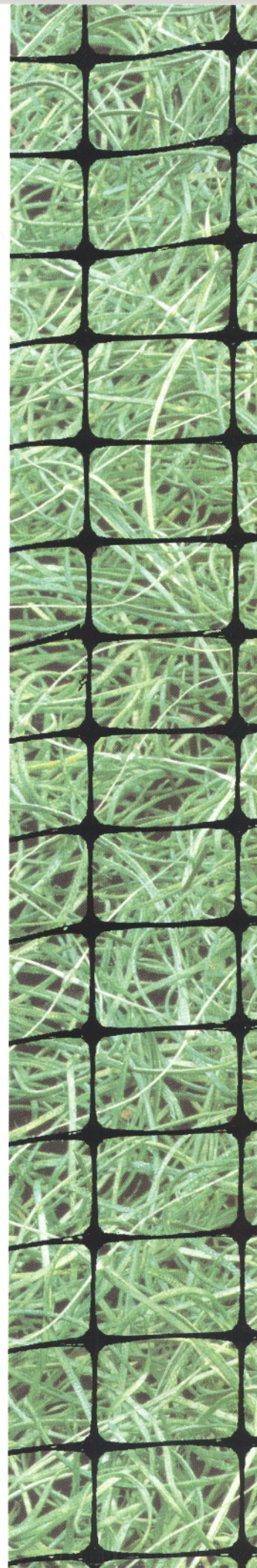
Slopes -

Steepness: 1H:1V+



Typical Applications:

- Urban Stormwater Channels
- Highway Ditches & Steep Embankments
- Steep Landfill Side Slopes
- Streambank Stabilizations
- Reinforced Slope Veneers



SUGGESTED ENFORCER™ SPECIFICATIONS

Section 2720 - Bio-Composite Reinforcement Matting (BCRM)

GENERAL

The BCRM is a rolled excelsior matting for the purpose of erosion control and revegetation. BCRMs shall be furnished in plastic bags or paper-wrappers. Each roll shall be labeled to provide identification sufficient for inventory and quality control purposes.

PRODUCTS

BCRM shall be **ENFORCER™**, as manufactured by American Excelsior Company, Arlington, TX (800-777-7645). BCRM shall be made of aspen excelsior with two layers of heavy polypropylene netting stitched to form a three-dimensional matrix. BCRM shall be free of weed seed and of consistent thickness. Fiber shall be curled and interlocked to form a mat, shall have barbed edges and shall be evenly distributed. A minimum of 80 percent of the fibers shall be 15cm (6 in) or greater in length. Excelsior color shall be QuickGrass™ (green). The BCRM shall have the following material characteristics:

Unit Weight	680g/m ²	(20 oz/sy)
Tensile Strength (MD x XD)	664N x 852N (per 10cm)	(456 lb/ft x 584 lb/lf)
Thickness	12.7mm	(0.5 in)
Roll Dimensions	2.4m x 20.3m	(8 ft x 67.5 ft)
Roll Area	48.7m ²	(60 sy)

Anchors shall be steel wire staples a minimum of 15cm (6 in) in length.

EXECUTION

Before placing BCRM, the finished grade shall be inspected by Engineer to insure that it has been properly compacted; has been graded smooth; has no depressed, void, soft or uncompacted areas; is free from obstructions, such as tree roots, projecting stones or other foreign matter; and has been seeded. Contractor shall not proceed until all unsatisfactory conditions have been remedied. The extent of BCRM shall be as shown on Drawings. Anchors shall be installed as identified on the Drawing stapling pattern detail(s).

Channels: BCRM shall be unrolled parallel to the direction of water flow. The first roll shall be centered longitudinally in the channel and anchored with staples. Subsequent rolls shall be installed outward to the edges of the channel and be lapped to allow installation of a common row of staples. BCRM ends shall be overlapped sufficiently for a common row of staples with the upstream end on top ("shingled"). Staple the overlap across the end of each of the overlapping lengths. A trench shall be constructed at the upstream termination [15cm (6 in) min depth]. BCRM shall be stapled to the bottom of the trench. Backfill and compact the trench.

Slopes: BCRM shall be oriented in vertical strips and anchored with staples. Joints may either be overlapped to allow for installation of a common row of staples or abutted. Horizontal joints shall be shingled. Along flanks and where exposed to overland sheet flow from above, construct a termination trench (staple, backfill and compact).

Disclaimer: ENFORCER™ is a system for erosion control and revegetation 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 revegetation 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 ENFORCER, 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 advance notice.