



# Curlex<sup>®</sup> Blankets

Excelsior Erosion Control Blankets

## ALL EXCELSIOR EROSION BLANKETS ARE NOT CREATED EQUAL

### Curlex<sup>®</sup> Tech Note

Volume I, Issue I

We take it for granted today that all biodegradable erosion control blankets are the same, and statements like “if they are made from excelsior wood fiber, they must be equals”. Taking into consideration the time, expertise, quality manufacturing standards, and ASTM performance standards that should define all biodegradable erosion blankets today, the “are equal” clause should be straightforward - but it's not! If your design is going to be held liable for compliance of erosion and sediment runoff under NPDES permits, make sure you are specifying the best performing, highest quality blankets for your job by brand name. In the end, it is not the price of the product that dictates job success, it is the savings of getting the product on time and off loaded quickly, it is in receiving the quality you expected, it is in the labor saved by easy installation, it is in the best grass stand, it is in compliance with your NPDES permit.

#### ENGINEERED FIBERS FOR EROSION CONTROL

#### The Curlex<sup>®</sup> Difference

A variety of materials are used today to produce an erosion control blanket. Nettings, stitching, and fibers are all part of the manufacturing process. Of these, the fiber is the most important component that determines performance. All fibers used today with the exception of Curlex fibers are primarily straight either due to the material itself or poor quality control. Straight fibers do not have the ability to cling to one another naturally. Stitching a netting and the fibers together in the manufacturing process allows the fibers to be formed into a mat (blanket). If the fibers are straight and cannot naturally cling to one another, a 2 x 2 inch stitch must be used in the manufacturing process to maintain product integrity and to keep the fibers from coming apart in the field. Curlex curled barbed fibers (see photo 1) naturally cling to one another, so a 4 x 4 inch stitch can be used to create a mat without affecting performance levels in the field. Therefore, stitching patterns, as part of the manufacturing process, are a result of the type of fiber used and not a result of a need for higher field performance. Photo 2 shows the result of poor quality control using a fiber other than Curlex. Note the large inconsistent straight fibers and voids as illustrated in photo 2. Photo 3 shows the result of the “repeatable quality” of Curlex fiber manufacturing.

#### **DEMAND “REPEATABLE QUALITY” FROM THE MANUFACTURER YOU SPECIFY**



1. Quality Curlex Fibers



2. Non Curlex Fibers



3. Quality Blanket with Curlex Fibers

### ***The Curlex<sup>®</sup> Fiber Difference***

The engineered excelsior Curlex fiber was invented and patented in the early 60's, and remains the only engineered patented biodegradable fiber created for erosion and sediment control. With ideal water holding capabilities, the Curlex curled barbed fiber's ability to interlock and cling to the soil, aids in establishing a quality grass stand. Curlex still defines all erosion and sediment control products. It is the original standard by which all biodegradable erosion control blankets are judged for soil retention and filtration. The quality and performance standards of Curlex that you expect are assured by the ability to consistently manufacture the same engineered erosion control fiber over and over. Our quality manufacturing standards insure "repeatable performance".

### ***The Curlex<sup>®</sup> Manufacturer Difference***

To produce the Curlex fiber, Aspen logs must be aged a proper length of time before the specific consistent fiber length and width can be produced. Cutting green Aspen wood before proper aging results in quality issues. Utilizing green wood or poor quality control in the fiber production process results in inconsistent fiber size and straight fibers (not curled). Inconsistent fibers do not allow adequate distribution of the fibers throughout the mat, which results in holes and voids in the blanket. A straight fiber allows water to move in a straight line increasing water velocity, which enhances the development of rills. A curled barbed fiber reduces the flow velocity and helps to eliminate rill development. These specifications are very important because they can dictate compliance or non-compliance on your job.

### ***The Curlex<sup>®</sup> Excelsior Blanket Specification***

To assure the quality and performance you would expect from an excelsior erosion blanket, the specification should be:

The engineered biodegradable erosion fiber that comprises the erosion blanket shall be made from Great Lakes Aspen Excelsior with no weed seeds. The erosion blanket shall have a consistent mat appearance and be free of voids. The fiber shall be curled, interlocking fibers with barbed edges, with 80% of the excelsior fibers to be a minimum of 6" in length and .038 in  $\pm$  .010 in wide by .018 in  $\pm$  .003 in thick. The erosion blanket should weigh<sup>a</sup> .73 lbs  $\pm$  10% per square yard. Water absorption shall be 250%  $\pm$  25%.

<sup>a</sup>weight is based on a dry fiber weight basis at time of manufacturer. Baseline moisture content of Great Lakes Aspen excelsior is 22%.

## ***SPECIFYING QUALITY INSURES THE BEST RESULT THE FIRST TIME.***

### ***ASTM Testing Protocol***

Curlex products are tested in accordance with the American Society of Testing Materials (ASTM) test standards. ASTM is the defining engineering body that provides material standards and index testing for various construction related products. These standards insure that all products can be judged on an equal playing field. ASTM test results allow the specifier to properly group equal products by product performance. In 1997 ASTM formed sub-committee D 18.25 Erosion and Sediment Control Technology to develop test standards related to erosion control products. ASTM sub-committee D 18.25 has developed testing protocols D-6459 and D-6460 that defines a product's effectiveness for holding soil in place on slopes and channels of various soil types. The protocol results in a battery of 27 different tests across three soil types for one product ensuring a quality performance standard that you can trust.

## ***REFERENCE PERFORMANCE OF YOUR SPECIFICATIONS BASED ON ASTM D-6459 TEST PROTOCOL***

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