

ALL EXCELSIOR EROSION BLANKETS ARE NOT CREATED EQUAL

Many people take it for granted that all biodegradable erosion control blankets (ECBs) are the same. We have all heard statements like, "If they are made from excelsior wood fiber, they must be equals,". When you take into consideration the manufacturing expertise, quality control measures, and ASTM performance standards used in our industry to define biodegradable ECBs, the "are equal" clause should be straightforward - but it's not!

If your design is going to be held liable for compliance with erosion and sediment runoff guidelines under NPDES regulations, 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 offloaded quickly, receiving the quality you expected, saving labor with easy installation, achieving the best vegetation stand, and complying with your NPDES permit.

ENGINEERED FIBERS FOR EROSION CONTROL

The Curlex Difference

A variety of materials are used today to produce an ECB. 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 netting and 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. Engineered curled and barbed Curlex 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 the 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 in the matrix. 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

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The Curlex® Fiber Difference

The engineered Curlex excelsior fiber was invented and patented in the early 60s and remains the only engineered patented biodegradable fiber created for erosion and sediment control. With exceptional water-holding capabilities, the curled barbed Curlex fiber's ability to interlock and cling to the soil aids in establishing a quality vegetation stand. Curlex still defines all erosion and sediment control products; it is the original standard by which all biodegradable ECBs 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 ensure "repeatable performance".

The Curlex 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 fiber distribution throughout the mat, which results in holes and voids in the ECB. A straight fiber allows water to move in a straight-line, which increases water velocity and enhances the development of rills. A curled barbed fiber reduces 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 Excelsior Blanket Specification

To ensure the quality and performance you would expect from an excelsior ECB, the specification should be:

The engineered biodegradable erosion fiber that comprises the erosion blanket shall be made from Great Lakes Aspen Excelsior (naturally seed-free). 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 .008 in wide by .018 in \pm .003 in thick. The erosion blanket should weigh^a .73 lbs \pm 10% per square yard.

^a Weight is based on a dry fiber weight at the time of manufacture. Baseline moisture content of Great Lakes Aspen excelsior is 22%.

SPECIFYING QUALITY ENSURES THE BEST RESULTS THE FIRST TIME

ASTM Testing Protocol

Curlex products are tested in accordance with 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 ensure 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 D18.25 Erosion and Sediment Control Technology to develop test standards related to erosion control products. ASTM sub-committee D18.25 has developed testing protocols D6459 and D6460 that define 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 D6459 TEST PROTOCOL