American Excelsior Company®
Earth Science Division

Proud Participant in NTPEP and Proud Member of:

Curlex® SFW
SPECIFICATION

PART I - GENERAL

1.01 Summary

A. The Curlex SFW (short fiber wood) contains excelsior wood fibers for the purpose of slowing water velocity and trapping sediment as described herein.

B. This work shall consist of furnishing and installing the Curlex SFW; including fine grading, installing, staking, and miscellaneous related work, in accordance with these standard specifications and at the locations identified on drawings or designated by the owner's representative. This work shall include all necessary materials, labor, supervision, and equipment for installation of a complete system.

C. All work of this section shall be performed in accordance with the conditions and requirements of the contract documents.

D. The Curlex SFW shall be used to slow water velocity, trap sediment, and enhance revegetation. Based on a project-by-project engineering analysis, the product shall be suitable for the following applications:

1. Slope interruption
2. Channels, Swales, and Ditches
3. Inlet and outlet protections
4. Any other applications where straw wattles are used

1.02 Performance Requirements

A. Curlex SFW shall provide temporary, degradable channel and slope interruption by slowing water velocity to reduce shear stress and soil erosion while enhancing revegetation. Curlex SFW performance capabilities shall be determined by large-scale testing deemed acceptable by the design engineer.

B. Curlex SFW performance requirements:

Functional Longevity[a]: ≤ 24 months

[a] Functional Longevity varies from region to region because of differences in climatic conditions.

1.03 Submittals

A. Submittals for approval shall include complete design data, Product Netting Information, SDS, Installation Guidelines, Manufacturing Material Specifications, Manufacturing Certifications, Staking Pattern Guide, CAD details, and a Manufacturing Quality Control Program.

1.04 Delivery, Storage, and Handling

A. Curlex SFW shall be furnished on pallets or master packs.

B. Curlex SFW shall be of consistent density with fibers distributed evenly over the entire area of the product.

C. Curlex SFW shall be free of defects and voids that would interfere with proper installation or impair performance.

D. Curlex SFW shall be stored by the Contractor in a manner that protects them from damage by construction activities.

PART II - PRODUCTS

2.01 Curlex SFW

A. Sediment Device shall be Curlex SFW, as manufactured by American Excelsior Company, Arlington, TX (1-866-9FIBERS).

B. Curlex SFW consists of naturally seed-free Great Lakes Aspen wood excelsior inside a durable tubular netting with knotted ends. Curlex SFW is designed to provide intimate contact with the soil, which prevents blowouts and undermining. Curlex SFW may be placed across channel bottoms, on hillslopes, around inlet structures, or any other applications where straw wattles are used. Curlex SFW shall be manufactured in the U.S.A.

C. Curlex SFW shall have the following nominal material characteristics:

PROPERTY	ENGLISH	METRIC
Product Name	9 in 12 in 20 in	22.9 cm 30.5 cm 50.8 cm
Minimum Diameter	8.5 in 11.5 in 19.0 in	21.6 cm 29.2 cm 48.3 cm
Curlex SFW Density [b] (± 10%)	(9 in) 4.53 lb/ft^3 (12 in) 3.82 lb/ft^3 (20 in) 2.75 lb/ft^3	72.56 kg/m^3 61.19 kg/m^3 44.05 kg/m^3
Curlex SFW Dimensions (W x L) (± 10%)	9 in x 25 ft 12 in x 10.0 ft 20 in x 10.0 ft	0.2290 m x 7.620 m 0.3048 m x 3.048 m 0.508 m x 3.048 m

[b] Weight and density are based on a dry fiber weight basis at time of manufacture. Baseline moisture content of Great Lakes Aspen excelsior is 22%.

2.02 Stakes

A. Stakes shall be wooden, 1 1/8 in wide x 1 1/8 in thick by a minimum of 30 in long for 9 in and 12 in Curlex SFW and 48 in long for 20 in Curlex SFW. Stakes shall not extend above the Curlex SFW more than 2 in.

PART III - EXECUTION

3.01 Curlex SFW Supplier Representation

A. Contractor shall coordinate with the Curlex SFW supplier for a qualified representative to be present on the job site at the start of installation to provide technical assistance as needed. Contractor shall remain solely responsible for the quality of installation.

3.02 Site Preparation

A. Before placing Curlex SFW, the Contractor shall certify that the subgrade has been properly compacted, graded smooth, has no depressions, voids, soft or uncompacted areas, is free from obstructions such as tree roots, protruding stones or other foreign matter, and is seeded and fertilized according to project specifications were applicable. The Contractor shall not proceed until all unsatisfactory conditions have been remedied. By beginning construction, Contractor signifies that the preceding work is in conformance with this specification.

B. Contractor shall fine grade the subgrade by hand dressing where necessary to remove local deviations.

C. No vehicular traffic shall be permitted directly on the Curlex SFW.

3.03 Installation

A. Curlex SFW shall be installed as directed by the owner's representative in accordance to manufacturer's Installation Guidelines, Staking Pattern Guide, and CAD details. The extent of Curlex SFW shall be as shown on the project drawings.

B. Curlex SFW should be installed to intercept water flow and collect sediment on site. They may be placed over bare soil or on top of erosion control blankets. Curlex SFWs are typically installed in a 2-inch trench with the ends of the product facing upstream. The soil from the trench shall be placed at the base of the Curlex SFW on the up-gradient side.

C. They shall be secured to the subgrade by wood stakes every four lineal feet across the length of the Curlex SFW. The stakes shall be driven through the center of the Curlex SFW only and driven into the ground a minimum of 24 inches.

D. Curlex SFW installed in a swale or channel bottom shall allow the installation to continue up the slopes three feet above the anticipated high-water mark and perpendicular to the flow of water.

E. The spacing of Curlex SFW shall be such that the elevation of the bottom of the Curlex SFW upstream will be equal to the elevation of the top of the Curlex SFW downstream.

F. Curlex SFW shall remain in place until fully established vegetation and root systems are present.

3.04 Quality Assurance

A. Curlex SFW shall not be defective or damaged. Damaged or defective materials shall be replaced at no additional cost to the owner.

B. Product shall be manufactured in accordance to a documented Quality Control Program. At a minimum, the following procedures and documentation shall be provided upon request:
   1. Manufacturing Quality Control Program Manual
   2. Additional inspections for product conformance shall be conducted during the run after the first piece inspection.
   3. Moisture content readings recorded for each manufacturing day.
   4. Each individual Curlex SFW shall be inspected, weighed, and documented prior to packaging for conformance to manufacturing specifications.

3.05 Clean-up

A. At the completion of this scope of work, Contractor shall remove from the job site and properly dispose of all remaining debris, waste materials, excess materials, and equipment required of or created by Contractor. Disposal of waste materials shall be solely the responsibility of Contractor and shall be done in accordance with applicable waste disposal regulations.

3.06 Method of Measurement

A. Curlex SFW shall be measured for payment as individual items and the unit of measure shall be each.

3.07 Basis of Payment

A. The accepted quantities of Curlex SFW shall be paid for at the contract unit price per each unit, complete in place.

Payment shall be made under:

Pay Item	**Pay Unit**
Curlex SFW	Individual Item