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**Curlex® Bloc**  
**An American Made Alternative to Coir Logs**  
**SPECIFICATION**

**PART I - GENERAL**

**1.01 Summary**

- A. The Curlex Bloc contains excelsior wood fiber for the purpose of shoreline and streambank stability by buffering wave action and flow velocity as described herein. Secondary applications include installation around inlets and outlets, around job sites for perimeter control, runoff diversion, or other application when a damming product is desired.
- B. This work shall consist of furnishing and installing the Curlex Bloc; 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 Bloc shall be used to stabilize shoreline/streambank areas, create area for live planting, aide in job site perimeter control, and divert construction site runoff. Based on a project-by-project engineering analysis, the Curlex Bloc shall be suitable for the following applications:
  - 1. Shoreline and streambank stability
  - 2. Inlet and outlet protections
  - 3. Runoff diversion
  - 4. Perimeter control
  - 5. Channels, swales, and ditches

**1.02 Performance Requirements**

Curlex Bloc shall provide initial stability of shorelines and streambanks by buffering wave action and flow velocity. Secondary applications for Curlex Blocs include around inlets and outlets, around jobsites for perimeter control, runoff diversion, or in other applications when a damming product is desired.



A. Curlex Bloc performance requirements:

Functional Longevity\*:  $\geq 36$  months

\*Functional Longevity varies from region to region because of differences in climatic conditions.

**1.03 Submittals**

- A. Submittals shall include complete design data, SDS, Installation Guidelines, Manufacturing Material Specifications, Manufacturing Certifications, CAD details, and a Manufacturing Quality Control Program.

**1.04 Delivery, Storage, and Handling**

- A. Curlex Bloc shall be furnished on pallets to minimize handling.
- B. Curlex Bloc shall be free of defects and voids that would interfere with proper installation or impair performance.
- C. Curlex Bloc shall be stored by the Contractor in a manner that protects them from damage by construction activities.

**PART II - PRODUCTS**

**2.01 Curlex Bloc**

- A. Product shall be Curlex Blocs, as manufactured by American Excelsior Company, Arlington, TX (800-777-7645).
- B. Curlex Blocs consist of a specific cut of naturally seed free, nontoxic Great Lakes Aspen wood excelsior with 80% of the fibers  $\geq 6$  inches in length inside a durable, flexible tubular netting with metal clips or knotted ends. Curlex Blocs are designed to provide initial stability of shorelines and streambanks by buffering wave action and flow velocity. Curlex Blocs' unique flat footprint provides more intimate contact with subgrade as compared to traditional tubular shore products such as coir logs and compost socks. In addition, Curlex Blocs are Manufactured in the U.S.A. with American fibers as compared to coir fibers that are typically imported from half way across the planet. Products not native to North America shall not be accepted. Curlex Blocs may be installed over bare soil or over rolled erosion control products. Secondary applications for Curlex Blocs include around inlets and outlets, around jobsites for perimeter control, runoff diversion, or in other applications when a damming product is desired. Curlex Blocs (with biodegradable containment material) are easily abutted with a seamless joint as one end of each Curlex Bloc has an extra flap of containment material to pull over the end of the adjacent Curlex Bloc after placement.



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

Product Name	Curlex Bloc	Curlex Bloc HD
Nominal Dimensions	18 in x 16 in (45.7 cm x 40.6 cm)	18 in x 16 in (45.7 cm x 40.6 cm)
Length (+ 10%, -0%)	4.0 ft or 8.0 ft (1.2 m or 2.4 m)	4.0 ft or 8.0 ft (1.2 m or 2.4 m)
Unit Weight* (± 10%)	14.0 lb/ft (20.8 kg/m)	18.0 lb/ft (26.8 kg/m)
Unit Ground Contact (minimum)	192 in <sup>2</sup> /ft (4,064.2 cm <sup>2</sup> /m)	192 in <sup>2</sup> /ft (4,064.2 cm <sup>2</sup> /m)
Density* (± 10%)	7.0 lb/ft <sup>3</sup> (112.1 kg/m <sup>3</sup> )	9.0 lb/ft <sup>3</sup> (144.1 kg/m <sup>3</sup> )
Containment Material**	Synthetic or Biodegradable	Synthetic or Biodegradable

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

\*\* The optional biodegradable containment material is designed to start degrading during the first year to allow voluntary seed and sediment into the Curlex fiber matrix. The matrix of the Curlex Bloc is the key to the product's performance capabilities. The containment material is a carrier to assist with product shipping and placement into the field. Optional synthetic containment material is designed not to degrade during the first year.

## 2.02 Stakes

- A. 1 1/8" wide x 1 1/8" thick x 48" long wooden stakes are recommended for Curlex Bloc installation.
- B. Each wooden stake shall be notched to secure the rope to the Curlex Bloc. The notch shall be located at a minimum 2" below the top of the stake with the notch opening a minimum of 1". See Curlex Bloc CAD Detail for additional installation techniques.

## PART III - EXECUTION

### 3.01 Curlex Bloc Supplier Representation

- A. Contractor shall coordinate with the Curlex Bloc 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 Blocs, the Contractor shall certify that the installation site has been properly formed, 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 where 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 Bloc.

### 3.03 Installation

- A. Curlex Bloc shall be installed as directed by the owner's representative in accordance to manufacturer's Installation Guidelines and CAD details. The extent of Curlex Blocs shall be as shown on the project drawings.
- B. Curlex Blocs shall be installed parallel to water flow and perpendicular to potential wave action. Secondary applications of Curlex Blocs include around inlets and outlets, around jobsites for perimeter control, runoff diversion, or other applications when a damming product is desired.
- C. They may be installed over bare soil or over rolled erosion control products.
- D. They shall be secured to the subgrade by a minimum 1" diameter wood stake every two lineal feet across the length of both sides of the Curlex Bloc in an alternating pattern. The stakes shall be located directly next to the Curlex Bloc then driven into the ground a minimum of 24". Twine or rope can be used to tie the Curlex Blocs to the stakes by weaving it from stake-to-stake, front-to-back along the length of the Curlex Blocs. If using twine or rope to tie Curlex Blocs to stakes, notch stakes deep enough to fit twine or rope to be used.
- E. Adjoining Curlex Blocs shall be abutted tightly. Curlex Blocs (with biodegradable containment material) are easily abutted with a seamless joint as one end of each Curlex Bloc has an extra flap of containment material to pull over the end of the adjacent Curlex Bloc after placement. Note that each Curlex Bloc with biodegradable containment material contains one end with an extra flap for the abutment joint and one end without the extra flap that will be covered using the extra flap on the adjoining Curlex Bloc.
- F. Multiple rows of Curlex Blocs may be needed to reach mean high water mark. Check with Engineer for placement details. Project specifications should be reviewed for any unique installation requirements.
- G. Incorporation of live plants through and around Curlex Blocs is common. Ensure sufficient moisture is available for target species selected. Use planting iron to create hole in Curlex Bloc then place plug deep into Curlex Bloc. Typically, plugs are installed in a staggered pattern along the length of the Curlex Bloc.

### 3.04 Quality Assurance

- A. Curlex Bloc 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 Bloc shall be inspected, weighed, and documented prior to packaging for conformance to manufacturing specifications.
  5. Certification that fibers' raw material source is native to North America.
  6. Documentation and record retention for at least two years.

**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 Bloc 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 Bloc shall be paid for at the contract unit price per each unit, complete in place.

Payment shall be made under:

**Pay Item**  
Curlex Bloc

**Pay Unit**  
Individual Item

Disclaimer: Curlex Blocs is a system for shoreline and streambank stabilization and for sediment control in channels and on slopes. American Excelsior Company (AEC) believes that the information contained herein to be reliable and accurate for use in erosion and sediment control 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 Curlex Blocs, 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 guidelines are subject to change without notice.



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