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## HYDRAULICALLY APPLIED EROSION CONTROL PRODUCT SPECIFICATION

## PART I - GENERAL

#### 1.01 Summary

- A. The hydraulically applied Bindex Wood WT is made from natural wood fibers (including Curlex<sup>®</sup> Fibers), high grade organic tackifier, and green dye for the purpose of erosion control and revegetation as described herein.
- B. This work shall consist of furnishing and applying the hydraulically applied mulch; including site conditions, 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 hydraulically applied mulch shall be mixed with water and applied with hydraulic mulching equipment to prevent surface erosion and enhance revegetation. Based on a project-by-project engineering analysis, the mulch shall be suitable for the following applications:
  - 1. Slope Protection
  - 2. Temporary or Permanent Seeding

#### **1.02 Performance Requirements**

- A. Hydraulically applied mulch shall provide a temporary, biodegradable cover to reduce slope erosion, protect seeds, and enhance re-vegetation.
- B. Hydraulically applied mulch performance requirements:

C Factor:	≤ 0.15
Slopes:	$\leq$ 3H:1V
Application Rate:	$\approx 2,000 - 3,000$ lb/acre (2,241 - 3,362 kg/ha)
Longevity:	$\leq$ 4 months
Maximum uninterrupted slope length <sup>a</sup> :	50 ft (15.24 m)

<sup>a</sup> Recommended maximum uninterrupted slope length at maximum slope rating. Install Curlex<sup>®</sup> Sediment Logs<sup>®</sup> perpendicular to slope length at proper spacing intervals prior to applying hydraulic mulch when slope interruption is used.



#### 1.03 Submittals

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

### 1.04 Delivery, Storage, and Handling

- A. Hydraulically applied mulch shall be provided in bags that are water proof to protect against moisture intrusion.
- B. Hydraulically applied mulch shall be free of defects that would interfere with proper installation or impair performance.
- C. Hydraulically applied mulch shall be stored by the Contractor in a manner that protects them from damage by construction activities.

## **PART II - PRODUCTS**

### 2.01 Hydraulically Applied Mulch

- A. Hydraulically applied mulch shall be Bindex Wood WT, as provided by American Excelsior Company, Arlington, TX (1-800-777-SOIL).
- B. Bindex Wood WT consists of natural wood fibers (including Curlex Fibers), high grade organic tackifier, and green dye.
- C. Bindex Wood WT shall be manufactured in the U.S.A.
- D. The matrix shall have a minimum water holding capacity of 1,035% (ASTM D 7367).
- E. The matrix shall be comprised of materials which are 100% biodegradable and beneficial to plant growth.
- F. Bindex Wood WT shall have the following material characteristics:

Fiber: Fiber Length:	Natural Wood Fibers (including Curlex Fibers) 25% or more of fibers $\ge 0.40$ in (10.2 mm) long 50% of fibers retained on #24 sieve
Bag Gross Weight:	$\approx 50.0$ lb (22.7 kg)
Green Dye:	$\approx 8.0 \text{ oz} (0.227 \text{ kg})$
Tackifier:	$\approx 24.0 \text{ oz} (0.68 \text{ kg})$
Bag Volume:	10.0 ft <sup>3</sup> (283 L) Before Compression
	3.9 ft <sup>3</sup> (110 L) After Compression
Moisture Content:	$12\% \pm 3\%$
pH:	7.3 (ASTM D 778)
Organic Matter:	98.25% (ASTM D 2974)
Ash Content:	1.72% (ASTM D 2974)
Water Holding Capacity:	1,042% (ASTM D 7367)
Germination Improvement:	$\geq$ 200% (ASTM D 7322)



# **PART III - EXECUTION**

### 3.01 Hydraulically Applied Mulch Supplier Representation

A. Contractor shall coordinate with the hydraulically applied mulch supplier for a qualified representative to be present at 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 hydraulically applying Bindex Wood WT, the site shall be inspected by the Owner's Representative to ensure the area to be protected is geotechnically stable. In addition, areas to be protected should be designed to prevent run-on conditions. Bindex Wood WT shall not be used in channels or areas of concentrated flow. The contractor shall proceed when all satisfactory conditions are present.
- B. No traffic shall be permitted directly on the hydraulically applied mulch.

#### NOTE: Seeding and fertilizing is not included in this specification.

#### 3.03 Slope Installation

- A. Hydraulically applied mulch shall be applied as directed by the owner's representative in accordance with manufacturer's Installation Guidelines. The extent of the mulch shall be as shown on the project drawings.
- B. Each bag of hydraulically applied mulch should be mixed with the proper volume of water to achieve the desired application rate. Mixing and application rates shall be matched to project-specific specifications.
- C. Apply hydraulic mulch from two directions for best coverage results.

#### 3.05 Quality Assurance

- A. Hydraulically applied mulch 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 to be provided on request.

#### 3.06 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.



#### 3.07 Method of Measurement

A. The hydraulically applied mulch shall be measured by the bag. No measurement for payment shall be made for over application or other miscellaneous materials necessary for application of the mulch.

### 3.08 Basis of Payment

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

Payment shall be made under:

<u>Pay Item</u> Hydraulically Applied Mulch <u>Pay Unit</u> per bag [ $\approx$  50 lb (22.7 kg)]

Disclaimer: Bindex Wood WT is a system for erosion control and revegetation on slopes. American Excelsior Company (AEC) believes that the information contained herein to be reliable and accurate for use in erosion control and re-vegetation 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 Bindex Wood WT, 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. These specifications are subject to change without notice.

