



EROSION CONTROL
TECHNOLOGY COUNCIL
ECTC-ESJ 4992
DIRECTING MEMBER



**Bindex™ Wood / Excel® Fibermulch II
HYDRAULICALLY APPLIED MULCH
SPECIFICATION**

PART I - GENERAL

1.01 Summary

- A. The hydraulically applied mulch is made from Great Lakes Aspen wood fibers 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 fine grading, 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:

Slopes:	≤ 4H:1V
Application Rate:	≈ 2,000 – 2,500 lb/acre (2,241 – 2,802 kg/ha)
Longevity:	≤ 3 months
Maximum uninterrupted slope length ^a :	20 ft (6.1 m)

^a Recommended maximum uninterrupted slope length at maximum slope rating. Install Curlex® Sediment Logs® 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. In addition, the Manufacturer shall provide test documentation showing the performance analysis of the mulch, along with reference installations similar in size and scope to that specified for the project.

1.04 Delivery, Storage, and Handling

- A. Hydraulically applied mulch shall be provided in 50 lb bags that are waterproof 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 / Excel Fibermulch II, as manufactured by American Excelsior Company, Arlington, TX (1-866-9FIBERS).
- B. Bindex Wood / Excel Fibermulch II hydraulic mulch consists of natural, seed free wood fibers from Great Lakes Aspen. Excel Fibermulch II shall be manufactured in the U.S.A.
- C. Bindex Wood / Excel Fibermulch II shall have the following material characteristics:

Fiber:	Great Lakes Aspen (naturally seed free)
Fiber Length:	25% or more of fibers \geq 0.40 in (10.2 mm) long 75% of fibers retained on #28 sieve
Bag Gross Weight:	\approx 50.0 lb (22.7 kg)
Green Dye:	\approx 2.0 oz (0.057 kg)
Tackifier:	\approx 30.1 oz (0.853 kg)
Bag Volume:	6.25 ft ³ (177 L) Before Compression 2.8 ft ³ (79 L) After Compression



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 applying the hydraulically applied mulch, the finished grade shall be inspected by the Owner's Representative to ensure it has been properly compacted and fine graded to remove any existing rills. It shall be free of obstruction, such as tree roots, projections such as stones and other foreign objects. The contractor shall proceed when all satisfactory conditions are present.
- 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 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 50 lb 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. Hydraulically applied mulch shall be applied in multiple directions to ensure optimal coverage.

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. At a minimum, the following procedures and documentation shall be provided upon request:

1. Manufacturing Quality Control Program Manual
2. First piece inspection and documentation of products produced to assure component materials and finished product tolerances are within manufacturer specifications.
3. Additional inspections for product conformance shall be conducted during the run after the first piece inspection.
4. Moisture content readings recorded for each manufacturing day.
5. Recorded weight of 4 random samples per pallet of 45 bags.
6. Each individual filled mulch bag shall be inspected, weighed, and documented prior to packaging for conformance to manufacturing specifications.
7. Documentation and record retention for at least two years.

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 (50 lb). 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 50 lb bag, complete in place.

Payment shall be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Hydraulically Applied Mulch	50 lb bag

Disclaimer: Bindex Wood / Excel Fibernulch II 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 / Excel Fibernulch II, 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.

