



HYDROSTRAW® ALL IN 1 BONDED FIBER MATRIX CERTIFICATE OF COMPLIANCE

CERTIFICATE OF COMPLIANCE

Patents Pending

Manufacturer: HydroStraw, LLC 22110 S. State Route 27 Rockford, WA 99030

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HydroStraw, LLC certifies that HydroStraw® All In 1 BFM contains the following properties and characteristics



DESCRIPTION

HydroStraw® All In 1 Bonded Fiber Matrix addresses the biological, chemical, and physical requirements for stabilizing and restoring vegetation on disturbed soil sites, as well as controlling erosion during vegetation establishment.

SPECIFICATIONS

HydroStraw® All In 1 consists of heat and mechanically treated wheat straw fibers which are environmentally safe, biodegradable and produced from annually renewable materials combined with a non-toxic brown colorant as an application aid. The porous matrix of the wheat straw encourages water infiltration, enabling the new seedlings to easily pass thru the matrix. The combination of the wheat straw fibers together with our cross-linked high strength polymer binders provides effective erosion prevention and increased vegetation establishment.

HydroStraw® All In 1 includes all the benefits of our HydroStraw BFM plus 25% micronized natural fertilizers, biological inoculants and soil amendments which provide slow-release balanced nutrients for the new vegetation and promote the growth of soil microbes.

The biological inoculant system includes beneficial microbes and mycorrhizae fungi that increase the surface absorbing area of the roots 100 to 1,000 times. Beneficial bacteria are also added to jump start the microbial activity of the soil, as these microbes help the seedlings more efficiently absorb nutrients. Some of these bacteria help to release nitrogen, sulfur, phosphorus, and trace elements from soil organic matter, while others break down soil minerals and release potassium, phosphorus, magnesium, calcium and iron. Still other bacterial species make and release natural plant growth hormones, which stimulate root growth. Even though microbes are invisible to the naked eye their effects are far reaching as it relates to restoring soil health.

HydroStraw® All In 1 requires no additional infield mixing, resulting in a more accurately mixed slurry and compliance to application specifications. HydroStraw® All In 1 is earthy brown in color and provides a very attractive onsite appearance.

SLOPE GRADIENT / CONDITION	LB / ACRE	KG / HECTARE
≤ 3:1	4,000	4,500
≤ 2:1	5,000	5,600
≤ 1:1	6,000	6,725
Soil Moisture Retention	4,000 - 6,000	4,500 - 6,725

Physical Characteristics	
Toxicity	Non Toxic
Applied Color	Brown
Surface Tension	Material will evenly disperse and suspend when agitated in water
Absorbency	When sprayed uniformly at the recommended rate, the mulch fibers form an absorbent mulch cover which will allow percolation of water and increased water infiltration to the underlying soil matrix
Solubility	Mulch Fibers are Non Water Soluble
pH	6.8 +/- 0.5
Average Fiber Length	1/2" +/- 1/4" (1.27 cm +/- .64 cm)

Packaging and Shipping Data	
Bag Size	11.5" x 17" x 25" (29.2 x 43 x 63.5 cm)
Bag Weight	50 lb (22.7 kg)
Pallet	40 Bags, 52" x 45" x 96" (132 x 114 x 244 cm)
Full Truck	22 Pallets, 880 Bags
Packaging	Moisture Resistant Packaging

Composition	
Heat & Mechanically Treated™ (HMT) - Wheat Straw	50.0% +/- 1.0%
Fertilizers / Soil	25.0% +/- 1.0%
Moisture	10.0% +/- 1.0%
Natural Fibers	7.5% +/- 1.0%
Proprietary Tackifiers	7.5% +/- 1.0%

Fertilizer Rates Deliver Per Acre	
Mulch Lbs. / Acre	Nutrients Delivered / Acre*
4,000	N(40lbs) P ₂ O ₅ (40lbs) K ₂ O (40lbs)
5,000	N(50lbs) P ₂ O ₅ (50lbs) K ₂ O (50lbs)
6,000	N(60lbs) P ₂ O ₅ (60lbs) K ₂ O (60lbs)

*All In 1 Contains Micronized Natural Fertilizer and other beneficial components, refer to analysis above.

Fertilizer Rates Deliver Per Hectare	
Mulch Kg / Hectare	Nutrients Delivered / Hectare*
4,500	N(45kg) P ₂ O ₅ (45kg) K ₂ O (45kg)
5,600	N(56kg) P ₂ O ₅ (56kg) K ₂ O (56kg)
6,750	N(67kg) P ₂ O ₅ (67kg) K ₂ O (67kg)

*All In 1 Contains Micronized Natural Fertilizer and other beneficial components, refer to analysis above.

Mixture Rates	
Hose Work	75 lbs / 100 gallons (34 kg / 379 liters)
Tower Work	100 lbs / 100 gallons (45 kg / 379 liters)

*Hose Work Rate may vary dependent on hydroseeder type and/or size and length of hose used.

WARRANTY

HydroStraw, LLC warrants that its products are free from defects and will perform as stated in this literature. If our product does not meet products specifications, notice of failure must be received within 15 days of failure. HydroStraw, LLC will not warrant that the product will perform under unlimited circumstances that are caused by soil conditions, installation, and/or weather variables.