



# Rainier Fiber™



## **Rainier Supreme™** **Fiber Reinforced Matrix (FRM)** **Superior Erosion Protection**

### **DESCRIPTION**

Rainier Supreme™ FRM consists of specially processed, extra-long strand, virgin wood fibers along with a high-strength, non-toxic, hydrocolloid based cross-linked organic tackifier with a reinforcing tackifier additive combined to create a mechanically reinforced fiber. This combination gives superior erosion protection without the addition of man-made synthetic plastic fibers which are not naturally biodegradable.

The system sprays on like mulch and forms a blanket that adheres to the soil surface immediately upon application. When dry, the blanket is porous, erosion resistant and protects the soil surface. The blanket retains its integrity and soil protection despite re-wetting for more than eighteen months. The extra-long, woolly wood fibers form tent-like pockets which aids germination and plant growth. When applied over the soil surface the wood fibers twist and interlock with each other and the soil as they dry.

Rainier Supreme™ FRM is 100% naturally biodegradable, has no plastic fibers added, and is non-toxic to animal, aquatic organisms, fish or plant life.

### **ADVANTAGES**

- No man-made synthetic plastic fiber added. Wood fiber is 100% biodegradable.
- Greater than 99% effectiveness in controlling soil loss.
- Extra long wood fibers make a stronger mat.
- Plant growth increase greater than 760% versus bare soil.
- Mat blanket retains integrity after repeated rains.
- Conforms to all surface contours. Eliminates tenting and rilling.
- Pre-mixed fiber blended with cross-linked organic tackifier disperses quickly in slurry for fast hydration.
- High temperature 177°C (350°F) steam and pressurized, thermo-mechanical refining produces long fibers.
- No viable noxious or other plant seed in the fiber. All seeds are sterilized.
- Tackifier additive is homogeneously mixed with the fiber creating a mechanically reinforcing fiber (FRM).

Rainier Supreme™ FRM is fast to load in hydroseeding equipment from easy-to-handle plastic bags. The fibers make a homogeneous slurry of water, seed and fertilizer. The fibers remain in suspension during agitation and pumping, and the slurry does not dewater when doing hose work. The color allows the operator to apply an even application of material over the soil surface. The colorant added to the fiber during manufacture is non-toxic to animal, aquatic organisms, fish, or plant life.

### **PRODUCT FEATURES**

- Made from specially selected, clean, wood chips.
- Fiber stays in uniform suspension and blends with seed and fertilizer.
- Goes into slurry quickly.
- Provides favorable micro-climate for fast seed germination.
- Pumps easy in hydromulching machines.

- Has no germination or growth inhibiting factors.
- Wood fibers decompose after plants have been established.

## PRODUCT SPECIFICATIONS

Rainier Supreme™ is manufactured to specific fiber sizes in a controlled environment to provide best job-site performance. Specially selected wood chips are softened by high temperature 177°C (350°F) steam, and the pressurized thermo-mechanical refining process produces extra long, soft, woolly fibers. The fibers have physical features that tend to intertwine with each other, thus forming a more protective blanket. The fibers are totally free from lead paint, printing ink, varnish, petroleum products, seed germination inhibitors or chlorine.

| Composition                                            | Test Method                           | Notes                                  | Tested Value     |
|--------------------------------------------------------|---------------------------------------|----------------------------------------|------------------|
| Thermo-mechanical refined virgin wood fiber            |                                       | (total weight basis)                   | 90%              |
| Proprietary cross-linked tackifier & additive          |                                       | (total weight basis)                   | 10% min          |
| Crimped wood fiber                                     | Additive used in place                | (total weight basis)                   | Not required     |
| Micro-Pore Granules                                    | Additive used in place                | (total weight basis)                   | Not required     |
| Physical Properties                                    | Test Method                           | Notes                                  | Tested Value     |
| Moisture Content                                       | ASTM D 2974 / CA-Test 226 / CTL, 2025 | (total weight basis)                   | 8.0% +/- 3.0%    |
| Organic Matter                                         | ASTM D 2974 / AASHTO T-267            | (oven dried weight basis)              | 97.0% min        |
| Ash Content                                            | AASHTO T267 / TAPPI T-413             | (oven dried weight basis)              | .36%             |
| pH @ 3% Concentration                                  | SW846-9045D                           | Spectra                                | 4.8±0.5          |
| Water Holding Capacity (min)                           | ASTM D 7367                           | CTL, FEB 2025                          | > 1300%          |
| Color                                                  | Observed                              |                                        | Green            |
| Fiber Length                                           | ASTM D 7560                           | 25%=10mm (3/8 inch)                    |                  |
| Sieve Retention                                        | ASTM D 7560                           | 50% retained on 25 mesh (710 µm) sieve |                  |
| Performance Properties                                 | Test Method                           | Notes                                  | Tested Value     |
| Percent Effectiveness                                  | ASTM D 6459 (mod)                     |                                        | > 99.9%          |
| Vegetation Enhancement                                 | ASTM D 7322                           | Biomass Enhancement                    | > 760%           |
| Functional Longevity                                   | Observed                              |                                        | > 18 Months      |
| Erosion Control Technology Council HECP Classification |                                       |                                        | Long Term        |
| Maximum Slope Application                              | Observed                              |                                        | ≤ 0.25H : 1.0V   |
| Cover Factor                                           | ASTM D 6459 – Large Scale**           | May 2024                               | 0.005            |
| R Factor                                               | ASTM D 6459 – Large Scale**           | May 2024                               | <162             |
| Cure Time                                              | Observed                              | Condition Dependent                    | 0 to 2 hours     |
| Environmental Properties                               | Test Method                           | Method/Notes                           | Results          |
| Ecotoxicity                                            | EPA 2019.0 / EPA 2021.0/WSDOT-T-127   | 96-hr LC50 > 100%                      | Pass             |
| Acute Toxicity                                         | EPA-821-R-02-012                      | 96-hr LC50 > 100%                      | Pass             |
| Heavy Metals                                           | EPA 6020A                             | ND                                     | Pass             |
| Biodegradability                                       | ASTM D 5338                           |                                        | Pass             |
| Solvents                                               | EPA 6020A, EPA 8260D                  | ND                                     | Pass             |
| Boron Content                                          | EPA 6020A                             | < 50 ppm                               | Pass             |
| Elemental Impurity Limits                              | EPA 1668                              |                                        |                  |
| USDA BioPreferred                                      | ASTM D6866                            | BioBased Content                       | <i>Pending</i>   |
| Recommended Rates                                      | Pounds Per Acre                       | Kilogram Per Hectare                   |                  |
| ≤ 3.0H : 1.0V                                          | 2,500                                 | 2,800                                  |                  |
| 2.5H : 1.0V                                            | 3,000                                 | 3,370                                  |                  |
| 2.0H : 1.0V                                            | 3,500                                 | 3,930                                  |                  |
| ≥ 1.0H : 1.0V                                          | ≥ 4,000                               | 4,490                                  |                  |
| Packaging                                              | Dimensions                            | Quantity                               | Pallet Weight    |
| 50 Pound Bale                                          | 10"x19"x29" Bale/48"x48"x102" Pallet  | 40 Bales Per Pallet                    | Est. > 2,000 lbs |

## APPLICATION RATES & PROCESS

Recommended Rates are for typical field conditions where the slope has been stabilized and prepared for seeding. Apply the fiber to make a uniform mat. If more than 2,500 lbs/acre (2,800 kg/ha) is applied the spraying should be done in two applications. Allow enough drying time between applications so some dry spots are shown on the surface of the fiber. Spray from two directions to avoid light coverage, or shadowing, on the back side of ridges and depressions. Application works best when made in advance of rainfall to allow a short drying time.

### FOR MORE INFORMATION PLEASE CONTACT:

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