



**STANDARD SPECIFICATION  
FOR  
SEDIMENT RETENTION FIBER ROLLS (SRFRS)**

*Version: March 30, 2020*

**PART 1 GENERAL**

**1.01 SUMMARY**

A. This section specifies a Sediment Retention Fiber Roll (SRFR). A SRFR is a manufactured 3-dimensional device of a specified filler material encapsulated within a flexible containment material utilized in sediment and flow control applications. SRFRs are also known as wattles, logs, socks, tubes or fiber rolls and are offered as a prefabricated unit.

**1.02 SUBMITTALS**

A. Product Data: Submit manufacturer's product data and installation instructions.

B. Certifications: Submit a letter from manufacturer certifying that the SRFR meets or exceeds all requirements found in this specification. Submittals shall include manufacturer's installation instructions.

**1.02 PACKAGING, DELIVERY, STORAGE, AND HANDLING**

A. Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect product from damage due to climatic conditions and construction operations.

## PART 2 PRODUCTS

### 2.01 PRODUCT REQUIREMENTS

- A. Table 1 is for general guidelines only. Refer to manufacturer for site specific guidelines.
- B. The SRFR to be used shall meet the standards of Fiber Type \_\_\_\_\_ and Nominal Diameter \_\_\_\_\_ as specified in *Table 1*.

**Table 1: ECTC Guidance Values for Sediment Retention Fiber Rolls (SRFRs)**

Nominal Diameter (in)	Straw SRFR <sup>a</sup>		
	Diameter (in) <sup>b</sup>	Weight (lb/ft) <sup>b</sup>	Density (lb/ft <sup>3</sup> ) <sup>b</sup>
6	5.5	0.6	3.1
9	8.0	1.6	3.6
12	11.0	3.0	3.8
20	18.0	6.0	2.7

<sup>a</sup>All Values are measured at time of manufacturing. Values may differ once installed in the field. Most SRFRs are available with either synthetic netting or biodegradable netting. Each net and fiber type has a different functional longevity. Check with the manufacturer to verify functional longevity.

<sup>b</sup>Values are minimums.

Nominal Diameter (in)	Wood Excelsior SRFR <sup>a</sup>		
	Diameter (in) <sup>b</sup>	Weight (lb/ft) <sup>c</sup>	Density (lb/ft <sup>3</sup> ) <sup>c</sup>
6	5.5	1.2	2.4
9	8.0	1.0	2.2
12	11.0	2.0	2.5
20	18.0	1.5	1.3

<sup>a</sup>All Values are measured at time of manufacturing. Values may differ once installed in the field. Most SRFRs are available with either synthetic netting or biodegradable netting. Each net and fiber type has a different functional longevity. Check with the manufacturer to verify functional longevity.

<sup>b</sup>Values are minimums.

<sup>c</sup>Values not to exceed 20%, or filtering capabilities will be limited. Clear water flow rate shall be  $\geq 35$  GPM/ft<sup>2</sup> (ASTM D5141).

	Coir SRFR <sup>a</sup>		
Nominal Diameter (in)	Diameter (in) <sup>b</sup>	Weight (lb/ft) <sup>b</sup>	Density (lb/ft <sup>3</sup> ) <sup>b</sup>
6	5.5	1.4	7.0
9	8.0	3.1	7.0
12	11.0	5.5	7.0
16	14.5	9.8	7.0
20	18.0	15.3	7.0

<sup>a</sup>All Values are measured at time of manufacturing. Values may differ once installed in the field. Most SRFRs are available with either synthetic netting or biodegradable netting. Each net and fiber type has a different functional longevity. Check with the manufacturer to verify functional longevity.

<sup>b</sup>Values are minimums.

	Compost SRFR <sup>a</sup>		
Nominal Diameter (in)	Diameter (in) <sup>b</sup>	Weight (lb/ft) <sup>b</sup>	Density (lb/ft <sup>3</sup> ) <sup>b</sup>
5	4.5	4.0	25.0
8	7.2	12.0	25.0
12	11.0	28.0	25.0
18	16.5	58.0	25.0

<sup>a</sup>All Values are measured at time of manufacturing. Values may differ once installed in the field. Most SRFRs are available with either synthetic netting or biodegradable netting. Each net and fiber type has a different functional longevity. Check with the manufacturer to verify functional longevity.

<sup>b</sup>Values are minimums.

## PART 3 EXECUTION

### 3.01 APPROPRIATE APPLICATIONS

- A. Slope length and gradient are two factors that directly affect the erodibility of a slope and introduce sediment into storm-water runoff. As many road right-of-ways are space limited, slopes along roadsides tend to be steep, leading to accelerated erosion. SRFRs provide a reliable and economical means to reduce the effective length of slopes, thus reducing erosion and sediment discharge to natural waters.
  
- B. SRFRs are typically placed along the toe, top, face and at grade breaks of exposed and erodible slopes to shorten the slope length and spread runoff as sheet flow. SRFRs are also frequently used for inlet protection, around temporary stockpiles and even around the perimeter of a job site. SRFRs are also used in channel applications as checks to reduce flow velocity and filter sediment laden flow.

- C. SRFRs may be used in conjunction with Rolled Erosion Control Products (RECPs) and Hydraulic Erosion Control Products (HECPs). If used with HECPs, SRFRs are installed prior to application of the HECP. Once SRFRs are installed, apply the HECP per the manufacturer's application rates and instructions. When used with RECPs, SRFRs are typically placed and secured after installation of the RECP. Proper installation is necessary for successful SRFr implementation. Excessive runoff and erosion may occur if SRFRs are not adequately spaced, trenched in and/or anchored.

### 3.02 INSTALLATION

- A. Comply with manufacturer's submitted installation instructions and other recommendations. Manufacturer's recommendations shall meet or exceed ECTC's Sedimentation Retention Fiber Roll (SRFR) General Usage and Installation Guidelines for installation. [www.ectc.org](http://www.ectc.org).

### 3.03 PROTECTION

- A. Areas protected with SRFr shall be free from foot and vehicle traffic, grazing and other disturbances. Any damaged area shall be repaired accordingly to the installation procedures as specified above.

### 4.01 PAYMENT

- A. SRFr will be paid for by the linear footage installed. The price shall include; full compensation furnishing all labor, materials, tools, equipment, and incidentals, for doing all SRFr work, complete in place, as shown on the plans, and as specified in these Standard Specifications and as directed by the Engineer.

**Erosion Control Technology Council**

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*The Erosion Control Technology Council (ECTC) is committed to promoting cost-effective erosion and sediment control through leadership, standardization and education. ECTC assists agencies, engineers, designers, contractors and other entities in the proper application, installation and specification of erosion control technologies while establishing guidelines for product quality, testing and performance.*