Terra-Tubes®

Terra-Tubes® are the industry's most cost-effective storm water treatment device—designed to effectively trap, filter and treat sediment-laden runoff while reducing hydraulic energy. Terra-Tubes Fiber Filtration Tubes are engineered composites of wood fibers, man-made fibers and performance-enhancing polymers—all encased in heavy-duty cylindrical tubes.

This revolutionary filtration medium is available as a superior polymer delivery system or as stand alone, high performance fiber tubes to accommodate specific applications, including:

- Slope Interruption Devices (SIDs)
- Channel/Ditch Flow Checks
- Bio-Swale/Storm WaterTreatment Systems
- Drain Inlet Protection
- Perimeter Sediment Control

Terra-Tubes Outperform Competitive Technologies

- Does everything better than common fiber rolls and wattles…and more!
- Proven to be far more effective in independent testing
- 15 times more effective in reducing turbidity
- 15 times more effective in controlling sediment loss
- Lightest weight and easiest to ship, handle and install

Maritime™ Hydroseed
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Terra-Tubes - Fiber Filtration Tubes (FFT) Installation Overview -

Slopes:

Vertical spacing for slope installations should be determined by site conditions. Key parameters include slope gradient, length of slope, soil type, climate, design event and anticipated runoff. General guidelines follow:

Slope Gradient	FFT Interval
1H:1V	15' (4.6 m)
2H:1V	25' (7.6 m)
3H:1V	35' (10.7 m)
4H:1V	50' (15.2 m)

When installing on highly erosive soils, decrease interval distance. On less erosive soils, increase interval distance.

step 1

1. For maximum performance Terra-Tubes must be installed to maintain intimate contact with the soil surface. Terra-Tubes should be installed prior to hydraulic or dryland seeding applications. They may be installed before or after the installation of rolled erosion control products (RECPs). Smooth soil surface and remove all obstructions >1"-2" in diameter.

   Deploy Terra-Tubes FFT where material is to be installed.

step 2

2. Anchor the upslope/upstream side of FFT using 6"- 8" U-shaped wire staples or approved devices at 1' intervals. Position anchors 1" inward from upper edge of FFT and drive flush to soil surface.

step 3

3. Raise tube to fullest height and drive 12"-18" wooden stakes or approved metal rods through downslope/downstream side of FFT at 2' intervals. Drive stakes 1" inward from downslope/downstream edge of FFT, leaving 2"- 3" of the stake protruding above the FFT. Take care not to compress the FFT structure.

step 4

4. The FFT should appear more rectangular than round. Backfill and compact loose soil against upslope/upstream side of FFT.

5. Overlap adjacent FFT roll ends by a minimum of 1'. Reduce stake interval on downslope/downstream FFT to 1' interval making sure to place a stake at the terminus of the FFT. Continue to use wire staples on 1" centers on upslope/upstream side of FFT. Extend next FFT 1' past terminus and upslope/upstream of preceding FFT and place wire staples on 1' intervals. Then, drive stakes through outer 1" of both FFTs to complete the overlap.

step5

Channels:

1. Construct anchor trench 3" deep by FFT roll diameter and place loose soil against upstream side of FFT. For channel gradients of 2% install anchor trenches on 25' intervals. Decrease interval distance of anchor trenches with steeper channel gradients or more highly erosive soils.

2. Follow above installation sequence for slope installations, but decrease interval of both upstream and downstream anchoring devices to 1 foot.

Notes: Consult detailed Terra-Tubes Installation Guidelines for additional information. Site conditions may dictate the following considerations:

- *Recommended anchoring devices and anchor trench intervals may be adjusted.*
- *Anchor trenches on slopes may be advisable.*
- *When warranted, use a 3.25' wide roll of Futerra® F4 Netless™ blanket as a scour apron beneath FFT.*