

CORE Filter Sock

General Description and Use

Filter socks from CORE Erosion Control Services (CFS) are available in 8", 12", 18" and 24" diameters. The diameter of each sock refers to its design height. When installed properly, the CFS will maintain an effective height of roughly 80% of the design height. For example, a 12" sock will have an effective height of 9.5" or greater.

CFS are a highly effective sediment control Best Management Practice (BMP). Filter socks are most used as perimeter sediment controls but can also be used on steep slopes, on pavement or as check dams. Filter socks can be installed on-site using a pneumatic blower truck or can be pre-filled and shipped to the site on pallets.



Filter sock used as perimeter protection on a pipeline project.

Applications

Filter socks from CORE Erosion Control Services can be used in a variety of applications on all types of construction sites.

- Sediment control
- Perimeter protection
- Check dams
- Inlet protection
- Sediment traps
- Basin forebay
- Temporary slope interrupts
- Permanent slope interrupts
- Lot wraps
- Concrete washout

One major advantage to using filter socks in place of other sediment control BMPs is that trenching is often not required. Because the filter socks are heavier in weight,

they will achieve greater contact with the underlying soil. This allows the filter socks to be used in areas where trenching is not possible due to soil conditions or on impervious surfaces such as concrete and asphalt.

Mesh Characteristics

The outer mesh of the filter sock serves as containment to hold the filter media in place while allowing for storm water runoff to flow through the mesh. The mesh itself will not necessarily improve the function of the filter sock but it can hinder the performance if the pore size is not large enough. CORE Erosion Control Services uses a multifilament polypropylene, photodegradable mesh with 1/8" opening pore size. This mesh has a functional life of 2+ years and is durable enough to hold up to typical construction site wear and tear. *See table 2 for mesh properties.*

Some regulatory agencies may require minimal trenching of filter socks. Filter socks should be staked through the center of the sock or on the immediate downhill side of the sock at a roughly 45-degree angle. For most applications stakes should be spaced at 10' intervals. Some regulatory agencies may require additional stakes. When pre-filled filter socks are used on-site, the ends must overlap a minimum of 18" with each end securely staked to prevent storm water runoff from bypassing the filter sock. The ends of the filter socks should be turned upslope to prevent end around flow.

Filter socks may be moved after installation to accommodate traffic or other site considerations. Filter socks should be returned to the design position at the end of the day or prior to a rain event. *See installation guide for details.*

Filter Material Characteristics

The most important component of the filter sock is the filter material. The filter material is the portion of the BMP that is responsible for filtering out sediment as it passes through the filter sock.



Filter material.



CORE Erosion Control Services tests our filter material several times per year to ensure it meets all federal, state and local requirements. If the filter material is too fine, it will not allow the storm water runoff to effectively flow through the sock causing failures due to overtopping or undercutting. If the filter material is too coarse it will not allow the storm water runoff to temporarily pond on the uphill side of the filter sock and will flow through the sock too quickly. A material that is too coarse will not provide the proper filtration.

General Maintenance

Filter socks should be inspected after each runoff event and on a regular basis between runoff events.

Any sediment that has accumulated to half of the above ground height of the filter sock shall be removed.

If overtopping occurs a larger diameter sock may be

required, or additional upstream BMPs may need to be put in place.

If the mesh is punctured or holes develop, replacement may not be required. If the filter material is still contained within the mesh, then replacement will not be needed. If the filter material is being washed out of the mesh, then repair or replacement will be required. Only the affected portion of the filter sock will need to be replaced. Using small sections of pre-filled filter sock is an acceptable method of replacing damaged portions of sock.

If the filter material is left on-site, it should be vegetated or spread in a manner so as to not cause any off-site sediment discharge. Vehicles and equipment should not be allowed to drive over the filter socks.