
Standard Practice for Compost for Erosion/Sediment Control (Filter Berms and Filter Socks)

AASHTO Designation: R 51-22¹

Technically Revised: 2022

**Technical Subcommittee: 4g, Geosynthetics and
Erosion Control Products**



**American Association of State Highway and Transportation Officials
555 12th Street NW, Suite 1000
Washington, DC 20004**

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1. SCOPE

- 1.1. This specification covers compost produced from various organic by-products for use as filter berm media for erosion/sediment control. The technique described in this specification is primarily used for temporary erosion/sediment control applications where perimeter controls are required or necessary.
- 1.2. This technique is appropriate for slopes up to a 2:1 grade (horizontal distance:vertical distance) and on level surfaces and should be used only in areas that have sheet flow drainage patterns (not areas that receive concentrated flows).
- 1.3. The filter sock technology is appropriate for areas outlined in Section 1.2 as well as areas of high sheet flow erosion, around inlets, and in other disturbed areas of construction sites requiring sediment control. Unlike filter berms, the filter sock technology may be used in areas that have concentrated flow drainage patterns, up to 10 gal per minute per linear foot of filter sock.

2. REFERENCED DOCUMENTS

- 2.1. *ASTM Standard:*
 - D2977, Standard Practice for Particle Size Range of Peat Materials for Horticultural Purposes
- 2.2. *TMECC Sampling and Test Method:*
 - *Test Methods for the Examination of Composting and Compost* (TMECC), jointly published by the USDA and USCC (2002, publishing as a part of the USDA National Resource Conservation Technical Bulletin Series)
- 2.3. *Other Standard:*
 - U.S. Composting Council Seal of Testing Assurance Program documents

3. GENERAL DESCRIPTION

- 3.1. Compost is the product resulting from the controlled biological decomposition of organic material, occurring under aerobic conditions, which has been sanitized through the generation of heat and stabilized to the point that it is appropriate for its particular application. Active composting is typically characterized by a high-temperature phase that sanitizes the product and allows a high rate of decomposition, followed by a lower-temperature phase that allows the product to stabilize while still decomposing at a slower rate. Compost should possess no objectionable odors or

substances toxic to plants and shall not resemble the raw material from which it was derived. Compost contains plant nutrients but is typically not characterized as a fertilizer.

- 3.2. Compost may be derived from a variety of feedstocks, including agricultural, forestry, food, or industrial residuals; biosolids (treated sewage sludge); leaf and yard trimmings; manure; tree wood; or source-separated or mixed solid waste.
- 3.3. Proper thermophilic composting, meeting the U.S. Environmental Protection Agency's definition for a "process to further reduce pathogens" (PFRP), will effectively reduce populations of human and plant pathogens, as well as destroy noxious weed seeds and propagules.
- 3.4. Compost is typically characterized as a finely screened and stabilized product that is used as a soil amendment. However, most composts also contain a wood-based fraction (e.g., bark, ground brush and tree wood, wood chips, etc.) that is typically removed before use as a soil amendment. This coarser, woody fraction of compost plays an important role when compost is used in erosion and sediment control. It is even possible to add fresh, ground bark or composted, properly sized wood-based materials to a compost product, as necessary, to improve its efficacy in this application.
- 3.5. Compost products acceptable for this application must meet the chemical, physical, and biological parameters outlined in Section 4.

4. CHEMICAL, PHYSICAL, AND BIOLOGICAL PARAMETERS

- 4.1. Compost products specified for use in this application must meet the criteria specified in Table 1. The products' parameters will vary based on whether vegetation will be established on the filter berm or the compost will be self-contained in a filter sock.
- 4.2. Only compost products that meet all applicable state and federal regulations pertaining to their production and distribution may be used in this application. Approved compost products must meet related state and federal chemical contaminant (e.g., heavy metals, pesticides, etc.) and pathogen limits pertaining to the feedstocks (source materials) in which they were derived.