

## Material Specification 5xx - Compost

### 1. SCOPE

This specification covers the type and quality of compost for the construction of Compost Blanket and Compost Filter Sock.

### 2. QUALITY AND TESTING

Compost products shall be the result of the biological degradation and transformation of plant-derived (or –from PaDOT- derived from a variety of feedstocks including agricultural, forestry, food, or industrial residuals; bio-solids (treated sewage sludge); leaf and yard trimmings; manure; or tree wood with no objectionable odors or substances toxic to plants) materials under controlled conditions designed to promote aerobic decomposition at a state approved composting facility. Well-decomposed, weed-free, organic compost shall be stable with regard to oxygen consumption and carbon dioxide generation. Compost shall be mature with regard to its suitability as serving as a soil amendment or an erosion control Best Management Practice (BMP) as defined below. The compost shall have a moisture content that has no visible free water or dust produced when handling the material.

IDOT 1081.05(b) - Compost shall be thoroughly decomposed organic waste produced at an IEPA registered composting facility. The compost shall have no glass or metal shards present. Any plastic or other man made material shall be no larger than 1/4 in. (6 mm) and sieved out to be less than one percent of the total dry weight. A copy of the compost test results complying with IEPA standards for General Use Compost and certification of IEPA registration shall be provided to the Engineer with each shipment of compost.

Compost shall be capable of supporting and germinating vegetation.-end IDOT excerpt

Test in accordance with U.S. Composting Council's Test Methods for Examining of Composting and Compost (TMECC). Provide compost with the U.S. Composting Council's Seal of Testing Assurance Program (STA) certification and STA product label. Compost having the following physical properties:

1. Compost material shall be tested in accordance with TMECC Test Method 02.02-B, "Sample Sieving for Aggregate Size Classification"

Fine Compost shall meet the following:

	Min	Max
Percent passing 2"	100%	
Percent passing 1"	99%	100%

Percent passing  $\frac{5}{8}$ " 90% 100%  
 Percent passing  $\frac{1}{4}$ " 75% 100%  
 Maximum particle length of 6 inches

Coarse Compost shall meet the following:

	Min	Max
Percent passing 3"	100%	
Percent passing 1"	90%	100%
Percent passing $\frac{3}{4}$ "	70%	100%
Percent passing $\frac{1}{4}$ "	40%	60%
Maximum particle length of 6 inches		

2. The pH shall be between 6.0 and 8.5 when tested in accordance with TMECC 04.11-A, "1:5 Slurry pH".
3. Manufactured inert material (plastic, concrete, ceramics, metal, etc.) shall be less than 1.0 percent by weight as determined by TMECC 03.08-A "Percent Dry Weight Basis".
4. Minimum organic matter shall be 40 percent dry weight basis as determined by TMECC 05.07 A, "Loss-On-Ignition Organic Matter Method".
5. Soluble salt contents shall be less than 4.0 mhos/cm tested in accordance with TMECC 04.10-A, "1:5 Slurry Method, Mass Basis".
6. Maturity shall be greater than 80% in accordance with TMECC 05.05A, "Germination and Vigor".
7. Stability shall be 7 or below in accordance with TMECC 05.08-B, Carbon Dioxide Evolution Rate".
8. The compost product must originate a minimum of 65 percent by volume from recycled plant waste as defined in WAC 173-350 as "Type I Feedstocks." A maximum of 35 percent by volume of other approved organic waste and/or biosolids may be substituted for recycled plant waste. The supplier shall provide written verification of feedstock sources.
9. Samples may be tested using the Solvita Compost Maturity Test by the Contracting Agency at the Engineer's discretion. Fine Compost shall score a number 6 or above on the Solvita Compost Maturity Test. Coarse Compost shall score a 5 or above on the Solvita Compost Maturity Test.

The compost supplier will test all compost products within 90 calendar days prior to initial application. Samples will be taken using the Seal of Testing Assurance (STA) sample collection protocol. (The sample collection protocol can be obtained from the U.S. Composting Council, 4250 Veterans Memorial Highway,

Suite 275, Holbrook, NY 11741 Phone: 631-737-4931, www.compostingcouncil.org). The sample shall be sent to an independent STA Program approved lab. The compost supplier will pay for the test. A copy of the approved independent STA Program laboratory test report shall be submitted to the Contracting Agency prior to initial application of the compost. Seven days prior to application, the Contractor shall submit a sample of each type of compost to be used on the project to the Engineer.

Compost not conforming to the above requirements or taken from a source other than those tested and accepted shall be immediately removed from the project and replaced at no cost to the Contracting Agency.

The Contractor shall submit the following information to the Engineer for approval:

1. A Request for Approval of Material Source.
2. A copy of the {xxxxxxx} Permit issued to the supplier by the Jurisdictional State Agency re (Minimum Functional Standards for Solid Waste Handling).
3. The supplier shall verify in writing, and provide lab analyses that the material complies with the processes, testing, and standards specified in {xxxxxxx} and these Specifications. An independent STA Program certified laboratory shall perform the analysis.
4. A list of the feedstock by percentage present in the final compost product.
5. A copy of the producer's Seal of Testing Assurance certification as issued by the U.S. Composting Council.

Acceptance will be based upon a satisfactory Test Report from an independent STA program certified laboratory and the sample(s) submitted to the Engineer.