

## APPENDIX 5.28:

### FILTREXX INTERNATIONAL STANDARD SPECIFICATIONS FOR GROWINGMEDIA™

#### GROWINGMEDIA™

Composted products used for Filtrex GrowingMedia™ shall be weed free and derived from a well-decomposed source of organic matter. The composted products shall be produced using an aerobic composting process meeting USEPA CFR 503 regulations (In Canada: M.O.E. 101, C.C.M.E. Type “A” and Type “AA” regulations), including time and temperature data indicating effective weed seed, pathogen and insect larvae kill. The composted products shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products will not be accepted. Test methods for the items below should follow USCC TMECC guidelines for laboratory procedures:

#### Section

A. PH – 5.0-8.0 in accordance with TMECC 04.11-A, “Electrometric pH Determinations for Compost”

B. Moisture content of less than 60% in accordance with standardized test methods for moisture determination.

C. GrowingMedia™ to be used with FilterSoxx™ where seeding and/or live stakes are specified; on low grade slopes where vegetation establishment is the priority; or where rainwater absorption, water holding capacity, runoff reduction and infiltration are the priority shall meet the following particle size distribution. Examples include Runoff Diversion Soxx™, ChannelSoxx™, EdgeSaver™, LivingWall™, GreenLoxx™, FilterCell Flow Diversion Soxx™, Compost Vegetated Cover™, Compost Erosion Control Blanket™, Compost Storm Water Blanket™, Compost Engineered Soil™, Compost Bioretention System™, Green Roof GrowingMedia™.

Particle Sizes - 100% passing a 2 in (50mm) sieve, 99% passing a 1 in (25mm) sieve, minimum of 60% passing a ½ in (12.5mm) sieve in accordance with TMECC 02.02-B, “Sample Sieving for Aggregate Size Classification”.

D. Material shall be relatively free (<1% by dry weight) of inert or foreign man made materials.

E. A sample shall be submitted to the Engineer for approval prior to being used and must comply with all local, state and federal regulations.

#### **Option A: Erosion Control**

For vegetated non FilterSoxx™ applications where slope grades are greater than 3:1, where sheet runoff rate or velocity may be high, or rainfall rate/intensity may be high.

Substitution for Section C. Particle Size of Filtrex GrowingMedia™ shall use the following particle size distribution specification: 99% passing a 1 in (25mm) sieve, maximum of 50% passing a 1/2 in (12.5mm) sieve.

#### **Option B: Non-vegetated Temporary Erosion Control**

For non-vegetated non FilterSoxx™ applications where slope grades are greater than 3:1, where sheet runoff rate or velocity may be high, or rainfall rate/intensity may be high.

Substitution for Section C. Particle Size of Filtrexx GrowingMedia™ shall use the following particle size distribution specification: 99% passing a 3 in (75mm) sieve and a maximum of 30% passing a 1/2 in (12.5mm) sieve.

**Rationale for Options:** Research conducted at The University of Georgia and Auburn University (Faucette et al, 2006; Faucette, 2006) to evaluate the performance of particle sizes in compost erosion control blankets found that distributions with predominantly small particles absorbed more rainfall, reduced a greater volume of runoff, increased the delay of runoff commencement, and exhibited greater vegetation growth, relative to compost erosion control blankets with large particle sizes. However, compost erosion control blankets with distributions of predominantly large particles slowed runoff rate and reduced soil loss prior to vegetation establishment over compost erosion control blankets with smaller particles sizes.

### **References:**

Demars, K.R. and R.P. Long, 1998. Field evaluation of source separated compost and Coneg model procurement specifications for Connecticut DOT projects. University of Connecticut and Connecticut Department of Transportation. December, 1998. JHR 98-264.

Faucette, L.B., J. Governo, C.F. Jordan, B.G. Lockaby, H.F. Carino, and R. Governo. 2006. Storm water quality, C factors, and particle size specifications for compost and mulch blankets relative to straw blankets with PAM used for erosion control. Currently Under Peer Review by Journal of Soil and Water Conservation. *In:* Filtrexx Library #706

Faucette, B. 2006. How Important is Particle Size in Specifications for Compost Erosion Control Blankets? *In:* Filtrexx Tech Link #3310; and Filtrexx Standard Specifications and Design Manual 5.0, Appendix 5.9.

Faucette B, C. Jordan, M. Risse, M. Cabrera, D. Coleman, and L. West. 2005. Evaluation of storm water from compost and conventional erosion control practices in construction activities. Journal of Soil and Water Conservation. 60:6:288-297.

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Mukhtar, S., M. McFarland, C. Gerngross, F. Mazac. 2004. Efficacy of using dairy manure compost as erosion control and revegetation material. 2004 American Society of Agricultural Engineers/Canadian Society of Agricultural Engineers Annual International Meeting, Ontario, CA. Paper #44079.

Persyn, R.A., T.D. Glanville, T.L. Richard, J.M. Laflen, and P.M. Dixon. 2004. Environmental effects of applying composted organics to new highway impacts: Part 1. Interrill runoff and erosion. Transactions of the American Society of Agricultural and Biological Engineers. 47:2:463-469.

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