

2. XX Intensive Growing Medium – Naturcycle® Intensive 85 Green Roof Media

A. Description:

An engineered planting medium for intensive vegetative roof systems with a separate drain layer designed to retain stormwater and encourage long-term healthy plant growth. It meets requirements described in ASTM E2777-14; the Standard Guide for Vegetative (Green) Roof Systems. Intensive green roof media is a soil-like manufactured blend of lightweight expanded mineral aggregate, natural washed sand, other inert components, and premium United States Composting Council Seal of Testing Assurance participating compost meeting the following technical and performance characteristics:

B. Physical and Chemical Properties:

Item	Results	Test Methods
1. Particle Size		
a. Proportion of Particles Passing $\leq 0.05$ mm	$\leq 10$ % by mass	by ASTM D422-63
b. Proportion of Particles Passing $< 9.50$ mm	$> 95$ % by mass	by ASTM D422-63
2. Bulk Density Measurements		
a. Bulk Density on Dry Weight Basis	50.0 - 60.0 lbs/ft <sup>3</sup>	by ASTM E2399
b. Bulk Density at Max Water Holding Capacity	80.0 - 85.0 lbs/ft <sup>3</sup>	by ASTM E2399
3. Water and Air Measurements		
a. Maximum Water Holding Capacity	$\geq 40.0$ %	by ASTM E2399
b. Air Filled Porosity	$\geq 10.0$ %	by ASTM E2399
c. Saturated Hydraulic Conductivity	0.5 - 1.5 in/min	by ASTM E2399
4. Chemical Measurements		
a. pH	6.5 - 8.2	by ASTM 4972 v CaCl <sub>2</sub>
b. Organic Matter Level	4.0 - 10.0 %	by ASTM F1647
c. Soluble Salts	$< 1.0$ mmhos/cm	by FLL Standards

C. Standard of Quality shall be:

“Naturcycle Intensive 85® Green Roof Media” distributed by Naturcycle, LLC, [www.naturcycle.com](http://www.naturcycle.com) or (315) 707-8955, or architect/engineer approved equal.

*The organic amendment to create this green roof media must be compost and must participate in the United States Composting Council Seal of Testing Assurance (STA) Program. As part of the green roof submittal, the media supplier must provide a certified independent analysis from a laboratory participating in the STA Program, along with being a participant in good standing and having the ability to produce the required annual test reports. A recent STA Technical Data Sheet is required to be submitted prior to shipment. Any organic amendment besides compost is not acceptable as other organic matter sources are nonrenewable and not sustainable sources.*

*Prior to shipment, both a physical sample and a recent quality control sample by a laboratory capable of conducting ASTM E2399 and related FLL standards of the media type should be required. The required quality control test must be dated within 120 days of physical sample submittal.*

*Please NOTE: Because soil-less media is a living system, Naturcycle, LLC can only guarantee their products to meet the specified properties at the time of delivery. Therefore, any claim of potential non-compliance must be at this time.*

*Please consult a Naturcycle representative before finalizing any specification as adjustment is sometimes needed based on unique project design requirements.*

*The details contained in these specifications correspond with the technical knowledge of Naturcycle, LLC at the time of publication. Naturcycle, LLC reserves the right to update and or adjust performance specifications periodically, in accordance with new insight and best practices, due to the availability of materials, or special project conditions related to plant selection, nutrient requirements, or environmental conditions.*