

## **Extensive Growing Media**

**Product NUMBER: GM3000-EXT**

### ***Description:***

The following technical information sheet covers the production and materials for use in lightweight growing media blends on extensive vegetative roof assemblies.

Our extensive vegetative roof growing media is regionally blended and formulated to meet the rigorous standards of the FLL Guidelines for particle size gradation, fines content, dry and saturated bulk density, total porosity, air filled porosity, water retention, hydraulic conductivity, pH balance, soluble salt content and organic matter content.

The growing media is created using only high quality and local sourced product to the greatest extent possible. Per FLL Guidelines this growing media is derived from industry proven materials consisting inorganic and organic materials.



### ***Physical Characteristics:***

1. Expanded Media Component:
  - a. Description: Inorganic expanded Media that is consistent with Pumice, Perlite, Volcanic Cinder Rock, or lightweight expanded clay aggregate.
2. Compost Component:
  - a. Description: Nutrient grade compost that is manufactured from recycled material and is mixed with the other three components by a composter that is enrolled in the United States Compost Council's (USCC) Seal of Testing Assurance (STA) Program.
  - b. Only compost products that meet all applicable state and federal regulations, Section 07 33 63 [www.federalgreenspec.wbdg.org](http://www.federalgreenspec.wbdg.org) pertaining to its production and distribution are used in this application.
  - c. All approved compost products meet all applicable state and federal regulations for chemical contaminants (e.g. heavy metals, pesticides, etc.) and pathogen limits pertaining to the source materials in which it was derived.
3. Organic Component:
  - a. Description: Fiber or organic material that is a clean cellulose product that adds friability to media, filtration, and agronomic horticultural attributes.

### ***Storage:***

- Store in a dry area free of potential contaminants which may adversely affect the engineered blend including potential weed seeds.
- Store away from sources of ignition and extremely high temperatures, when media is shipped in bags or totes.

### ***Precautions:***

- When media is placed in bags or totes, avoid prolonged exposure to sunlight, heat, sparks and open flames.
- When media is delivered in bulk, cover media piles as needed to reduce effects of potential weather conditions including heavy rains and winds.
- Wash exposed skin prior to eating, drinking or smoking and at the end of each shift.

### ***LEED Information:***

Manufacturing Location and Post-Consumer Recycled Content:

- Varies; contact Columbia Green for project-specific information.

**Physical Properties\*:**

| <b>Particle Size Distribution</b>                     |                    |              |  |
|---|--------------------|--------------|--|
| Proportion of silting components < 0.063 mm           | Mass %             | ≤ 15         |  |
| Proportion of particles < 0.25 mm 60 mesh             | Mass %             | 5 - 30       |  |
| Proportion of particles < 1.00 mm 18 mesh             | Mass %             | 10 - 50      |  |
| Proportion of particles < 2.00 mm 10 mesh             | Mass %             | 30 - 70      |  |
| Proportion of particles < 3.20 mm 1/8 inch            | Mass %             | 40 - 80      |  |
| Proportion of particles < 6.30 mm 1/4 inch            | Mass %             | 65 - 95      |  |
| Proportion of particles < 9.50 mm 3/8 inch            | Mass %             | 100          |  |
| <b>Density Measurements</b>                           |                    |              |  |
| Bulk Density (dry weight basis)                       | lb/ft <sup>3</sup> | 44 - 53      |  |
| Bulk Density (at max. water-holding capacity)         | lb/ft <sup>3</sup> | 72 - 85      |  |
| <b>Water/Air Measurements</b>                         |                    |              |  |
| Total Pore Volume                                     | Vol. %             | ≥ 50         |  |
| Maximum water-holding capacity                        | Vol. %             | 35 - 65      |  |
| Air-filled porosity at max water-holding capacity     | Vol. %             | ≥ 10         |  |
| Water permeability (saturated hydraulic conductivity) | in/min             | 0.024 - 2.83 |  |
| <b>pH and Salt Content</b>                            |                    |              |  |
| pH (in CaCl <sub>2</sub> )                            |                    | 6.0 - 8.0    |  |
| Soluble salts (water, 1:10, m:v)                      | g (KCl)/L          | < 3.5        |  |
| <b>Organic Measurements</b>                           |                    |              |  |
| Organic matter content                                | g/L                | 25 - 65      |  |
| <b>Nutrients</b>                                      |                    |              |  |
| Phosphorus, P2O5 (CAL)                                | mg/L               | ≤ 200        |  |
| Potassium, K2O (CAL)                                  | mg/L               | ≤ 700        |  |
| Magnesium, Mg (CaCl <sub>2</sub> )                    | mg/L               | ≤ 200        |  |
| Nitrate + Ammonium (CaCl <sub>2</sub> )               | mg/L               | ≤ 80         |  |

\* Volume measures are guaranteed at the time of production and packing. Settling of materials may occur during transportation and handling. Minor deviations from test data may occur due to the natural variability of the bulk materials used to produce the media blend

**Packaging/Component Size:**

| Type         | Volume                                       | Approx. Delivery Weight        |
|--------------|--|--------------------------------|
| 1.5 cf. Bags | 1.5 cf bags. (palletized in 1 cy increments) | 1,250 lbs.                     |
| 1.5 cy Tote  | 1.5 cy                                       | 1,850 lbs.                     |
| 2.0 cy Tote  | 2.0 cy                                       | 2,500 lbs.                     |
| Bulk         | 40-60 cy. / truck (weight dependent)         | 48,000 lbs. (more with tandem) |

\* Recommended 10%-15% additional growing media (by volume) be ordered to account for long term settling of product.