



# **Etera**<sup>®</sup> **SEDUM TILE**<sup>®</sup>

## Pre-Vegetated Mats Product Specifications

**Etera**<sup>®</sup> Green Roof Plants  
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Mt. Vernon, WA 98273  
877-694-7613 p  
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**Etera**<sup>®</sup> is a registered trademark of Northwest Horticulture LLC  
**SEDUM TILE**<sup>®</sup> is a registered trademark of Northwest Horticulture LLC  
**TILE**<sup>®</sup> is a registered trademark of Northwest Horticulture LLC



## SECTION XXXXXX

### PRE-VEGETATED MATS

#### PART 1 GENERAL

##### 1.1 SCOPE

Provide all labor, material, tools, and equipment to unload, convey to roof, and install Etera® SEDUM TILE® pre-vegetated mats.

##### 1.2 RELATED SECTIONS

- A. Membrane Roofing
- B. Irrigation

##### 1.3 QUALITY ASSURANCE

- A. Source Responsibility: The vegetated roof plant material shall be SEDUM TILE® pre-vegetated mats as provided by Etera®.

- B. Contact:

Etera  
14113 River Bend Road  
Mt. Vernon, WA 98273  
877-694-7613 phone  
[sales@etera.com](mailto:sales@etera.com)

- C. System Installer:

- 1. Company specializing in work of this section with documented experience of comparable scope.
- 2. Accepted by Architect as qualified for installing work of this Section prior to Bid Date.

##### 1.4 PROJECT CONDITIONS

- A. Environmental Conditions:

- 1. SEDUM TILE mats should not be installed when temperatures are below freezing.
- 2. When roof temperatures are expected to reach above 100° F (38° C) on day of installation install mats early in the day when temperatures are lower, or water the roof growing media to lower the temperature just before installation.
- 3. SEDUM TILE mats should not be installed over waterlogged media.
- 4. SEDUM TILE mats should not be installed during prolonged periods of drought unless irrigation is available.

- B. Existing Conditions:

- 1. It is the responsibility of the installer to verify load limits for the roof structure prior to installation of the green roof elements.
- 2. It is the responsibility of the installer to inspect or verify inspection of a new or existing roof for watertight conditions prior to installation of the green roof elements.



## PART 2 PRODUCTS

### 2.1 Etera SEDUM TILE pre-vegetated mats:

- A. SEDUM TILE mats are made up of a coconut fiber base filled with a planting substrate, and pre-cultivated with a layer of low-profile, drought-tolerant vegetation adapted to rooftop conditions.
- B. SEDUM TILE mats are 12" x 24" (+/- 2.00 sq. ft.) and range from 2" to 4" in height on delivery. (Dependent on the variety of vegetation included.)
- C. SEDUM TILE mats have a maximum saturated weight of 5.48 lbs per square foot.
- D. SEDUM TILE mat fiber/soil base – Approximately 1" Thick.
- E. SEDUM TILE mats shall have a minimum of 150 plants per square foot.
- F. SEDUM TILE mats shall have a minimum 95% vegetation coverage upon delivery to the site using a succulent plant mix as described below:
  - 1. **Color Max Etera SEDUM TILE mat** – A blend of Sedums for the roof where maximum color is desired. This comes in the form of brightly colored foliage, flowers in abundance, and colors that blend and go together well. Color Max SEDUM TILE mat shall consist of 6 to 8 of the following varieties. Occasionally substitutes are used.
    - a. *Sedum acre* 'Aurea'
    - b. *Sedum album* 'Coral Carpet'
    - c. *Sedum kamtschaticum* 'Weihenstephaner Gold'
    - d. *Sedum kamtschaticum* 'Variegatum'
    - e. *Sedum reflexum* 'Blue Spruce' **Signature Variety**
    - f. *Sedum rupestre* 'Angelina' **Signature Variety**
    - g. *Sedum spurium* 'John Creech'
    - h. *Sedum spurium* 'Red Carpet'
  - 2. **Tuff Stuff Etera SEDUM TILE mat** – Sometimes particular places are unusually harsh and difficult for plants. The Sedums in Tuff Stuff are the toughest, most durable, most drought-resistant choices available. They have proven ability to survive wind, cold, heat, drought, and tough environments that limit plant choices. Tuff Stuff SEDUM TILE mat shall consist of 6-8 of the following varieties. Occasionally substitutes are used.
    - a. *Sedum album* 'Coral Carpet'
    - b. *Sedum cauticolium* **Signature Variety**
    - c. *Sedum kamtschaticum*
    - d. *Sedum middendorffianum* *diffusum*
    - e. *Sedum rupestre* **Signature Variety**
    - f. *Sedum sexangulare*
    - g. *Sedum takesimensis* 'Golden Carpet'

- h. *Sedum reflexum* 'Blue Spruce'
  - i. *Sedum spurium* 'Summer Glory'
  - j. *Sedum spurium* 'Album Superbum'
  - k. *Sedum spurium* 'Fuldaglut'
3. **All Seasons Etera SEDUM TILE mat** – This mix provides flowers throughout the growing season. All Seasons is also one of our most cold tolerant mixes performing well in northern climates. This is a good, general purpose mix that provides year-round roof top beauty. All Seasons SEDUM TILE mat shall consist of 6-8 of the following varieties. Occasionally substitutes are used.
- a. *Sedum album* 'Coral Carpet'
  - b. *Sedum divergens*
  - c. *Sedum kamtschaticum* 'Weihenstephaner Gold'
  - d. *Sedum reflexum* 'Green Spruce' **Signature Variety**
  - e. *Sedum tetractinum* 'Coral Reef'
  - f. *Sedum sexangulare*
  - g. *Sedum spurium* sp.
  - h. *Sedum takesimensis* 'Golden Carpet' **Signature Variety**
  - i. *Sedum spurium* 'Tricolor'
  - j. *Sedum spurium* 'Voodoo'

#### Non Standard SEDUM TILE Mat Mixes:

1. **Sun & Shade Etera SEDUM TILE Mat**– The mix of plants in this group are those that have demonstrated abilities to withstand the difficult conditions of shade. All Sedums do best in higher light, but this group can tolerate low-light better than most. We recommend a minimum of three hours full sun each day for best results. Sun & Shade SEDUM TILE mat shall consist of 6-8 of the following varieties. Occasionally substitutes are used.
- a. *Sedum acre* 'Aurea'
  - b. *Sedum sexangulare*
  - c. *Sedum reflexum* 'Green Spruce'
  - d. *Sedum reflexum* 'Blue Spruce'
  - e. *Sedum kamtschaticum* 'Weihenstephaner Gold'
  - f. *Sedum takesimensis* 'Golden Carpet' **Signature Variety**
  - g. *Sedum divergens*
  - h. *Sedum* 'Coral Reef'
  - i. *Sedum spurium* 'Album Superbum'
  - j. *Sedum spurium* 'Fuldaglut'

2. **Red Mix Etera SEDUM TILE Mat** - A mix designed for maximum red foliage. Red Mix SEDUM TILE mat shall consist of at least 6 of the following. Occasionally substitutes are used.
  - a. *Sedum spurium* 'Red Carpet'
  - b. *Sedum spurium* 'Fuldaglut'
  - c. *Sedum spurium* 'Voodoo'
  - d. *Sedum spurium* 'Bronze Carpet'
  - e. *Sedum spurium* 'Elizabeth'
  - f. *Sedum album* 'Coral Carpet'
  - g. *Sedum stefco*
  - h. *Sedum sexangulare*
  
3. **Green Mix Etera SEDUM TILE Mat**- A mix designed for maximum green foliage. Green Mix SEDUM TILE mat shall consist of at least 6 of the following. Occasionally substitutes are used.
  - a. *Sedum spurium* 'Album Superbum'
  - b. *Sedum album* 'Coral Carpet'
  - c. *Sedum stefco*
  - d. *Sedum reflexum* 'Green Spruce'
  - e. *Sedum middendorffianum* diffusum
  - f. *Sedum kamtschaticum* 'Weihestephaner Gold'
  - g. *Sedum kamtschaticum*
  - h. *Sedum sexangulare*
  - i. *Sedum takesimensis* 'Golden Carpet'
  
4. **Blue Mix Etera SEDUM TILE Mat**- A mix designed for maximum blue foliage. Blue Mix SEDUM TILE mat shall consist of at least 4 of the following. Occasionally substitutes are used.
  - a. *Sedum reflexum* 'Blue Spruce' **Signature Variety**
  - b. *Sedum caudicolum*
  - c. *Sedum rupestre*
  - d. *Sedum divergens*
  - e. *Sedum pachyclados*
  - f. *Sedum stefco*
  
5. **Yellow Mix Etera SEDUM TILE Mat**- A mix designed for maximum yellow foliage. Yellow Mix SEDUM TILE mat shall consist of at least 4 of the following. Occasionally substitutes are used.
  - a. *Sedum acre* 'Aurea' **Signature Variety**
  - b. *Sedum rupestre* 'Angelina' **Signature Variety**
  - c. *Sedum kamtschaticum* 'Variegatum'
  - d. *Sedum sexangulare*
  - e. *Sedum stefco*



## 2.2 IRRIGATION

- A. Irrigation must be applied until the roots are established in the growing media on the roof (4-6 weeks after installation).
  - 1. Thoroughly water media underneath SEDUM TILE mat prior to installation and then immediately over SEDUM TILE mat after installation.
  - 2. Deliver  $\geq \frac{1}{4}$ " water, 2 x per week for the first 2 weeks, then deliver  $\geq \frac{1}{4}$ " water, 1 x per week for the next 2-4 weeks. Extended irrigation requirements are dependent upon project location, conditions, and plant selection. It is recommended that if a permanent irrigation system is not installed, that a backup system (such as hose bibs located on the roof) be available for use during prolonged periods of drought (>4 weeks with less than a total of  $\frac{1}{4}$ " precipitation).

## PART 3 EXECUTION

### 3.1 GENERAL

- A. Etera SEDUM TILE pre-vegetated mats shall be installed by qualified contractors with demonstrated experience and project references. The mats shall be installed in such a manner as to not damage or disturb any previously installed roofing components.

### 3.2 DELIVERY, STORAGE, AND HANDLING

- A. SEDUM TILE pre-vegetated mats shall be delivered in such a manner as to preserve the quality of the plants. Truck delivery will be conducted in a manner as to protect the vegetated mats from temperature or wind damage. For transport times less than 1 day, a closed or open trailer may be used. For longer duration transport times, vegetated mats must be delivered in a climate controlled trailer (e.g. refrigerated container).
- B. Upon arrival, the vegetative mats shall be immediately off-loaded and moved to a protected area. Ideally, the mats are to be installed within 24 hours of arrival.
- C. If installation is not possible in this time frame, then a holding area shall be reserved to store the vegetative mats until they can be installed.
  - 1. Protect the mats from weather extremes.
    - a. If it is hot, move them to a shady location.
    - b. If harsh winter conditions exist, set them out of the wind and protect them from frost.
  - 2. Store the mats outside if possible. Mats can be stored indoors for 1-2 days as long as they are kept cool. Do not store in a closed, hot storage container.
  - 3. Two day's storage on the pallet is acceptable while waiting for installation.



- a. If more than two days are needed, the mats shall be un-stacked and exposed to air and light
- b. Once the mats are un-stacked, water them thoroughly once every three days until they can be installed.

### 3.3 EXAMINATION

- A. Underlying roof components shall be installed and tested according to manufacturer guidelines.
- B. SEDUM TILE mats shall be examined for count and any damage that may be present. Any damage or discrepancy in SEDUM TILE mat count should be duly noted and photos taken of the damaged material. Etera shall be notified immediately with a complete description of any damage or missing SEDUM TILE mat. Failure to notify Etera within 24 hours of delivery may result in a denial of any claim for damaged or missing SEDUM TILE mat.

### 3.4 PREPARATION AND INSTALLATION

- A. Growth Media:
  1. SEDUM TILE mat shall be installed over media specifically engineered for green roofs, preferably to FLL standards.
  2. Spread a minimum of 2-4 (*edit to requirements*) inches growing media over the green roof system.
  3. Level growing media with a large rake.
  4. Thoroughly wet the media before overlaying with vegetated mats.
- B. Etera SEDUM TILE Pre-Vegetated Mats:
  1. Install vegetative mats directly over freshly moistened growing media.
  2. Lay vegetative mats smoothly over the growth media, maintaining good overall contact with the media layer and avoiding air gaps between tile and media.
  3. Place mats close together, avoiding air gaps between them.
- C. The newly installed SEDUM TILE mat must be immediately and thoroughly watered.

### 3.5 WARRANTY

- A. Etera warrants that our products will conform to the description or pictures presented and will be viable when received. Since we have no control of plant growth once delivered, we give no other warranty, expressed or implied. Claims will be limited to the amount of the purchase price of the product and any applicable freight and royalty. Etera will not be held liable for consequential or incidental damages resulting from a shipment, such as: lost revenue, profit, commission, contamination, legal fees or any other damage

### 3.6 MAINTENANCE

- A. System installer shall maintain the vegetated roof for a period of at least [XXX] (*edit to requirements*) days from completion.
- B. Maintenance activities shall include:



1. Water the vegetated roof system twice a week for the first two (2) weeks and once a week for the next 2-4 weeks to aid in root establishment. Water the system more frequently during extended periods of hot, dry weather conditions.
2. Provide hand weeding as necessary.
3. Replace areas of damaged plants or dead plants using Sedum plugs or cuttings.

END OF SECTION