

# UTELITE E-SOIL®

## LIGHTWEIGHT EXPANDED SHALE AGGREGATE IN GREENROOF APPLICATIONS



## UTELITE E-SOIL® IN GREENROOF DESIGN

Utelite E-Soil provides innovative, cost-effective, long-term solutions to modern horticulture and landscape design challenges. Utelite E-Soil has long history of success in rooftop garden projects all over the Western United States. This track record of proven performance demonstrates how Utelite E-Soil has become the preferred choice among design professionals when designing rooftop gardens, plazas and courtyards.

The use of Utelite E-Soil, an environmentally friendly ceramic material, in greenroof design helps address important issues such as managing storm water runoff, improving water quality, reducing urban heat, conserving energy, lowering dead load and increasing green space.



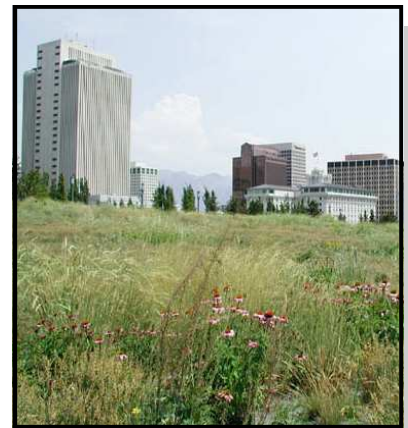
### WHAT IS UTELITE E-SOIL?

Utelite E-Soil is a lightweight, ceramic material produced by expanding and vitrifying select shale in a rotary kiln at temperatures of near 2000°F. The process produces a high quality ceramic aggregate that is structurally strong, physically stable, durable, environmentally inert, light in weight, and highly insulative. It is a non-toxic, absorptive aggregate that is dimensionally stable and will not degrade over time.

### HOW DOES UTELITE E-SOIL FIT INTO GREENROOF DESIGN?

One of the most important components to both extensive and intensive greenroof systems is a quality planting media. Because of the complex nature of greenroof construction and the difficulties of access after completion, the planting media must be able to support and sustain plants for the duration of the intended life span of the roof. A well-designed planting media must have the following physical characteristics: *Be free of silts and clays that could clog the filter fabric; Have permanent internal aeration even after several years of consolidation; Insure adequate drainage; Insure stable root support; Not degrade, breakdown or shrink in volume over time.* Utelite E-Soil is the environmentally friendly answer that provides a long-term solution to the above complex requirements.

Besides exceeding all the requirements of an ideal planting media, Utelite E-Soil provides additional important benefits. Its reduced weight can accommodate structural design requirements; yet it is heavy enough to avoid loss caused by excessive wind or water. Its' angular, stable and porous ceramic nature ensures an adequate supply of air to enable plants to be established quickly and develop healthy root systems. Ample aeration increases the insulative properties of the planting media and helps reduce urban heat. This reduces energy consumption as well as lessen the urban heat island effect. Overall project costs are often reduced because Utelite E-Soil can also serve as the drainage portion of the greenroof system. When used for storm water management, the porous planting media allows rain water to readily penetrate the soil surface. This reduces runoff and allows pollutants to be naturally filtered and remediated thereby improving water quality.



## HOW DOES UTELITE E-SOIL COMPARE TO OTHER AGGREGATES?

Design professionals choose Utelite E-Soil because of its long-history of success in designs all over the West. Utelite E-Soil has established itself as the standard for creating planting media for rooftop gardens. Designers can count on it being predictable, stable and highly dependable for the duration of the greenroof.



Natural sand and soil are heavy. They frequently require that structural modifications be made to the project's design. Native soils have silts and clays that may clog the filter materials or drainage layers and reduce effectiveness. The physical properties of natural volcanic aggregates vary widely with source and location. Natural materials may degrade and compact over time, and require possible additions to or replacement of planting media. Some horticultural products used in greenhouses and container planting, such as vermiculite and perlite, are extremely light in weight and do not offer adequate anchoring and support for larger plants. In exterior applications vermiculite and perlite often float to the top of the planting media where they can be carried away by wind or water.

## WHERE IS UTELITE E-SOIL AVAILABLE AND WHERE CAN I FIND ADDITIONAL INFORMATION?

Utelite E-Soil are environmentally friendly products that save material, labor and transportation cost, as well as improve the function ability and service life of greenroofs. These benefits support sustainable development and contribute to designs becoming LEED™ certified.

*Utelite Corporation is a lightweight expanded shale aggregate producer located in Utah. Utelite Corporation has provided lightweight aggregate to customers throughout the Western United States including Hawaii and Alaska for over 40 years. Utelite E-Soil® is the horticultural line of products that design professionals count on when designing greenroofs, structural soils, engineered soils, vegetated wetlands and other special applications.*

***For additional information on Utelite E-Soil® products, please contact:***

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