

GREEN ROOF GEOTEXTILES

Conservation Technology offers a wide range of technical geotextiles optimized for green roofs including:

- separation fabrics with a three-dimensional surface structure that is highly resistant to clogging, and with an internal pore structure that retains green roof media without restricting root penetration or water drainage
- protection mats optimized for puncture resistance, water storage, and capillarity
- composite drainage mats designed to provide controlled drainage under long-term loading

All geotextiles are supplied individually bagged in easy-to-handle roll sizes. Every roll is electrically scanned for metal debris and broken punching needles.



SELECTING GREEN ROOF GEOTEXTILES

Drainage Plate Systems: In this type of green roof, a waffled or dimpled plastic sheet serves as the primary drainage mechanism. Place *Separation Fabric HD* (6 oz/yd²) above the sheet drain to retain planting media while allowing water to drain freely. Place *Protection Mat* below the sheet drain to protect the underlying root barrier or waterproofing from mechanical damage and to retain water to reduce stormwater runoff. To enhance water storage for plants and to reduce stormwater runoff, substitute *Water Storage Mat* for *Protection Mat*.

Drainage Media Systems: In this type of green roof, a coarse lightweight inorganic granular media serves as the primary drainage mechanism, often supplemented by slotted drainage channels. Place *Separation Fabric SD* (4 oz/yd²) above the granular media to retain planting media while allowing water to drain freely. Place *Capillary Mat* below the granular media to protect the underlying root barrier or waterproofing from mechanical damage and to retain water that can be later utilized by the green roof plants by direct root contact and by vapor diffusion. The unique properties of *Capillary Mat* will also distribute the water evenly, eliminating problems caused by standing water or by uneven irrigation. To enhance water storage for plants and to reduce stormwater runoff, use *Water Storage Mat* instead of or in conjunction with *Capillary Mat*.

Drainage Mat Systems: In this type of green roof, a composite mat serves as the primary drainage mechanism. *Drainage Mat* is a two-layer composite consisting of a top layer of Separation Fabric that retains planting media while allowing water to drain freely into a coarse-fiber drainage layer below. *Protection Mat* is placed below this composite mat to protect the underlying root barrier or waterproofing from mechanical damage and to retain water that can be later utilized by the green roof plants by direct root contact and by vapor diffusion. *Capillary Drainage Mat* is a three-layer composite with Capillary Mat at the bottom of the coarse-fiber drainage layer, replacing the protection mat while providing better mechanical and hydraulic properties.

Conservation Technology Geotextile	Mechanical Strength	Water Retention	Capillary Rise	Internal Flow	Cross Flow
Separation Fabrics	low	low	low	low	high
Protection Mat	moderate	moderate	moderate	low	low
Capillary Mat	high	moderate	high	low	low
Water Storage Mat	high	high	moderate	low	low
Drainage Mat	low	low	low	high	high
Capillary Drainage Mat	high	moderate	high	high	low