DRAINAGE MAT

Drainage Mat is a thermally-bonded laminate of two geotextiles. The top layer is a separation fabric with inter-fiber spaces carefully controlled to retain green roof planting media while allowing unrestricted root penetration and water drainage. The lower layer is a coarse-fiber mat with large inter-fiber spaces that provide controlled lateral water flow.

Drainage Mat is optimized for sloped green roofs that require just enough drainage to prevent waterlogged root systems without creating excessive drying. It can be used to partially cover Protection Mat, Capillary Mat, or Water Storage Mat in locations prone to excess water accumulation, such as near roof drains and edges. Its dense structure assures that it will will retain its hydraulic properties under long-term loading. All rolls are electrically scanned for metal debris.

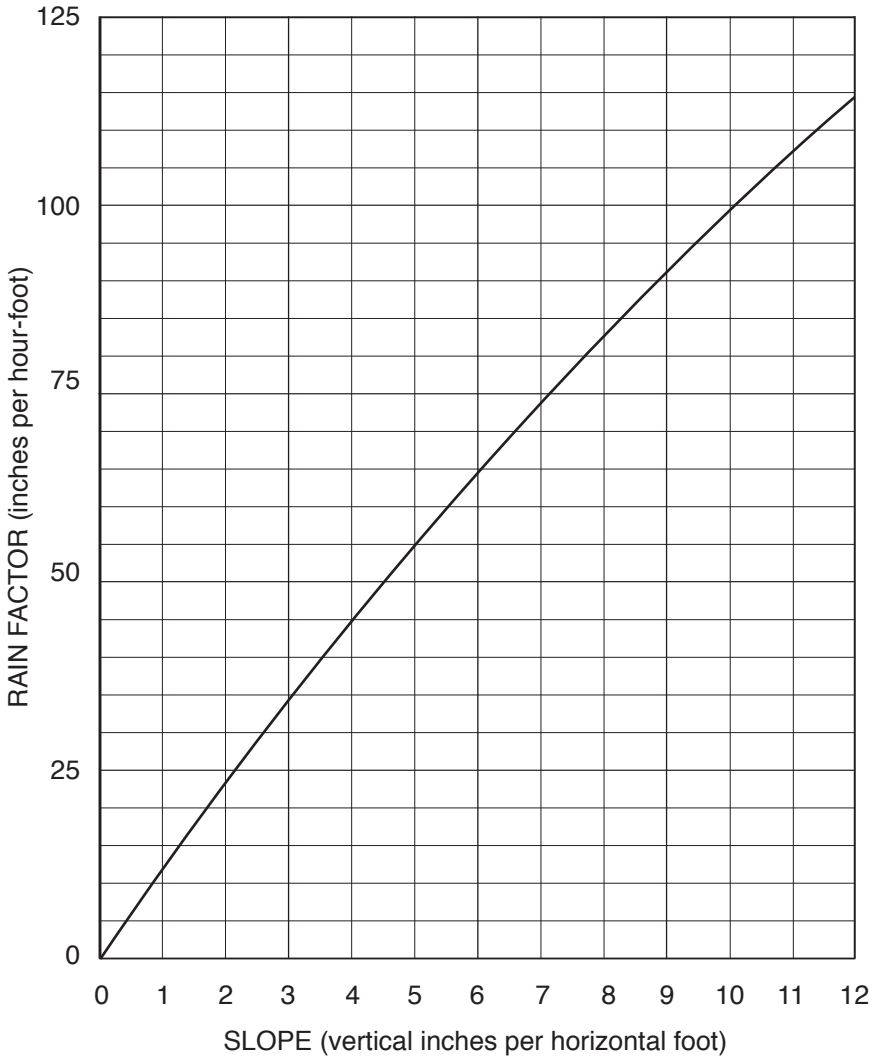
PHYSICAL CHARACTERISTICS

Property	Test Method	US	Metric
Dry Weight (typical)	ASTM D5261	24 oz/yd^2	800 g/m^2
Thickness (typical)	ASTM D5729	5/16 in	8 mm
Water Retention (marv)	ASTM E2398	0.17 gal/ft^2	6.7 l/m^2
Saturated Density (marv)	ASTM E2398	1.5 lb/ft^2	7.5 kg/m^2
Static Puncture CBR (marv)	ASTM D6241	160 lb	720 N
Pin Puncture (marv)	ASTM D4833	20 lb	100 N
Elongation (marv)	ASTM D4632	50%	50%
Grab Tensile (marv)	ASTM D4632	70 lb	330 N
Trapezoidal Tear (marv)	ASTM D4533	30 lb	130 N
Flow Rate, i = 0.02 (250 psf = 12 kpa)	ASTM D4716	0.03 gal/min/ft	0.4 l/min/m
Flow Rate, i = 0.05 (250 psf = 12 kpa)	ASTM D4716	0.08 gal/min/ft	1.0 l/min/m
Flow Rate, i = 0.10 (250 psf = 12 kpa)	ASTM D4716	0.15 gal/min/ft	2.0 l/min/m
Flow Rate, i = 0.25 (250 psf = 12 kpa)	ASTM D4716	0.36 gal/min/ft	4.8 l/min/m
Flow Rate, i = 0.33 (250 psf = 12 kpa)	ASTM D4716	0.47 gal/min/ft	5.8 l/min/m
Flow Rate, i = 0.50 (250 psf = 12 kpa)	ASTM D4716	0.68 gal/min/ft	8.4 l/min/m
Flow Rate, i = 0.75 (250 psf = 12 kpa)	ASTM D4716	0.96 gal/min/ft	11.9 l/min/m
Flow Rate, i = 1.00 (250 psf = 12 kpa)	ASTM D4716	1.20 gal/min/ft	15.7 l/min/m
Roll Dimensions (typical)	-	6 ft x 33.3 ft	1.8 m x 10.2 m
Roll Surface Area (typical)	-	200 ft^2	18.6 m^2
Roll Weight (typical)	-	33 lb	15 kg

(marv = minimum average roll value; allow 10-15% additional material for overlaps)

DRAINAGE MAT HYDRAULIC FLOW CHARACTERISTICS

The following chart can be used to determine the drainage capacity of Drainage Mat. The roof slope is used to determine the "rain factor" which is the rain intensity measured in inches per hour that can flow through a one-foot wide section of the mat. Dividing this number by the length of the roof slope yields the rain intensity falling on each square foot of roof that can drain effectively. For example, if the roof slope is 3:12 the rain factor is slightly less than 35 inches per hour per foot, so if the length along the roof slope measures 25 feet, the mat can effectively drain 35/25 = 1.4 inches per hour. This flow rate is very conservative because it is measured at a compression of 250 lb/sf, roughly ten times the weight of a typical sloped green roof, and it does not account for the substantial water holding capacity of the planting media and capillary mat.



INSTALLATION

All rolls of Drainage Mat or Capillary Drainage Mat are shipped individually wrapped in waterproof plastic bags. Store the rolls in a dry location or under a waterproof tarp.

Unroll either mat in the direction of water flow; then cut with a heavy-duty shears or a utility knife. Optimally, a single sheet of mat should run from the high side of the roof to the low side of the roof. If more than one sheet must be used in this direction, overlap the upper sheet over the lower sheet approximately six inches. Adjacent sheets of mat should also be lapped approximately six inches. Spray with water to prevent uplift during windy conditions. When required, the *Mesh and Cleat Slope Stabilization System* should be laid over the mat with drip irrigation tubing tied to the mesh.