



Between the World  
and The Weather  
Since 1928

# Ram Drain 1241 and Ram Drain 2451

## Drainage and Moisture Retention Mats

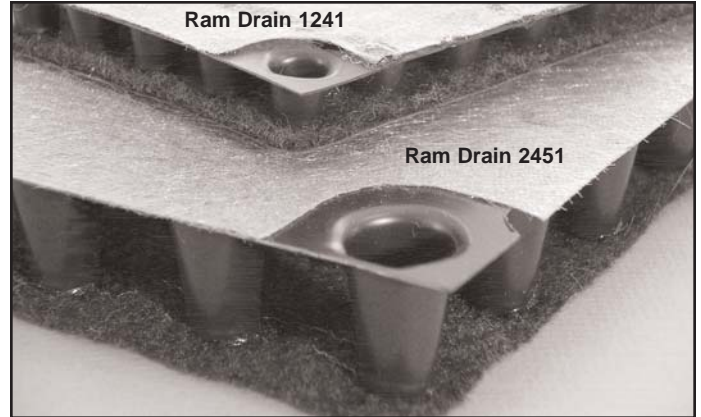
### PRODUCT DESCRIPTION

**Ram Drain 1241** is a composite polystyrene drainage medium with optional moisture retention capabilities, often required for greenroof, plaza deck and planter box applications. It's one-half (1/2) inch high three dimensional core is covered on both sides with a polypropylene geotextile fabric.

With a greenroof configuration, the fabric cover allows excess water to flow from the growing medium into the water storage cups, while preventing the growing medium sentiment from entering. The fabric covering also resists root penetration into the drainage core, insulation and waterproofing membrane. Water retained in the storage cups is held until it is reabsorbed by the vegetation. Excess water is allowed to escape through holes in the top surface of the core and is carried off to the drainage outlets. The water retained will promote plant growth while reducing the chance of root rot due to excessive moisture. Open drainage channels also provide aeration for the plants root system.

The fabric in the bottom side provides extra protection for and compatibility with Ram-Tough membrane systems.

In a plaza deck application, moisture retention is eliminated by placing the mat with the reservoirs cups turn down.



**Ram Drain 2451** is the same design as Ram Drain 1241 except it is one (1) inch thick offering additional water storage capacity and higher drainage flow rates.

### FEATURES

- Water Drainage
- Moisture Storage
- Lightweight
- Resists Root Penetration
- Provides Plant Aeration
- Additional Waterproofing Membrane Protection

### BENEFITS

- Easy to install
- Proven performance
- Cost effective package

### TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	RAM DRAIN 1241	RAM DRAIN 2451
<b><u>Geotextile</u></b>			
Material	N/A	Polypropylene	Polypropylene
Fabric	N/A	Needle-punched non-woven	Needle-punched non-woven
Weight	ASTM D-3776	5.6 oz/ft <sup>2</sup>	5.6 oz/ft <sup>2</sup>
Flow Rate	ASTM D-4491	120 gpm/ft <sup>2</sup>	120 gpm/ft <sup>2</sup>
<b><u>Core Properties</u></b>			
Material	N/A	Polystyrene	Polystyrene
Thickness	N/A	7/16 inch	1 inch
Compressive Strength	ASTM D-1621 (Mod)	15,000 lbs/ft <sup>2</sup>	9500 lbs/ft <sup>2</sup>
Water Storage Capacity	N/A	0.06 gal/ft <sup>2</sup>	0.11 gal/ft <sup>2</sup>
Perforation Open Area	N/A	3.9in <sup>2</sup> /ft <sup>2</sup>	8.7 in <sup>2</sup> /ft <sup>2</sup>
Horizontal Flow			
gradient = 1.0	ASTM D-4491	16 gpm/ft <sup>2</sup>	100 gpm/ft <sup>2</sup>
Horizontal Flow			
gradient = 0.1	ASTM D-4491	6 gpm/ft <sup>2</sup>	21 gpm.ft <sup>2</sup>
<b><u>Geotextile Separator Layer</u></b>			
Material	N/A	Polypropylene	Polypropylene
Fabric	N/A	Needle-punched nonwoven	Needle-punched non-woven
Weight	ASTM D-3776	4 oz/ft <sup>2</sup>	4 oz/ft <sup>2</sup>
<b><u>Dimensions &amp; Weights</u></b>			
Roll Width	N/A	48 inches	36 inches
Length	N/A	50 ft.	100 ft.
Roll weight	N/A	40 lbs	88 lbs.
<b><u>Recycle Content</u></b>			
Post-industrial by Weight	N/A	57%	68%

## APPLICATION GUIDELINES

### Greenroof - Roofscapes®

Starting at the low points, apply Ram Drain 1241 or 2451 water drainage and retention mat over the membrane protection course, with open reservoir cups oriented in the upward position. At the side laps, overlap the fabric and glue or tape two (2) feet on centers over the previously installed material. End laps are installed by pulling back the fabric six (6) inches, nesting the next roll of material into the exposed six (6) inch lap, replacing the six (6) inch fabric lap, taping it in place and proceeding with installation. Temporary ballast may be used to keep drainage course in place until the overburden is installed.

### Plaza Decks

For plaza deck applications, follow the instructions presented above, except the products open reservoir cups should be oriented downward for maximum drainage.

### Planter Boxes

For planter box applications follow the Greenroof - Roofscapes® instructions, starting at the top of the planter walls, at finished grade elevation. Use Ram-Tough 250 as an adhesive on the vertical walls, as necessary.

Carefully backfill by hand as soon as possible

## PRODUCT SAFETY INFORMATION

Ram Drain 1241 and 2451 offer no unusual health or safety risks for a product of this nature. As with any moisture control process, proper clothing and eye protection is important.

For specific information, contact the Barrett Company for a current Material Safety Data Sheet on this product.

The user should not assume that all safety measures are indicated or that other measures may not be required.

### Note

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