



## Thermoplastic Single Ply and Multi-Ply Roofing Systems

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### **FLEX DBR 50 AND DBR 100** **PREFABRICATED DRAINAGE / WATER RETENTION / ROOT** **BARRIER SYSTEM**

#### **Description**

The Flex DBR 50/100 system consists of a high strength, dimpled polymeric sheet. The perforated core has two specific fabrics attached to the top and bottom core layers. The top layer contains a root barrier embodied into the non-woven fabric. Unlike physical barriers that re-direct the root or other chemical barriers that kill root tips, this fabric promotes secondary root branching and stops the root. The bottom fabric layer provides excellent cushioning properties, delivering extra protection to the roofing membrane. The back of the dimples in the core will be the primary water reservoir, while the perforations in the core provide the best drainage system in the industry.

#### **Features**

- High Compressive Strength
- Root Barrier located above insulation
- Manages Storm Water Run-Off
- Does not contain herbicides or pesticides

#### **Uses**

The Flex DBR 50 and DBR 100 are used to provide a moisture mat, water retention, and roof barrier material in a complete Garden Roof System.

The DBR 50 is designed for applications where grasses and small plants with a non-aggressive root system are used. The DBR 100 is designed for application where larger plants with more aggressive root systems requiring greater water retention are to be installed.

## Physical Properties

	<u>Test Method</u>	<u>Flex DBR 50</u>	<u>Flex DBR 100</u>
<b><u>Root Barrier Fabric Properties</u></b>			
Material		Polypropylene	Polypropylene
Fabric		Non woven, needle punched	Non woven, needle punched
Weight	ASTM D3776	5.6 oz./ft <sup>2</sup> , 196 gpm/m <sup>2</sup>	5.6 oz./ft <sup>2</sup> , 196 gpm/m <sup>2</sup>
Root Barrier Coating	US EPA 1812-347	Copper Hydroxide	Copper Hydroxide
Flow Rate	ASTM D4491	120 gpm/ft <sup>2</sup> , 4800 lpm/m <sup>2</sup>	120 gpm/ft <sup>2</sup> , 4800 lpm/m <sup>2</sup>
<b><u>Core Properties</u></b>			
Material		Polystyrene	Polystyrene
Thickness		7/16"	1"
Compressive Strength	ASTM D1621	15,000 lbs/ft <sup>2</sup> , 732 kN/m <sup>2</sup>	9,500 lbs/ft <sup>2</sup> , 460 kN/m <sup>2</sup>
Water Storage Capacity		0.06 gal/ft <sup>2</sup> , 2.4 l/m <sup>2</sup>	0.11 gal/ft <sup>2</sup> , 4.5 l/m <sup>2</sup>
Perforation Open Area		3.9 in <sup>2</sup> /ft <sup>2</sup> , 27,080mm <sup>2</sup> /m <sup>2</sup>	8.7 in <sup>2</sup> /ft <sup>2</sup> , 60,400 mm <sup>2</sup> /m <sup>2</sup>
Horizontal Flow-gradient = 1.0	ASTM D4491	16 gpm/ft <sup>2</sup> , 200 lpm/m <sup>2</sup>	100 gpm/ft <sup>2</sup> , 1240 lpm/m <sup>2</sup>
Horizontal Flow-gradient = 0.1	ASTM D4491	6 gpm/ft <sup>2</sup> , 75 lpm/m <sup>2</sup>	21 gpm/ft <sup>2</sup> , 260 lpm/m <sup>2</sup>
<b><u>Geotextile Separation Layer</u></b>			
Material		Polypropylene	Polypropylene
Fabric		Non woven, needle punched	Non woven, needle punched
Weight	ASTM D3776	4 oz./ft <sup>2</sup> , 136 gm/m <sup>2</sup>	4 oz./ft <sup>2</sup> , 136 gm/m <sup>2</sup>
<b><u>Dimensions &amp; Weights</u></b>			
Roll Width		4 ft., 1.22 m	3 ft., 0.91m
Roll Length		50/100 ft, 15.25/30.5m	50/100 ft, 15.25/30.5m
Roll Weight		40/80 lb, 18/36 kg	44/88 lb, 20/40 kg