

# J-DRain® GRS

## Green Roof Drainage System

**J-DRain GRS** is a pre-assembled drainage composite consisting of a high strength dimpled core and two layers of filter and protection media attached top and bottom. (See Figure 1.) The dimpled core has water retention chambers for storing some of the excess rainwater while allowing excess rainwater to pass through into the roof's collection system. The top filter fabric acts to allow excess water to pass while holding the planting media in place and as a root barrier. The bottom layer of fabric acts as a protection media to the roofing membrane.

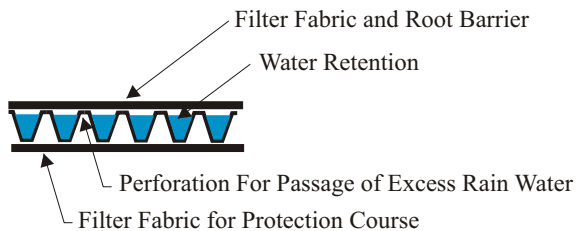


Figure 1. Cross Section

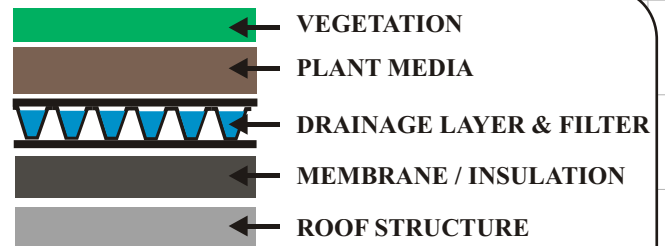


Figure 2. Green Roof Cross Section

### ADVANTAGES OF GREEN ROOFS:

- REDUCES RAINWATER RUN-OFF
- ADDS TO THERMAL INSULATION
- PROTECTS ROOFING FROM UV DEGRADATION
- ADDITIONAL USE OF SPACE
- REDUCES HEAT ISLAND EFFECT
- REDUCES SOUND LEVELS
- ABSORBS CARBON DIOXIDE
- PRODUCES OXYGEN

Be sure to visit our website at <http://www.j-drain.com>

**JDR Enterprises, Inc.**

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### ADVANTAGES OF J-DRain GRS

- Light Weight and easy to handle and install
- High Strength and Crush Resistant
- High Flow Capacity
- Built in Water Retention Chambers
- Low Cost
- Reduces Weight of Total System by Eliminating Sand or Gravel

### APPLICATIONS:

- Intensive Green Roofs which enable standard landscape components or lawns, planting beds, and paving which is supported at roof level. These systems are accessible and normally require high maintenance and irrigation.
- Extensive Green Roofs which are comprised of lightweight layers on top of roof structures and can tolerate the extreme conditions of temperature, wind and drought.

### PHYSICAL PROPERTIES

#### TEST METHOD

#### TYPE OF TEST

#### TYPICAL VALUES

#### *Root Barrier Fabric*

US EPA#1812-347  
ASTM D-5199-99  
ASTM D-3776  
ASTM E-4491

ROOT BARRIER COMPONENT  
THICKNESS (NOMINAL)  
WEIGHT  
COEFFICIENT OF PERMEABILITY

COPPER HYDROXIDE  
0.7 MM  
7.4 G/SQ METER  
5.1 X 10 CM./SEC.

#### *Drainage Core*

ASTM D-1621  
ASTM D-1777  
ASTM D-4716

COMPRESSIVE STRENGTH  
THICKNESS  
FLOW @ 3600 PSF./ HYDRAULIC  
GRADIENT OF 1 FOR 300 HRS.

9500 PSF 460 KN/M  
1.0 IN. 2.54 CM.  
30 GAL/MIN/FT WIDTH

#### *Geotextile*

ASTM D-5261  
ASTM D-4632  
ASTM D-4833

MASS/UNIT AREA  
GRAB TENSILE STRENGTH  
PUNCTURE

4.0 OZ./SQ. YD.  
100 LBS.  
65 LBS.

#### WATER RETENTION

STANDARD DEVIATION

VOLUME-GALLONS/SQ.FT.

1.1 GAL/10 SQ.FT.

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