

**DATA SHEET: BLACKDOWN 12MM DRAINAGE LAYER**  
**PRODUCT CODES: 12DWR 1100**

12DWR 1100 consists of a perforated cusped HDPE (High Density Polyethylene) core with selected geotextiles thermally bonded on each side. It is primarily intended for use under thin soil layers. The core is perforated to allow the excess rainwater to flow into the underside and away through the 12DWR 1100 to the outlets. The upper textile is optimised for drainage performance and the lower textile protects the waterproofing system. It is a major application is in extensive roof garden drainage where 12DWR 1100 provides a lightweight drainage layer.

12DWR 1100 makes extensive use of recycled polymers in its construction.

**Geotextiles**

Type		Non-woven needle punched & heat treated	
Material		Polypropylene	
Mass/Unit Area	(g/m <sup>2</sup> )	120	EN ISO 9864
Breakthrough head	(mm)	0	BS 6906 (3)
Pore size O <sub>90</sub>	(um)	115	EN ISO 12956
CBR puncture resistance	(N)	1 600	EN ISO 12236
Dynamic perforation cone drop	(mm)	32	EN ISO 13433

**Drainage layer**

Hydraulic gradient		10%	3%	1%	
In-plane water flow at 20kPa	(l/m.sec)	1.60	0.80	0.55	EN ISO 12958
Water flow normal to the plane	(l/m <sup>2</sup> .sec)	1.0			
Thickness at 2kPa	(mm)	13.2			EN ISO9863-1
Tensile strength (MD/CD)	(kN/m)	27 / 19			EN ISO 10319
Elongation (MD/CD)	(%)	45 / 40			EN ISO 10319
Water reservoir volume <sup>(7)</sup>	(l/m <sup>2</sup> )	1.5			
Mass/unit area(dry)	(g/m <sup>2</sup> )	1 140			EN ISO 9864
Mass/unit area (saturated)	(g/m <sup>2</sup> )	2 650			EN ISO9864
Compressive strength (unfilled)	(kPa)	250			
Life expectancy	(yrs)	120 years in pH 4 to 9 at 25°C			
Chemical resistance		Excellent resistance to common chemicals			EN 14030
Resistance to microbes		No significant effect			EN 12225
Compatibility		Fully compatible. All components compatible with potable water.			
Health, safety, environment		INERT. No known health hazard. No precautions necessary.			

**Product Dimensions**

Standard roll dimension	1.1m x 50 m
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**Notes**

- (1) The values given are indicative and correspond to nominal results obtained in our laboratories and testing institutes. The above figures have been obtained from statistical interpretation of test results. In line with our policy of continuous improvement the right is reserved to make changes without notice at any time.
- (2) The tolerance on roll length is 1.5% and on roll width is 1.0%
- (3) Non-load bearing walls can be built off 12DWR 1100.
- (4) The hydraulic performance of the dimple face textile does not influence overall product performance.

**Blackdown Greenroofs**

**Address:** 3 Waggon Shed, Flax Drayton Farm, South Petherton, Somerset TA13 5LR

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- (5) Final determination of the suitability of any information is the sole responsibility of the user. BHC will be pleased to discuss the use of this or any other product but responsibility for selection of material and its application in any specific project remains with the user.

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