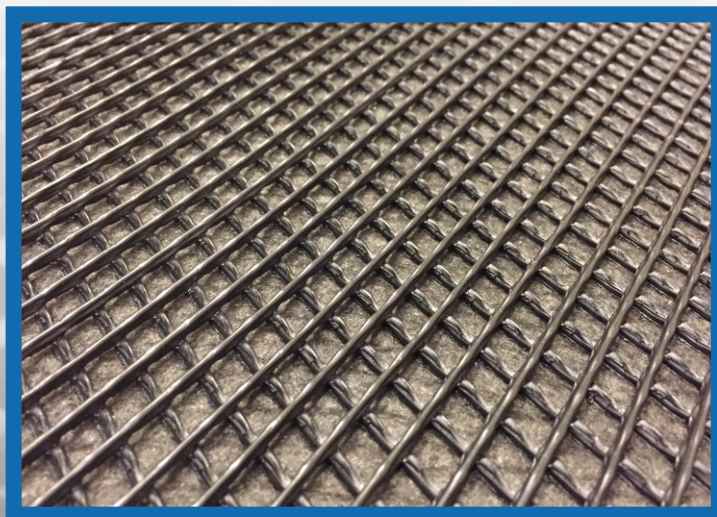




# J•DRAIN<sup>®</sup>

Prefabricated Drainage Composites



## APPLICATIONS

RETAINING WALLS

PLAZA DECKS

PLANTERS & GREENROOFS

UNDER SLABS

BRIDGE ABUTMENTS

## J•DRAIN<sup>®</sup> ES 4000 Series

Meets AASHTO M 288 Requirements

### J•DRAIN ES 4000 Series

For over 30 years, **J•DRAIN** drainage composites have been successfully installed to relieve hydrostatic pressure in building construction, civil engineering, environmental and landscape applications. Eliminating the costly and time-consuming installation of drainage aggregate, **J•DRAIN** drainage composites provide a more efficient, cost effective way to provide sub-surface drainage. The **ES 4000** geonet series are engineered to provide superior performance to meet specific project conditions. The multi-directional flow design allows for a continuous path for water discharge. **ES 4000** is lightweight, easy to install, and has very high compressive strengths.

The **ES 4000** series consists of a heavy duty HDPE geonet drainage core heat fused to a layer of non-woven filter fabric to one side. The geonet drainage core is virtually crush proof, yet flexible enough to conform to irregular surfaces. Due to the crushproof nature, geonet drainage composites can be used in the most extreme cases with heavy loads and/or heavy vehicular traffic. The integrated core and fabric system optimizes drainage channel consistency, minimizing soil particle intrusion for maximum flow capacity, allowing water to freely enter the drainage channel. The **ES 4000** series is engineered for intermediate flow requirements with high soil pressure conditions in vertical and horizontal applications and available with non-woven geotextile filter fabrics meeting AASHTO M288-06 specifications for survivability.

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## ES 4000 Series

### Physical Properties

Property	Test Method	UOM	ES 4030	ES 4040	ES 4060	ES 4080
FABRIC						
Material			Non woven PP	Non woven PP	Non woven PP	Non woven PP
AASHTO M 288	Survivability		-	Class 3	Class 2	Class 1
Grab Tensile Strength	ASTM D 4632	lbs	80	120	160	205
		N	356	534	712	912
Apparent Opening Size	ASTM D 4751	U.S. Sieve	70	70	70	80
		mm	0.212	0.212	0.212	0.18
Flow Rate	ASTM D 4491	gal/min/ft <sup>2</sup>	160	135	110	95
		l/min/m <sup>2</sup>	6519	5500	4481	3870
CBR Puncture Strength	ASTM D 6241	lbs	210	310	410	500
		N	934	1380	1825	2224
Permittivity	ASTM D 4491	sec <sup>-1</sup>	2.2	1.7	1.5	1.4
Grab Tensile Elongation	ASTM D 4632	%	50	50	50	50
UV Resistance	ASTM D 4355	% (@ 500 hrs)	70	70	80	70
CORE						
Thickness	ASTM D 1777	inch	0.25	0.25	0.25	0.25
		mm	6.35	6.35	6.35	6.35
Compression	ASTM D 1621	psf	40,000	40,000	40,000	40,000
		kNm <sup>2</sup>	1915	1915	1915	1915
Flow Rate Hydraulic Gradient = 1 @3,600 psf	ASTM D 4716	gal/min/ft	8.5	8.5	8.5	8.5
		l/min/m	106	106	106	106
Roll Size: 4 foot width x 75 foot length. Specialty roll widths and fabrics require additional lead time and minimum quantity orders.						

The information contained herein is believed by JDR Enterprises, Inc. to be accurate and is offered solely for the customer's consideration, investigation and verification. Determination of suitability for use is the responsibility of the user. JDR's Limitations, Limited Warranty, & Disclaimer along with Standard Terms & Conditions apply. See [www.j-drain.com](http://www.j-drain.com) for more info. **Limitations:** J-DRain is resistant to chemicals in normal soil environments. However, some reagents may affect the performance of J-DRain. A JDR representative should be contacted for further information to determine the suitability of use of J-DRain in unusual soil environments. J-DRain should be limited to its exposure to ultra-violet sunlight. J-DRain should be backfilled or covered within seven days of installation. **Disclaimer:** All information, drawings and specifications are based on the latest published information at the time of printing. JDR reserves the right to make changes due to manufacturing improvements and engineering at any time. All physical properties are minimum average roll values (MARV). Standard variations of 10% in mechanical properties and 15% in hydraulic properties are normal.

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