COLBOND

Enkadrain® 3611R

Replaces Enkadrain *9010* and *9611*

Description

Enkadrain 3611R is one of a new generation of environmentally conscious Enkadrain products. This drainage composite consists of a post-industrial recycled polypropylene drainage core of fused, entangled filaments and a geocomposite fabric bonded to one side. The entangled filaments are molded into a square waffle pattern that maintains the flexible design of other Enkadrain products. This product, because it exceeds 40% post-industrial recycled content, can help contribute up to 2 LEED points when used in conjunction with other recycled content products. Enkadrain 3611R can contribute towards additional LEED points when used with a green roof by reducing stormwater runoff, heat islands, and energy consumption.

Recommended Applications

- Foundation walls
- Green roofs
- Plaza decks
- Retaining walls
- Beneath slabs
- Earth sheltered homes
- Underground parking
- Exterior planters

Features and Benefits

- Excellent durability
- Protects waterproofing during and after backfill
- Conforms to irregular surfaces and corners
- Waffle design creates open flow path — even during backfill
- Continuous flow even under high loads
- Long rolls reduce installation costs by reducing butt seams and eliminating interlocking
- Recycled content polymer contributes towards LEED points
- Increased flow rates over same thickness nylon and HDPE drains
- 3” fabric overlap flap

Technical Data

Physical Properties

Property	English Units	Metric Units
Core Material	*Recycled Polypropylene*	
Thickness	*0.45 in*	*11.43 mm*
Total Weight	*20.5 oz/yd ^{2}*	*695.2 g/m ^{2}*
Core Weight	*16.0 oz/yd ^{2}*	*542.6 g/m ^{2}*
Colbond Compressive Load Test[1]	*>30,000 psf*	*kN/m ^{2} No failure**

[1]Colbond Test Method: ASTM 1621 modified and ASTM D4716
**Failure defined as reaching yield point or no continued measurable flow under stated load*

Flow Rates

Pressure	1.0 Gradient	0.5 Gradient	0.2 Gradient
250 psf	*22.5 gal/min/ft*	*15.5 gal/min/ft*	*9.2 gal/min/ft*
500 psf	*22.0 gal/min/ft*	*15.2 gal/min/ft*	*8.7 gal/min/ft*
1000 psf	*20.7 gal/min/ft*	*14.3 gal/min/ft*	*8.4 gal/min/ft*
2000 psf	*19.0 gal/min/ft*	*13.1 gal/min/ft*	*8.3 gal/min/ft*
3000 psf	*16.0 gal/min/ft*	*11.0 gal/min/ft*	*6.4 gal/min/ft*
3600 psf	*13.0 gal/min/ft*	*8.7 gal/min/ft*	*5.4 gal/min/ft*
5000 psf	*8.05 gal/min/ft*	*5.4 gal/min/ft*	*3.1 gal/min/ft*
8000 psf	*3.2 gal/min/ft*	*2.0 gal/min/ft*	*1.1 gal/min/ft*

Typical flow vs. pressure for vertical applications (ASTM D 4716) Sample Configuration: Plate/Enkadrain/Plate
Values are average of machine direction and cross machine direction test results

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Fabric Properties

Property	English Units	Metric Units	Test Method
Polymer	*Polypropylene*		
Fabric Color	*Black*		
Weight	*4.5 oz/yd ^{2}*	*152.6 g/m ^{2}*	*ASTM D 5261*
Grab Strength MD/CD	*120.0 lbs*	*0.54 kN*	*ASTM D 4632*
Grab Elongation	*50%*	*50%*	*ASTM D 4632*
Trapezoidal Tear	*50.0 lbs*	*0.22 kN*	*ASTM D 4533*
Puncture Strength	*70.0 lbs*	*0.31 kN*	*ASTM D 4833*
AOS (maximum average)	*70 US Sieve*	*0.212 mm*	*ASTM D 4751*
Flow Rate	*120.0 gal/min/ft ^{2}*	*4887 l/sec/m ^{2}*	*ASTM D 4491*
Permittivity	*1.8 sec^{-1}*	*1.8 sec^{-1}*	*ASTM D 4491*

Values are MARV Minimum Average Roll Value

Polymer Properties

Polypropylene has excellent resistance to organic solvents, degreasing agents, acids, and alkalines. It has tensile strength superior to high density polyethylene. It is has a low moisture absorption rate, is resistant to staining, and is very light weight.

Packaging

Property	English Units	Metric Units
Product ID	*3611-101-0001*	
Core Width	*39.0 in*	*99.1 cm*
Length	*100.0 ft*	*30.5 m*
Area	*36.0 yd ^{2}*	*30.1 m ^{2}*
Area	*324.0 ft ^{2}*	*30.1 m ^{2}*
Roll Diameter	*27.0 in*	*68.6 cm*
Gross Roll Weight	*57.0 lbs*	*25.8 kg*