

product **Geolon® HP-Series Woven Polypropylene Geotextiles** for Stabilization and Soil Reinforcement Applications

Mirafi® Construction Products offers a wide range of woven geotextiles for stabilization and soil reinforcement applications. These geotextiles are cost-effective reinforcement elements which improve and enhance modern construction techniques in a variety of civil engineering applications.

PRODUCT DESCRIPTION

Geolon® HP-Series products are woven geotextiles comprised of high tenacity polypropylene yarns. HP-Series Woven Polypropylene Geotextiles yield ultimate tensile strengths up to 300kN/m (20559 lbs/ft) (machine direction) per ASTM D 4595. Geolon® HP-Series products combine the properties of high tensile strength and modulus and high confinement with their ability to act as a filter and separator.

FEATURES AND BENEFITS

- Strength. Higher tensile strength at 2% and 5% than any comparable stabilization product.
- Flow. Uniform openings provide the same filtration and flow characteristics as that of a fine to coarse sand layer.
- Soil Interaction. Excellent soil confinement resulting in greater load distribution.
- Seams. Panels can be sewn together in

the factory or field, providing cross-roll direction strength to facilitate installation and providing reinforcement strength.

- Cost. Woven reinforcement geotextiles provide low cost tensile strength for reinforced soil structures.

APPLICATIONS

Because of their flexibility and versatility, woven geotextiles are used in a variety of applications, including embankments on soft foundations, retaining walls, steepened slopes, and soil stabilization for road and rail construction. Environmental applications include liner support, voids bridging, and reinforcement over soft, hazardous pond closures. For any application where long term design of earth reinforcement structures are involved, Geolon® HP-Series Woven Polypropylene Geotextiles are a logical choice.

INSTALLATION GUIDELINES*

Site Preparation

Many conditions affect the degree of site preparation required to provide a working surface compatible with the selected geotextile including:

- Foundation subgrade strength and its

relation to equipment mobility;

- The presence of a vegetative root mat;
- The need for removal of large trees or other obstacles.

Direct placement of the geotextile on the prepared site is usually preferable. Generally, it is advisable to leave vegetative cover such as grass and weeds in place to provide a support matting for construction activities.

Geotextile Fabrication and Placement Procedures

Placement of geotextiles can be labor intensive process. This time consuming procedure can be simplified by prefabricating geotextile panels before field placement and using experienced field installation and sewing crews.

Installation of the geotextile must conform to the lines and grades as drawn by the engineer. This may require large roll or panel placement, using manual positioning or equipment-assisted deployment.

* These guidelines serve as a general basis for installation. Detailed instructions are available from your Mirafi representative.



Geolon® HP-Series Polypropylene Woven Geotextile



Geolon® HP-Series Geotextile used in pond closure application



product Geolon® HP-Series Woven Polypropylene Geotextiles for Stabilization and Soil Reinforcement Applications

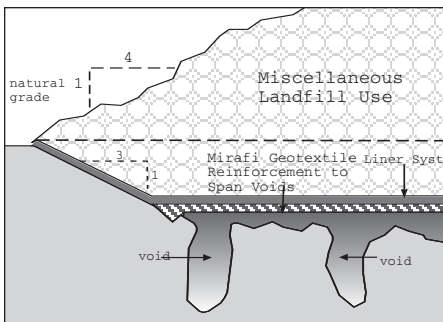
Property	Test Method	Units	HP370	HP470	HP565	HP570	HP665	HP670	HP770	PP200/40	PP300/40
MECHANICAL PROPERTIES											
Wide Width Tensile Strength											
Strength @ Ultimate (MD)	ASTM D 4595	kN/m (lbs/ft)	47.3 (3240)	52.5 (3600)	61.3 (4200)	70.0 (4800)	70.0 (4800)	91.1 (6240)	105.1 (7200)	200 (13706)	300 (20559)
Strength @ Ultimate (CMD)	ASTM D 4595	kN/m (lbs/ft)	39.4 (2700)	52.5 (3600)	70.0 (4800)	70.0 (4800)	96.3 (6600)	70.0 (4800)	70.1 (4800)	40.0 (2741)	40.0 (2741)
Strength @ 2% Strain (MD)	ASTM D 4595	kN/m (lbs/ft)	7.9 (540)	13.1 (900)	7.9 (540)	14.0 (960)	n/a	n/a	n/a	n/a	n/a
Strength @ 5% Strain (MD)	ASTM D 4595	kN/m (lbs/ft)	19.8 (1356)	26.3 (1800)	22.8 (1560)	35.0 (2400)	17.5 (1200)	39.4 (2700)	43.8 (3000)	80 (5483)	90 (6168)
Strength @ 10% Strain (MD)	ASTM D 4595	kN/m (lbs/ft)	35.0 (2400)	52.5 (3600)	61.3 (4200)	70.0 (4800)	43.8 (3000)	78.8 (5400)	96.4 (6600)	n/a	n/a
Wide Width Factory Seam Strength	ASTM D 4884	kN/m (lbs/ft)	24.6 (1688)	26.3 (1800)	35.0 (2400)	43.8 (3000)	52.5 (3600)	43.8 (3000)	43.8 (3000)	20 (1370)	20 (1370)

HYDRAULIC PROPERTIES											
Apparent Opening Size	ASTM D 4751	US Sieve mm	30	20	40	30	40	20	30	30	30
Permittivity	ASTM D 4491	sec ⁻¹	0.600	0.850	0.425	0.600	0.425	0.850	0.600	0.600	0.600

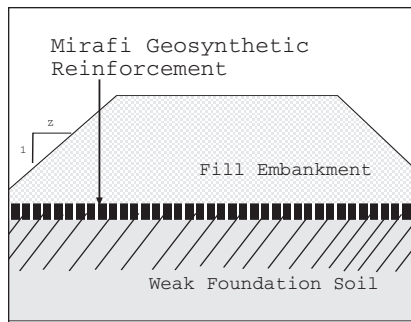
Packaging	Units	HP370	HP470	HP565	HP570	HP665	HP670	HP770	PP200/40	PP300/40
Roll Width	m (ft)	4.5 (15.0)	4.5 (15.0)	4.5 (15.0)	4.5 (15.0)	4.5 (15.0)	4.5 (15.0)	3.8 (12.5)	5.2 (17)	5 (16.4)
Roll Length	m (ft)	91 (300)	91 (300)	91 (300)	91 (300)	91 (300)	91 (300)	91 (300)	200 (656)	200 (656)
Est. Gross Weight	kg (lbs)	121 (266)	164 (361)	202 (445)	215 (475)	253 (558)	230 (508)	200 (442)	620 (1370)	790 (1745)
Area	m ² (yd ²)	418 (500)	418 (500)	418 (500)	418 (500)	418 (500)	418 (500)	349 (417)	570 (16.8)	750 (22.1)

* NOTE: All Mechanical Properties and Hydraulic Properties shown are Minimum Average Roll Values (MARV).

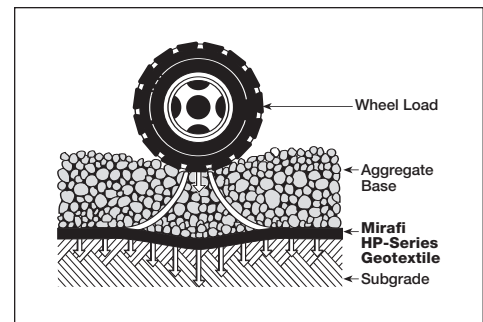
Landfill Liner Reinforcement



Embankments over Soft Soils



Subgrade Load Distribution



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WARRANTY

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