

## Mirafi® HP-Series Woven Polypropylene Geotextiles for Stabilization and Soil Reinforcement Applications

TenCate Geosynthetics develops and produces materials that function to increase performance, reduce costs and deliver measurable results by working with our customers to provide advanced solutions.

The Difference Mirafi® HP-Series High-Performance Geotextiles Make:

- **Reinforcement Strength.** Higher tensile modulus properties per ASTM D4595 than any comparable stabilization product.
- **Separation and Filtration.** Unique geotextile weave provides excellent separation factors with controlled filtration and drainage. Uniform openings provide same filtration and flow characteristics as that of a fine to coarse sand layer.
- **Durability.** Superior damage resistance for moderate to severe stress installations.
- **Soil Interaction.** Superior soil confinement resulting in greater load distribution.
- **Roll Sizes.** Mirafi® HP geotextiles come in multiple roll sizes to fit your project requirements.
- **Seams.** Panels can be sewn together in the factory or field, providing cross-roll direction strength to facilitate installation.

### APPLICATIONS

When high performance, flexibility and versatility are necessary, Mirafi® HP geotextiles make the difference for varying application needs including: base course reinforcement and subgrade restraint for road and railway construction; embankment stabilization on soft foundations; reinforcement for mechanically stabilized earth (MSE) structures; liner support, voids bridging, reinforcement over soft hazardous pond closures and other environmental market applications.

### INSTALLATION GUIDELINES\*

#### Geotextile Placement

Place the geotextile directly on the prepared site. It is advisable to leave vegetative cover such as grass and weeds in place to provide a support matting for construction activities. The geotextile should be rolled out flat and tight with no wrinkles or folds. The rolls should be oriented as shown on plans to insure the principal strength direction of the material is placed in the correct orientation. Adjacent rolls should be overlapped or seamed as a function of subgrade strength (CBR).

Prior to fill placement, the Mirafi® HP geotextile should be held in place using suitable means such as pins, piles of soil, etc. so that it does not move around during fill placement.



Mirafi® HP-Series High-Performance Geotextile

### Fill Placement

Fill should be placed directly over the Mirafi® HP geotextile in 8in (20cm) to 12in (30cm) loose lifts. For very weak subgrades, 18in (40cm) lifts or thicker lifts may be required to stabilize the subgrade, as directed by the engineer.

Most rubber-tired vehicles can be driven at slow speeds, less than 10mph (16km/h) and in straight paths over the exposed geotextile without causing damage to the geotextile. Sudden braking and sharp turning should be avoided. Tracked construction equipment should not be operated directly upon the geotextile. A minimum fill soil thickness of 6in (15cm) is required prior to operation of tracked vehicles over the geotextile. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and damaging the geotextile.

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



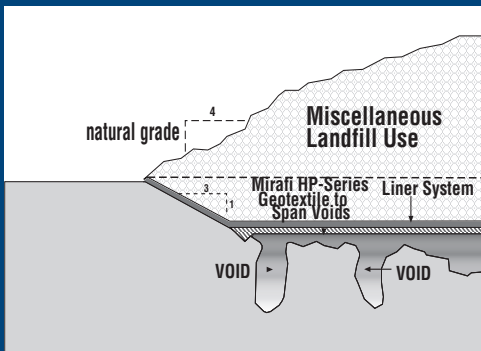
# Mirafi® HP-Series Woven Polypropylene Geotextiles

## for Stabilization and Soil Reinforcement Applications

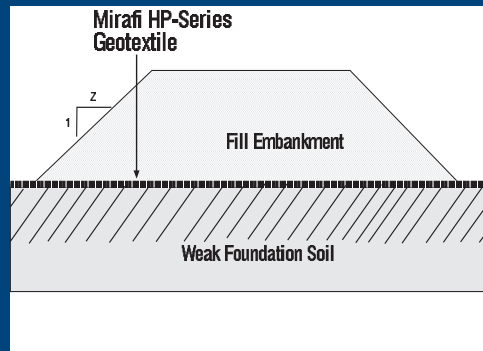
Mechanical Properties	Test Method	Units	HP270	HP370	HP570	HP665	HP770	HP770PET	
<b>Wide-Width Tensile Strength</b>			<b>Minimum Average Roll Value</b>						
@ Ultimate (MD)	ASTM D4595	lbs/ft/(kN/m)	2640(38.5)	3600(52.5)	4800(70.0)	5450(78.8)	7200(105.1)	600(105.1)	
@ Ultimate (CD)	ASTM D4595	lbs/ft/(kN/m)	2460(35.9)	3240(47.3)	4800(70.0)	7500(109.4)	5760(84.0)	800(140.1)	
@ 5% Strain (MD)	ASTM D4595	lbs/ft/(kN/m)	1272(18.6)	1500(21.9)	2400(35.0)	1200(17.5)	3600(52.5)	300(52.5)	
@ 5% Strain (CD)	ASTM D4595	lbs/ft/(kN/m)	1440(21.0)	1560(22.8)	3000(43.8)	4200(61.3)	3600(52.5)	350(61.3)	
<b>Hydraulic Properties</b>			<b>Minimum Roll Value</b>						
Flow Rate	ASTM D4491	gal/min/ft <sup>2</sup>	40	40	30	20	65	55	
		(l/min/m <sup>2</sup> )	(1630)	(1630)	(1222)	(815)	(2648)	(2241)	
Permittivity	ASTM D4491	sec	0.60	0.90	0.50	0.26	0.90	0.70	
			<b>Maximum Opening Size</b>						
Apparent Opening Size	ASTM D4751	US Sieve(mm)	30(0.60)	40(0.425)	30(0.60)	40(0.425)	20(0.85)	30(0.60)	
<b>Packaging</b>			<b>Units</b>	<b>HP270</b>	<b>HP370</b>	<b>HP570</b>	<b>HP665</b>	<b>HP770</b>	<b>HP770PET</b>
Roll Width		ft(m)	15(4.5)	15(4.5)	15(4.5)	15(4.5)	15(4.5)	15(4.5)	
Roll Length		ft(m)	300(91)	300(91)	300(91)	300(91)	300(91)	300(91)	
Area		yd <sup>2</sup> (m <sup>2</sup> )	500(418)	500(418)	500(418)	500(418)	500(418)	500(418)	

<sup>1</sup> Based on Third Party Testing

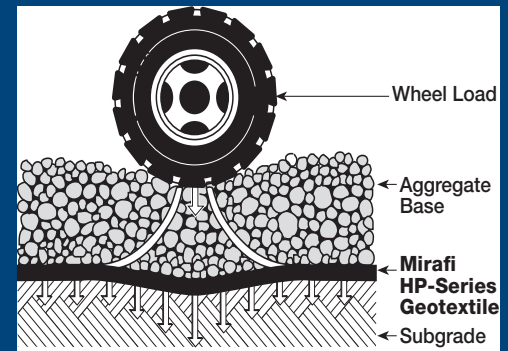
### Mirafi® HP-Series Woven Geosynthetics



**Landfill Liner Reinforcement**



**Embankments Over Soft Soils**



**Subgrade Load Distribution**

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