

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

TenCate™ develops and produces materials that deliver increased performance, reduce costs and measurable results when working with our customers to provide advanced solutions utilizing Mirafi® HP geotextiles that make a difference.

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

- **Reinforcement Strength.** Higher tensile modulus properties per ASTM D 4595 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

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. 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).

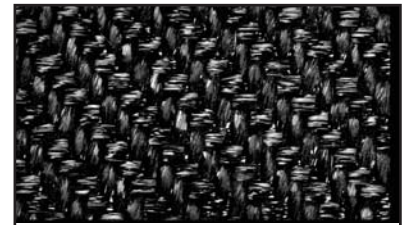
Prior to fill placement, the Mirafi® HP geotextile should be held in place using suitable means such as pins, piles of soil, etc. so that it does not move around during fill placement.

Fill Placement

Fill should be placed directly over the Mirafi® HP geotextile in 20cm (8in) to 30cm (12in) loose lifts. For very weak subgrades, 45cm (18in) 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 16km/h (10mph) 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 15cm (6in) 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 High-Performance Geotextile

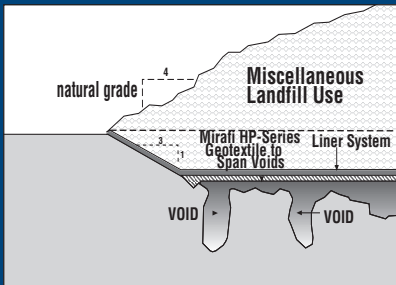


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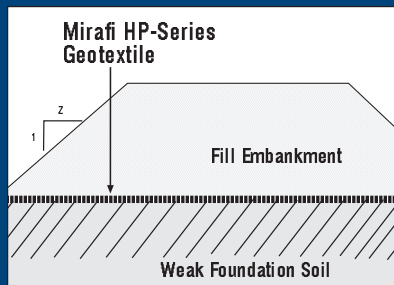
| Property | Test Method | Units | HP270 | HP370 | HP565 | HP570 | HP665 | HP770 | PP200 | PP300 |
|---|-----------------------------------|-------------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| Mechanical Properties | | | | | | | | | | |
| Wide Width Tensile Strength | | | | | | | | | | |
| Strength @ Ultimate (MD) | ASTM D 4595 | kN/m (lbs/ft) | 38.5 (2640) | 47.3 (3240) | 61.3 (4200) | 70.0 (4800) | 70.0 (4800) | 105.1 (7200) | 200 (13706) | 300 (20559) |
| Strength @ Ultimate (CD) | ASTM D 4595 | kN/m (lbs/ft) | 35.9 (2460) | 39.4 (2700) | 70.0 (4800) | 70.0 (4800) | 96.3 (6600) | 70.1 (4800) | 40.0 (2741) | 40.0 (2741) |
| Strength @ 2% Strain (MD) | ASTM D 4595 | kN/m (lbs/ft) | 7.0 (480) | 7.9 (540) | 7.9 (540) | 14.0 (960) | 4.4 (300) | 16.6 (1140) | 25 (1713) | n/a |
| Strength @ 2% Strain (CD) | ASTM D 4595 | kN/m (lbs/ft) | 8.6 (588) | 7.9 (540) | 19.3 (1320) | 19.3 (1320) | 25.4 (1740) | 21.0 (1440) | n/a | n/a |
| Strength @ 5% Strain (MD) | ASTM D 4595 | kN/m (lbs/ft) | 17.7 (1212) | 19.8 (1356) | 22.8 (1560) | 35.0 (2400) | 17.5 (1200) | 52.5 (3600) | 80.0 (5483) | 100 (6853) |
| Strength @ 5% Strain (CD) | ASTM D 4595 | kN/m (lbs/ft) | 19.8 (1356) | 22.8 (1560) | 35.0 (2400) | 38.0 (2604) | 61.3 (4200) | 43.8 (3000) | n/a | n/a |
| Wide Width Factory Seam Strength | ASTM D 4884 | kN/m (lbs/ft) | 18.4 (1250) | 24.6 (1688) | 35.0 (2400) | 43.8 (3000) | 52.5 (3600) | 43.8 (3000) | 20.0 (1370) | 20.0 (1370) |
| HYDRAULIC PROPERTIES | | | | | | | | | | |
| Apparent Opening Size | ASTM D 4751 | US Sieve mm | 30 | 30 | 40 | 30 | 40 | 30 | 30 | 30 |
| Permittivity | ASTM D 4491 | sec ⁻¹ | 0.600 | 0.600 | 0.425 | 0.600 | 0.425 | 0.600 | 0.600 | 0.600 |
| Packaging | | | | | | | | | | |
| Roll Width | m (ft) | 4.0 (13.1) | 4.5 (15.0) | 4.5 (15.0) | 4.5 (15.0) | 4.5 (15.0) | 4.5 (15.0) | 5.2 (17) | 5 (16.4) | |
| Roll Length | m (ft) | 50 (164) | 91 (300) | 91 (300) | 91 (300) | 91 (300) | 91 (300) | 200 (656) | 200 (656) | |
| Est. Gross Weight | kg (lbs) | 46 (102) | 121 (266) | 202 (445) | 215 (475) | 253 (558) | 242 (534) | 620 (1370) | 790 (1745) | |
| Area | m ² (yd ²) | 201 (239) | 418 (500) | 418 (500) | 418 (500) | 418 (500) | 418 (500) | 1040 (1239) | 1000 (1195) | |

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

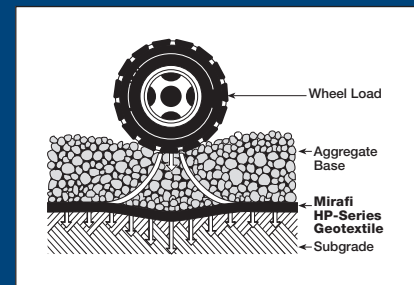
Mirafi® HP-Series Woven Polypropylene Geotextiles



Landfill Liner Reinforcement



Embankments Over Soft Soils



Subgrade Load Distribution

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