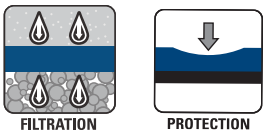
TENCATE Mirafi®



Mirafi® S-Series Nonwoven Polypropylene Geotextiles

for geomembrane liner protection, landfill gas collection, and landfill drainage systems

Mirafi® S-Series Nonwoven Geotextiles

TenCate® 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® S-Series Nonwoven Geotextiles Make:

- Construction. Mirafi® S-Series polypropylene nonwoven geotextiles easily conform to the ground or trench surface for trouble-free installation.
- Strength. Mirafi® S-Series geotextiles withstand installation stresses with high puncture and tear resistance.
- Drainage. High permittivity properties provide high water flow rates while providing excellent soil retention.
- Environmental. Mirafi® S-Series geotextiles are chemically stable in a wide range of aggressive environments.
- Cost Effective. Mirafi® S-Series geotextiles provide economical solutions to many civil engineering applications including a cost-effective alternative to graded-aggregate filters.

APPLICATIONS

Mirafi® S-Series nonwoven geotextiles are used in a wide variety of applications in the environmental market. These include separation, filtration, and protection applications.

Mirafi® S-Series nonwovens are used in critical subsurface drainage systems, soil separation, permanent erosion control, HDPE and other geomembranes in landfill construction. These geotextiles provide the required puncture strength and abrasion resistance to withstand installation and application stresses to create an effective long-term solution. Other applications for Mirafi® S-Series nonwovens in landfill applications include leachate collection/removal systems and for gas collection and venting systems.

Nonwoven geotextiles play a critical role in the collection of liquids in waste containment systems. The nonwoven geotextiles prevent clogging of the collection pipes and drainage aggregates. The successful removal of these liquids is critical to the performance of the landfill site. Mirafi® S-Series geotextiles assist in maintaining an outlet for gases to escape from below the liner systems. Gases may also travel within the nonwoven fabrics laterally until it reaches a vent. For these collection systems to be effective, they must have a properly designed protective filter. Mirafi® S-Series Nonwoven Geotextiles allow designers flexibility in finding an economic source of a specific aggregate gradation and assuring that the in-place aggregate provides effective filter performance.

INSTALLATION GUIDELINES*

Mirafi® S-Series should be handled and deployed in a way that prevents damage to the geotextile. The subgrade surface should be even and free of debris of any kind. Adjacent panels of Mirafi® S Series geotextile shall be overlapped, sewn or heat-seamed unless another method of seaming is specified by the engineer. It is important that overlapped panels of nonwoven geotextile be continuously joined to prevent any migration of soil through the overlaps. Overlap requirements for Mirafi® S-Series geotextiles should be specified by the project engineer or agency or follow the most current AASHTO M288 geotextile installation guidelines in absence of project specifications. In windy conditions, the outside edges of deployed panels of Mirafi® S-Series geotextile should be weighted down with sandbags or an equivalent manner as directed by the project engineer or agency. The sandbags should remain in place until the adjacent geotextile panel is fastened or until an overlying layer of material is placed.

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

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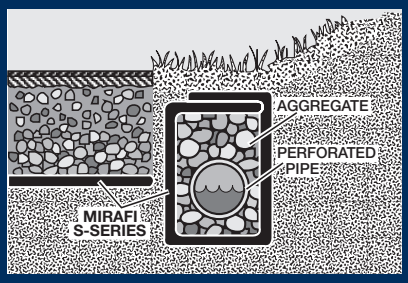
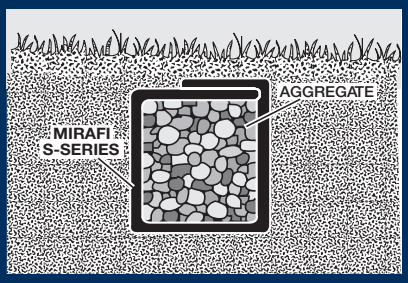
Property / Test Method	Units	S600	S800	S1000	S1200	S1600
MECHANICAL PROPERTIES						
Weight	oz/yd²	6	8	10	12	16
ASTM D5261	(g/m²)	(203)	(271)	(339)	(407)	(542)
Thickness	mils	80	90	115	130	175
ASTN D5199	(mm)	(2.0)	(2.3)	(2.9)	(3.3)	(4.4)
Grab Tensile Strength	lbs	170	230	270	320	425
ASTM D4632	(N)	(757)	(1024)	(1202)	(1424)	(1891)
Grab Tensile Elongation	%	50	50	50	50	50
ASTM D4632						
Trapezoid Tear Strength	lbs	70	95	105	125	155
ASTM D4533	(N)	(312)	(423)	(467)	(556)	(690)
CBR Puncture Strength	lbs	450	600	725	900	1200
ASTM D6241	(N)	(2003)	(2670)	(3226)	(4005)	(5340)
UV Resistance after 500 hrs.	% strength	80	80	80	80	80
ASTM D4355						
HYDRAULIC PROPERTIES						
Apparent Opening Size (AOS)	US Sieve	80	100	100	100	100
ASTM D4751	(mm)	(0.18)	(0.15)	(0.15)	(0.15)	(0.15)
Permittivity	sec^{-1}	1.5	1.4	1.2	0.9	0.7
ASTM D4491						
Flow Rate	gal/min/ft²	110	110	85	65	50
ASTM D4491	(l/min/m²)	(4481)	(4481)	(3463)	(2648)	(2037)
Packaging						
Roll Width	ft (m)	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)
Area	yd² (m²)	500 (418)	500 (418)	500 (418)	500 (418)	500 (418)

Values and methods could change without notice

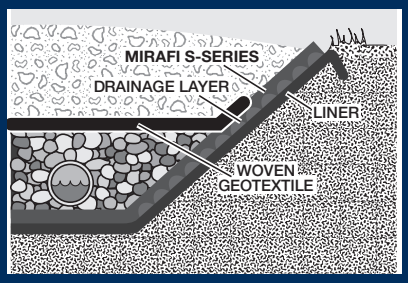
Mirafi® S-Series Nonwoven Geotextiles



Cut-off/Interceptor Drain



French Drain Without Pipe



Liner Protection Within a Landfill

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ISO 9001 FM 61026

TENCATE materials that make a difference