



Mirafi® 1450BB

Nonwoven Cementitious Bond Breaker For Unbonded Concrete Overlays

OUR COMPANY

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.

OUR PRODUCT

As pavement construction costs continue to escalate, the need to have alternative solutions to today's pavement rehabilitation solutions continues to drive the need for innovation. TenCate Geosynthetics has developed the solution. Our nonwoven cementitious bond breaker, Mirafi® 1450BB for unbonded concrete overlays will provide the alternative solution to traditional asphalt bond breaker separation layers. Recognizing the need for field constructability and performance, Mirafi® 1450BB bond breaker delivers these key features at significant cost savings.

Used in Germany for well over 25 years, similar nonwovens have had tremendous success in providing the cementitious bond breaker in new unbonded concrete overlay applications. In addition, reflective cracking has also been mitigated by the use of the bond breaker fabrics. The use of Mirafi® 1450BB also eliminates the need for notching the base pavement section, thus saving on additional labor and equipment costs.

The Difference Mirafi® 1450BB Nonwoven Bond Breaker Makes:

- Can be used on deteriorated pavements showing signs of rutting, fatigue cracking, D-cracking and pavements that have been subjected to Alkali Silica Reaction (ASR).
- Results in faster installation over traditional asphalt bond breakers.
- Reduces cost on materials over traditional hot mix layer.
- Physical composition of the material promotes water drainage between pavement layers, channeling water away that infiltrates into pavement.
- Mitigates reflective cracking, promoting longer lasting pavement.

OUR APPLICATIONS

Mirafi® 1450BB meets Federal Highway Administration (FHWA) specifications for nonwoven interlayers for separating cementitious pavement layers. It is specifically designed as a separation layer for unbonded concrete overlays in lieu of hot mix asphalt separation layers. Whenever concrete pavement overlays are considered, the choice is Mirafi® 1450BB nonwoven as the separation layer between the new and old pavement section.



Mirafi® 1450BB Nonwoven Bond Breaker

Mirafi® 1450BB nonwoven bond breaker is ideal for:

- Highways
- Urban Streets
- Airports
- Parking Lots
- Shopping Centers

OUR PROCESS

Mirafi® 1450BB bond breaker is a needle-punched nonwoven interlayer composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position for use as an interlayer for separating cementitious pavement layers. Mirafi® 1450BB bond breaker is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

OUR SERVICE

TenCate offers complete application technical assistance. Our comprehensive service includes assistance during the design, specification development and construction process. TenCate makes the difference.



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Technical Data

Mechanical Properties	Test Method	Unit	Roll Value
Weight ¹	ASTM D5261	oz/yd ² (g/m ²)	14.0 (475)
Thickness Under Load	ASTM D5199		
0.29 psi (2 kPa) ¹		mils (mm)	118 (3.0)
2.9 psi (20 kPa) ¹		mils (mm)	98 (2.5)
29 psi (200 kPa) ¹		mils (mm)	39 (1.0)
Wide Width Tensile Strength ²	ASTM D4595	lbs/ft (kN/m)	685 (10)
Wide Width Elongation ³	ASTM D4595	%	130
Water Permeability in normal direction under load	ASTM D5493		
2.9 psi (20 kPa) ¹		m/s	1 x 10 ⁻⁴
In-plane Water Permeability	ASTM D6574		
2.9 psi (20 kPa) ²		m/s	5 x 10 ⁻⁴
29 psi (200 kPa) ²		m/s	2 x 10 ⁻⁴
Alkali Resistance ¹	EN 13249	%	96
UV Resistance (at 500 hours) ¹	ASTM D4355	% strength retained	70

¹ Typical

² Minimum

³ Maximum

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