

# Geotex

Nonwoven high performance geotextiles



## Description

Nonwoven geotextile made from staple fibers that are mechanically bonded by a needle punching process to produce a dimensionally stable network. The fibers used are 100% virgin white polyester, ultra-violet resistant with 256°C melting point.

## Applications

Geotex is used in road and railway soil stabilization, waterways and seashore erosion control, asphalt pavement overlay crack relief, subsurface drainage systems, waterproofing membrane protection, landfill, landscaping, etc.

**Separation** between two dissimilar materials so that the integrity and functioning of both materials can remain intact or be improved.

**Filtration** by permitting water flow across the plane of the geotextile while retaining fine soil particles.

**Transmission** by providing water drainage and gas venting within the plane of the geotextile.

**Sealing** when impregnated with asphalt or resin to act as a moisture barrier.

**Stress Absorption** in pavement overlay when impregnated with asphalt.

**Protection** of geomembrane against puncture by absorbing the point stresses.

## Performance Properties

1) **Hydraulic Properties** include opening size, permeability, and transmissivity. For optimum filtration, the geotextile is required to meet two seemingly conflicting requirements: the geotextile pore spaces must be small enough to retain soil particles while also being large enough to permit relatively unimpeded water flow. Geotex meet this requirement and have exceptionally high filtration properties due to the needle punching process, which produces a large number of small holes in the fabric structure.

This process provides Geotex with superior filtration properties, offering a unique combination of high permeability that allows unimpeded flow of water across the fabric whilst maintaining a low opening size to retain the fine soil particles without becoming clogged over time.

2) **Survivability Properties** refer to the ability of the geotextile to withstand the installation stresses and to perform as intended in the design. The survivability properties include puncture resistance, dynamic puncture, CBR puncture and Mullen burst strengths. Geotex due to its high elongation property, are inherently more resistant to installation damage than stiff low elongation fabrics.

The high elongation property of Geotex allows the fabric to adapt to the uneven contour of the matrix and transmit the installation stresses, unlike stiff geotextile fabrics with low elongation that tend to carry the installation loads and hence are required to meet a set of higher strength values compared with high elongation geotextiles. The geotextile fabric in the tensile and grab tests is stressed in a linear direction along its plane, and hence these index test values need necessarily be considered in conjunction with elongation values.

## Biological and Chemical Resistance

Geotex is non-biodegradable, and have excellent resistance to chemicals and salts normally present in the soil. Geotex is unaffected by prolonged contact with common organic solvents such as gasoline and diesel.

## Exposure to Sunlight

Geotex have excellent UV resistance and exhibit strength retention of 70% on test for weathering resistance to EN 12224. Geotex is delivered in black PE wrap for protection against UV-rays during transit and storage. The recommended maximum time of exposure to direct sunlight is 15 days.

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Properties:	Unit	A181	A201	A221	A241	A301	A381	A401	A451	A501	A601	A701
Tensile strength CD: EN ISO 10319	kN/m	2.7	4.0	5.4	6.3	9.9	15.3	17.0	22.0	26.4	32.3	38.4
Tensile strength: EN ISO 10319	kN/m	2.4	3.6	4.5	5.4	8.2	10.2	11.2	12.8	14.6	18.0	20.4
Elongation CD/MD: EN ISO 10319	%	60 / 50	60 / 50	60 / 50	60 / 50	60 / 50	60 / 50	55 / 60	55 / 60	55 / 60	55 / 60	55 / 60
CBR puncture strength: EN ISO 12236	N	525	675	880	1035	1530	2160	2380	2810	3230	3910	4760
Dynamic cone drop: EN ISO 13433	mm	34	32	30	27	23	16	14	12	10	8	5
Permeability: EN ISO 11058	10 <sup>-3</sup> ms <sup>-1</sup>	100	95	90	80	75	60	55	53	50	40	30
Flow rate: EN ISO 11058	l/m <sup>2</sup> /s	100	95	90	80	75	60	55	53	50	45	30
Opening size (O <sub>90</sub> ): EN ISO 12956	microns	106	106	106	100	90	75	75	70	70	67	65
Thickness @ 2kPa: EN ISO 9863-1	mm	1.3	1.4	1.6	1.8	2.3	2.7	2.8	3.1	3.4	4.0	4.6
Mass per unit area: EN ISO 9864	g/ m <sup>2</sup>	80	100	120	140	200	280	300	350	400	500	600
Roll width: nominal	m	3	3	3	3	3	3	3	3	3	3	3
Roll length: nominal	m	100	100	100	100	100	100	100	100	100	100	100

\* Other grades are available upon request.

\*Values reported in the above table are the average results obtained in the laboratory and are subject to manufacturing tolerances.

**Note:**

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.

