

BITUTEX NONWOVEN GEOTEXTILES

TECHNICAL DATA

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Properties	Test Method	Unit	B100	B120	B140	B180	B200	B230	B250	B280	B300	B350	B400	B450	B500	B600	B800	B1000
Thickness (2kN/m ²)	ASTM-D-5199	mm	1.4	1.6	1.8	2.2	2.5	2.6	2.7	3.0	3.2	3.5	3.8	4.2	4.7	5.2	7.0	8.5
Mass Per Unit Area	ASTM-D-5261	g/m ²	100	120	140	180	200	230	250	280	300	350	400	450	500	600	800	1000
Roll Size (W x L)	-	m	3 x 100	3 x 100	3 x 100	3 x 100	3 x 100	3 x 100	3 x 100	3 x 100	3 x 100	3 x 100	3 x 100	3 x 100	3 x 100	3 x 100	3 x 50	3 x 50
CBR Puncture	EN-ISO-12236	N	1000	1200	1400	1800	2000	2300	2500	2800	3200	3500	4000	4500	5100	6100	8100	10000
Puncture Strength	ASTM-D-4833	N	180	220	260	330	420	470	550	690	700	850	950	1100	1200	1500	2000	2400
Dynamic Puncture	EN-918	mm	30	26	22	19	18		14	14	12	9	8	7	5	0	0	0
Mullen Burst	ASTM-D-3786	PSI	130	160	185	290	300	330	360	400	450	530	630	700	770	900	1100	1300
Elongation at 30% Load	EN-29073-3	%	30	30	30	30	30		30	30								
Flow Rate(10cm Head)	BS6806Part3	l/m ² /s	240	200	190	120	100	95	95	90	85	75	66	60	45	40	35	30
Permeability	ASTM-D-4491	cm/s	0.35	0.32	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Transmissivity(2kN/m ²)	ASTM-D-4716	l/m/h		120	140	160	170		185	190	200	200	220	240	300	340	380	420
Opening Size (O ₉₀)	ASTM-D-4751	micron	106	106	106	75	75	75	75	75	75	75	75	75	75	75	75	75
Tensile -5cm Strip (CD)			200	280	340	630	700	770	900	1100	1200	1500	1800	2000	2100	2800	3100	3800
Tensile -5cm Strip (MD)	EN-29073-3	N	170	235	280	380	420	460	520	600	700	820	850	1050	1100	1300	1700	2000
Minimum Elongation	EN-29073-3	%	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Grab Strength (M.D)	ASTM-D-4632	N	190	250	300	400	470	520	600	700	800	930	1000	1150	1200	1500	1800	2100
Min. Grab Elongation	ASTM-D-4632	%	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Trapezoidal Tear (M.D)	ASTM-D-4533	N	100	120	140	180	200	230	260	280	300	350	400	450	500	600	800	1000

* Other weights technical data can be provided on request.

** Values reported in this specification sheet are typical average values obtained in in-house laboratory and independent testing laboratories.

*** Due to continuous developments, specifications are subject to change without notice.

THIS PUBLICATION AUTOMATICALLY SUPERSEDES ALL PREVIOUS PUBLICATIONS RELATING TO THIS PRODUCT.

BITUTEX

DESCRIPTION

BITUMAT BITUTEX 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.

USES

BITUMAT BITUTEX are 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.

OUTSTANDING FEATURES

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. BITUMAT BITUTEX 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 BITUMAT BITUTEX 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 finest 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. BITUMAT BITUTEX, due to their high elongation property, are inherently more resistant to installation damage than stiff low elongation fabrics.

The high elongation property of BITUMAT BITUTEX allows the fabric to adapt to the uneven contour of the matrix and absorb 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 to high elongation geotextiles. The geotextile fabric, in the tensile, grab and trapezoidal tear 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.

BITUMAT BITUTEX are non-biodegradable, and have excellent resistance to chemicals and salts normally present in the soil.

EXPOSURE TO SUNLIGHT:

Test Method	AASHTO Specification	BITUTEX
ASTM D 4355	>50% strength at 500 hours	>60% strength at 500 hours

BITUMAT BITUTEX are delivered in black HDPE wrap for protection against ultra-violet rays during transit and storage.

PRODUCT RANGE

Besides BITUMAT BITUTEX standard geotextiles products indicated in this data sheet, a variety of grades between 40 g/m² and 1200 g/m² are also available in polyester and thermally bonded as well as polypropylene based geotextiles. Data sheets of other BITUMAT products are available upon request.