



GEOTEXTILES

UNITECH Geotextiles are a natural choice when designing building and construction works including road, ground, drainage and filtration systems, hydraulic works, waste disposal sites and water purifying plants.



Road Works



Pavement Works



Hydraulic Works

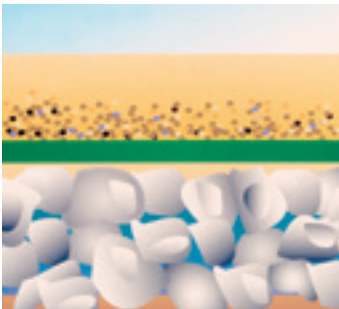


FUNCTIONS:

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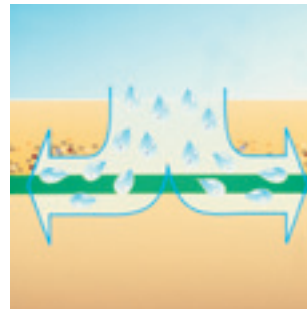
Separation:

Form an effective barrier between the different layers of material, i.e. soil, sand and gravel.



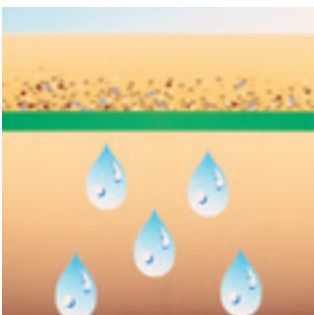
Filtration:

Allow water to pass unobstructed while particles such as silt and sand are retained.



Drainage:

Ensure that water is transported inside the geotextile in order to drain all water from the construction.



Protection:

Resist considerable local stresses as well as inflicted stresses.



FUNCTIONS

UNITECH Geotextiles																											
The recommended grades in the table below are specified under normal conditions.		F-10	F-20	F-22	F-25	F-30	F-31	F-32	F-35	F-40	F-46	F-50	F-55	F-60	F-200M / F-23M	F-300M	F-400M	F-45M	F-600M / F-650M	F-800M	F-1000M	F-1200M	Separation	Filtration	Drainage	Protection	Reinforcement
	ROAD WORKS																										
Permanent Roads				•	•			•	•		•			•									•	•			
Temporary Roads																							•	•			
Parking Areas (Heavy Vehicles)							•	•					•										•	•			
Parking Areas (Normal Vehicles)				•	•																		•	•			
Roads Widening				•	•			•	•														•	•			
Airports							•		•			•											•	•			
Railways								•		•		•		•		•		•					•	•			
Paths and Walking Areas		•	•																				•	•			
CONSTRUCTION WORKS																											
Foundations			•	•																			•				
Concrete Floors		•	•																				•				
Impact Sound Suppression															•								•				
Roof Constructions		•	•		•									•	•								•	•	•		
Retaining Walls				•	•																		•				•
GROUND SYSTEMS																											
Pipes and Trenches			•	•																			•				
Storage Areas			•	•	•																		•	•			
Sport Grounds						•	•																•	•			
Slopes (Erosion Control)															•	•		•					•				•
DRAINS																											
Drainage Pipes		•	•																					•			
Drainage Trenches - Fascines			•	•	•										•									•			
Surface Drains			•	•	•																			•			
Building Drains			•																								
HYDRAULIC WORKS																											
Coastal Protection																•	•	•	•	•	•			•			
Harbour Constructions																		•						•			
River Banks and Canals																•	•							•			
Artificial Lakes																•								•			
Water Reservoirs															•	•										•	
WASTE DISPOSAL																											
Drainage Layers				•	•										•	•	•						•	•	•		
Protection Layers																		•	•	•	•	•				•	

UNITECH Geotextiles			G-100	F-2B	F-10	F-20	F-22	F-25	F-30	F-31	F-32
Physical Properties											
Weight	EN ISO 9864	g/m ²	100	125	80	100	120	130	150	165	175
Thickness at 2 kpa	EN ISO 863-1	mm	0.6	0.7	0.6	0.6	0.7	0.8	0.8	0.8	0.9
Mechanical Properties											
Static Puncture (CBR-test)	EN ISO 12236	N	940	1500	800	1100	1500	1600	1800	1800	2000
Elongation	EN ISO 12236	%	55	50	50	50	50	50	50	50	50
Tensile Strength Long. dir.	EN ISO 10319	KN/m	4.0	8.0	4.5	7.0	8.0	10.0	12.0	12.0	13.0
Tensile Strength Trans. dir.	EN ISO 10319	KN/m	5.0	9.0	4.5	7.0	8.0	10.0	11.0	12.0	13.0
Elongation st Break	EN ISO 10319	%	32/45	35/45	40/50	40/55	40/55	45/55	40/50	40/50	45/50
Dynamic cone drop	EN ISO 13433	mm	40	28	>50	35	35	32	30	28	28
Hydraulic Properties											
Permeability at 50 mm WH	EN ISO 11058	m/sec	0.08	0.07	0.10	0.07	0.07	0.07	0.05	0.05	0.04
Permittivity at 50 mm WH	EN ISO 11058	sec ⁻¹	1.6	1.5	2.0	1.4	1.4	1.4	1.0	1.0	0.8
Water Flow at 50 mm WH	EN ISO 11058	l/sec/m ²	85	75	100	70	70	70	50	50	40
Velocity Index at 100mm WH	EN ISO 11058	m/sec	8.0	10.0	0.16	0.12	0.12	0.12	0.08	0.08	0.07
Water Flow at 100 mm WH	EN ISO 11058	l/sec/m ²	140	120	160	120	120	120	80	80	70
Transmissivity	EN ISO 12958	10 ⁻⁶ m ² /sec	0.5	0.6	0.1	0.3	0.6	0.6	0.8	0.8	0.8
Water Flow Capacity	EN ISO 12958	l/hour/m	2	2	0.5	1	2	2	3	3	3
Pore Size, 90%	EN ISO 12956	microm	100	85	100	95	70	70	85	85	85
Standard Dimensions											
Width		m	5.0	5.0	4/5	4/5	4/5	4/5	4/5	4/5	4/5
Length		m	100	100	100	100	100	100	100	100	100
Roll Diameter		cm	28	28	25	26	28	30	32	32	32
Roll Weight at Maximum Roll Width		kg	55	75	45	55	65	70	80	95	95

UNITECH Geotextiles	F-35	F-40	F-46	F-50	F-55	F-60	F-200M	F-300M	F-400M	F-45M	F-600M	F-650M	F-800M	F-1000M	F-1200M
Physical Properties															
Weight	225	250	275	310	340	400	200	300	400	500	600	650	800	1000	1200
Thickness at 2 kpa	1.1	1.4	1.4	1.6	1.6	1.8	2.0	3.0	4.0	3.4	5.0	5.0	6.0	7.0	8.0
Mechanical Properties															
Static Puncture (CBR-test)	2600	3100	3700	3890	4350	5550	1900	3890	4300	5200	6000	6000	800	1000	14000
Elongation	50	50	50	50	50	50	60	60	60	60	60	65	65	65	75
Tensile Strength Long. dir.	17.3	18	20	23	25	30	12	20	23	26	30	32	30	34	40
Tensile Strength Trans. dir.	17.3	18	20	23	25	30	12	20	25	36	41	40	60	75	110
Elongation st Break	43/55	50/60	45/55	50/55	50/55	55/60	65/80	65/65	70/65	67/60	80/60	90/65	70/60	90/60	110/65
Dynamic Cone Drop	22	20	13	15	10	8	20	16	11	9	5	6	0	2	0
Hydraulic Properties															
Permeability at 50 mm WH	0.03	0.04	0.03	0.03	0.03	0.02	0.08	0.05	0.05	0.04	0.03	0.03	0.03	0.02	0.015
Permittivity at 50 mm WH	0.6	0.8	0.6	0.6	0.6	0.4	1.7	1.0	1.0	0.8	0.6	0.6	0.5	0.4	0.3
Water Flow at 50 mm WH	30	40	30	30	30	20	80	50	50	45	30	30	25	20	15
Velocity Index at 100mm WH	0.06	0.07	0.05	0.05	0.05	0.03	0.13	0.07	0.07	0.06	0.05	0.05	0.04	0.03	0.02
Water Flow at 100 mm WH	60	70	50	50	50	30	135	70	70	60	50	50	40	35	25
Transmissivity	0.7	1.0	1.0	1.0	1.0	1.0	2.9	4.0	5.3	4.3	8.0	5.7	15	15	20
Water Flow Capacity	3	4	4	4	4	4	12	15	20	15	30	20	50	50	70
Pore Size, O 90%	70	70	65	65	65	65	100	70	80	70	70	70	80	70	60
Standard Dimensions															
Width	4/5	4/5	5.0	5.0	5.0	5.0	4/5	4/5	5.0	5.0	5.5	5.5	5.5	5.5	5.5
Length	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50
Roll Diameter	34	36	39	42	44	60	48	60	60	59	80	56	58	69	72
Roll Weight at Maximum Roll Width	120	130	145	160	175	205	105	155	205	255	335	185	225	265	335

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