

2017



GEOTEXTILE FABRICS

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Wallbarn supplies a large range of geotextile fabrics suitable for a wide number of uses – including protection, drainage, filtration, soil stabilisation & green roofing.

These nonwoven fabrics are strong, flexible but permeable membranes which allow water to pass through but hold the particles in place. The soil does not become saturated, thereby improving the strength and stability of the ground.

The geotextile is manufactured through a thermal process without the use of glues or staples. The fabric is run through a number of super heavy presses to ensure the fibres are securely bonded. The makeup of the fabric is uniform throughout the roll, so no weak spots will be present in the layer.



A number of different grades and strengths of fabric are available from Wallbarn, depending on the exact nature of the project.

Wallbarn supplies geotextile fabrics manufactured from virgin fibre polypropylene or recycled polyester. The material is supplied packed into tight rolls and we can supply material in a very large variety of roll sizes, from 1 metre wide up to 6 metres wide for very large-scale projects.



These super-jumbo rolls are designed for use for very large projects, such as road construction, reservoirs and landfills. Using very wide rolls reduces the number of joints between individual rolls. This cuts down on labour by having less individual rolls to stitch together, and also makes the whole fabric layer stronger by having less weak points at the joints.



For applications such as roofing, smaller rolls would be required to make access to the roof space easier. Wallbarn can supply all its geotextile fabrics in 1 metre wide rolls for these purposes.



HIGH TENACITY VIRGIN FIBRE GEOTEXTILE

The prime material supplied by Wallbarn is a high tenacity polypropylene fabric (PPST). This material goes through a special process during manufacture to give it increased tensile strength and puncture resistance. It is available in different weights and has been fully tested to comply with specifications for a large range of uses such as road, rail and runway construction, landfills and reservoirs.



Its soft, cushioning properties mean it can be placed onto rough areas to prevent sharp objects from passing through into the system above but still allow the passage of water. This means sealing and waterproofing sheet membranes can be installed above them without the risk of ground settlement causing any damage above.



At much lower weights, the high tenacity polypropylene fabric has also been used as an effective protection layer for waterproofing membranes including single ply sheet membranes. The cushioning effect is seen as a major advantage. It has been used successfully as a separation layer in inverted waterproofing systems, protecting the insulation boards from damage caused by the ballast.

Wallbarn can offer different grades of fabric to match up to the technical specifications required for each project. A second grade of virgin fibre polypropylene fabric is available called PPEXT is available with slightly lower mechanical properties to provide a more cost effective solution.

They are often used as subterranean soil stabilisation membranes. Either covering buried pipes or lining drains, they will ensure the passage of water without risk of land slippage, greatly improving the quality of the area. They can also be used on areas where new built-up ground is being created, such as artificial islands and reclaimed land, to prevent subsidence before the soil is fully consolidated.

RECYCLED POLYESTER GEOTEXTILE - PECT

Designers and installers can choose a more sustainable option by using recycled polyester fabrics.

Although these materials have much lower tensile strength and mechanical properties of the virgin fibre materials, recycled polyester fabrics can be used effectively as separation and filtration layers. They are ideal for green roof applications since they are made from recycled fibres. Wallbarn uses the multi-coloured PECT recycled polyester fabrics within its own M-Tray® green roof system build-up.

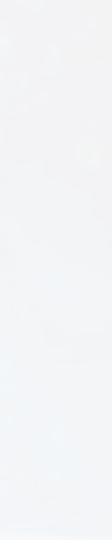


All Wallbarn geotextile fabrics are manufactured under ISO 9001:2000 standards and comply with Directive 89/10/EEC 1988 (as amended by 93/68/EEC 1993). Fabrics can be coloured and engineered so that the UV resistance is extended beyond the standard 15 days should any fabric be exposed for prolonged periods.

PPST HIGH STRENGTH POLYPROPYLENE

PHYSICAL PROPERTIES		TEST METHOD	UNIT	TOLERANCE																											
WEIGHT/ MASS PER UNIT AREA		EN ISO 9864	G/M ²	70	90	100	110	120	130	150	180	200	230	250	280	300	320	350	380	400	450	500	600	700	800	1000	1200	1500	2000	±	10%
THICKNESS		EN ISO 9863-1	MM	0.40	0.60	0.65	0.70	0.80	0.90	1.00	1.20	1.30	1.40	1.50	1.55	1.60	1.65	1.80	2.20	2.50	2.65	3.00	4.00	5.00	5.50	6.50	7.00	7.50	7.50	±	20%
MECHANICAL PROPERTIES																															
TENSILE STRENGTH	MD	EN ISO 10319	KN/M	3.2	6.0	7.0	8.0	9.0	10.0	12.0	14.0	16.0	18.0	20.0	23.0	25.0	27.0	27.0	28.0	30.0	32.0	35.0	40.0	45.0	50.0	60.0	70.0	85.0	75.0	-	10%
	CMD	EN ISO 10319	KN/M	3.5	6.0	7.0	8.0	9.0	10.0	12.0	14.0	16.0	18.0	20.0	23.0	25.0	27.0	30.0	32.0	34.0	36.0	40.0	50.0	65.0	80.0	90.0	105.0	140.0	155.0	-	10%
ELONGATION AT MAX LOAD	MD	EN ISO 10319	%	55	55	55	55	55	55	55	60	60	65	65	65	65	70	70	70	70	70	80	80	80	80	80	80	80	80	±	30%
	CMD	EN ISO 10319	%	60	60	60	60	60	60	60	65	65	70	70	70	70	70	70	70	70	70	80	80	80	80	80	80	80	80	±	30%
ENERGY INDEX		EN ISO 10318	KJ/M ²	1.0	1.7	2.0	2.3	2.6	2.9	3.5	4.4	5.0	6.1	6.8	7.8	8.4	9.1	10.0	10.5	11.2	13.6	15.0	18.0	22.0	26.0	30.0	35.0	45.0	46.0	±	20%
STATIC PUNCTURE RESISTANCE		EN ISO 12236	KN	0.7	0.9	1.2	1.3	1.5	1.7	1.9	2.2	2.4	2.7	3.0	3.5	4.0	4.2	4.5	5.0	5.5	6.0	6.5	8.0	9.0	10.0	13.0	14.0	18.0	20.0	-	10%
DYNAMIC PUNCTURE RESISTANCE (GDNE DROP TEST)		EN ISO 13433	MM	>50	44	38	34	32	30	26	22	20	16	14	12	10	10	8	8	6	6	4	2	1	0	0	0	0	0	+	20%
PYRAMID PUNCTURE RESISTANCE		EN 14574	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	200	220	280	320	330	340	350	350	400	500	700	900	1000	1300	1600	2200	2200	-	20%	
HYDRAULIC PROPERTIES																															
PERMEABILITY - NORMAL TO THE PLANE		EN ISO 11058	MM/S	130	130	125	120	115	110	100	95	90	80	75	70	65	30	50	40	35	30	30	30	25	20	15	15	5	-	-	30%
IN-PLANE FLOW CAPACITY		EN ISO 12958	10 ³ L/M S	0.8	0.80	0.80	0.80	0.80	0.80	1.60	1.60	2.10	2.10	2.30	2.30	2.50	2.50	2.70	2.80	3.20	4.00	5.00	7.80	8.00	8.50	9.00	9.00	7.00	-	-	30%
TRANSMISSIVITY		EN ISO 10318	L/M S		0.80	0.80		0.80	0.80	1.60	1.60	2.10	2.10	2.30		2.50		3.20			5.00		8.50	9.00		9.00					
OPENING SIZE		EN ISO 12956	µM	120	120	120	110	110	100	90	90	80	70	60	50	50	50	50	50	50	50	50	50	40	40	40	40	20	±	30%	
DURABILITY PROPERTIES																															
WEATHERING RESISTANCE		EN 12224		PASSES EN 12224 WEATHERING TEST. IT IS HIGHLY RECOMMENDED THAT THE GEOTEXTILE IS COVERED WITHIN 30 DAYS FROM THE DAY OF INSTALLATION. THE MATERIAL CAN BE EXPOSED TO SUNLIGHT FOR A MAXIMUM OF 4 MONTHS WITH A DEGRADATION OF THE MECHANICAL PROPERTIES DEPENDING ON SEASON.																											
PRODUCT COMPOSITION				MADE FROM VIRGIN FIBRE POLYPROPYLENE, UV STABILISED. SPECIFIC WEIGHT OF POLYMER IS 0.91 KG/DM ³ . RAW MATERIAL IS STAPLE FIBRES, PRODUCED THROUGH NEEDLEPUNCHING AND CALANDERING. MELTING POINT IS 165-175 °C. FIBRE DIAMETER IS 25-30 µM. THE MATERIAL IS PRODUCED ACCORDING TO THE QUALITY MANAGEMENT SYSTEM OF EN ISO 9001:2008. IT FULFILLS THE REQUIREMENT OF EUROPEAN REGULATIONS RELATED TO CONSTRUCTION PRODUCTS AS PER EN 1213-CPR 32669.																											
OXYDATION RESISTANCE		EN ISO 13438		FORECAST MINIMUM DURABILITY OF 25 YEARS FOR EVERY APPLICATION IN NATURAL GROUNDS WITH 4<PH<9 AND SOIL TEMPERATURE <25°C																											

THE VALUES GIVEN ARE AN AVERAGE OBTAINED IN OUR LABORATORIES AND IN OFFICIAL TESTING INSITUATES
THE CONFIDENCE LEVEL IS 95%
WE RESERVE THE RIGHT TO MAKE CHANGES AT ANY TIME WITHOUT NOTICE



1213-CPD-3269

PPXT POLYPROPYLENE NONWOVEN VIRGIN FIBRE FABRIC – SECOND STRENGTH GEOTEXTILE FABRIC

PHYSICAL PROPERTIES	TEST METHOD	UNIT	TOLERANCE															
			100	120	150	200	250	300	400	500	600	800	1000	1200	1500	±	10%	
WEIGHT		G/M ²	100	120	150	200	250	300	400	500	600	800	1000	1200	1500	±	10%	
THICKNESS	EN ISO 9863-1	MM	0.7	0.8	1.00	1.30	1.60	1.80	2.50	3.30	3.60	4.40	5.50	7.00	8.50	±	20%	
MECHANICAL PROPERTIES																		
TENSILE STRENGTH	MD	KN/M	2.0	2.7	3.5	4.5	6.0	9.0	10.0	12.0	18.0	24.0	30.0	35.0	40.0	-	15%	
	CMD	KN/M	2.5	3.2	4.0	5.5	8.0	11.0	14.0	18.0	22.0	32.0	40.0	45.0	50.0	-	15%	
ELONGATION AT MAX LOAD	MD	%	70	70	70	70	80	80	80	80	80	90	90	95	95	±	25%	
	CMD	%	80	80	80	80	85	85	85	90	90	95	100	100	100	±	25%	
ENERGY INDEX	EN ISO 10318	KJ/M ²	0.8	1.1	1.4	1.9	2.9	4.1	5.0	6.4	8.5	13.3	16.6	19.5	21.9	±	25%	
STATIC PUNCTURE RESISTANCE	EN ISO 12236	KN	0.4	0.5	0.9	0.9	1.3	1.5	1.8	2.5	3.6	4.8	6.0	8.0	10.0	-	10%	
DYNAMIC PUNCTURE RESISTANCE (CONE DROP TEST)	EN ISO 13433	MM	>50	>50	36	28	22	18	14	10	6	2	1	0	0	+	25%	
PYRAMID PUNCTURE RESISTANCE	EN 14574	N	N/A	N/A	N/A	150	200	300	340	400	500	700	1100	1400	1600	-	20%	
HYDRAULIC PROPERTIES																		
PERMEABILITY NORMAL TO THE PLANE	EN ISO 11058	MMS	110	100	80	70	50	35	25	20	20	20	20	20	20	-	30%	
IN-PLANE FLOW CAPACITY	EN ISO 12958	10-3L/MS	0.6	0.8	1.2	1.8	2.0	2.2	2.6	3.5	4.5	5.3	6.0	6.3	7.0	-	30%	
DURABILITY PROPERTIES																		
WEATHERING RESISTANCE	EN 12224	PASSES EN 12224 WEATHERING TEST. IT IS HIGHLY RECOMMENDED THAT THE GEOTEXTILE IS COVERED WITHIN 15 DAYS FROM THE DAY OF INSTALLATION. THE MATERIAL CAN BE EXPOSED TO SUNLIGHT WITH A DEGRADATION OF THE MECHANICAL PROPERTIES DEPENDING ON SEASON.																
PRODUCT COMPOSITION		MADE FROM POLYPROPYLENE VIRGIN FIBRE. SPECIFIC WEIGHT OF POLYMER IS 0.91 KG/DM ³ . RAW MATERIAL IS STAPLE FIBRES, PRODUCED THROUGH NEEDLEPUNCHING AND CALANDERING. MELTING POINT IS 165-175 °C. THE MATERIAL IS PRODUCED ACCORDING TO THE QUALITY MANAGEMENT SYSTEM OF EN ISO 9001:2008. IT FULFILLS THE REQUIREMENT OF EUROPEAN REGULATIONS RELATED TO CONSTRUCTION PRODUCTS AS PER 1213-CPR 3269.																
OXYDATION RESISTANCE	EN ISO 13438	FORECAST MINIMUM DURABILITY OF 5 YEARS FOR EVERY APPLICATION IN NATURAL GROUNDS WITH 4<PH<9 AND SOIL TEMPERATURE <25°C																

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PEIT RECYCLED POLYESTER – NONWOVEN GEOTEXTILE FABRIC

PHYSICAL PROPERTIES	TEST METHOD	UNIT	TOLERANCE															
			150	200	250	300	350	400	500	600	700	800	1000	1200	1500	±	10%	
WEIGHT		G/M ²	150	200	250	300	350	400	500	600	700	800	1000	1200	1500	±	10%	
THICKNESS	EN ISO 9863-1	MM	0.90	1.10	1.30	1.60	1.75	1.90	2.20	2.80	3.00	3.50	4.00	4.50	6.00	±	20%	
MECHANICAL PROPERTIES																		
TENSILE STRENGTH	MD	KN/M	1.2	1.8	2.0	2.5	2.8	3.2	4.2	5.5	6.0	6.5	7.5	13.0	20.0	-	10%	
	CMD	KN/M	1.2	1.8	2.0	2.7	3.2	4.0	5.2	7.5	8.0	9.0	10.5	16.0	25.0	-	10%	
ELONGATION AT MAX LOAD	MD	%	50	50	50	50	50	50	60	70	70	80	80	80	80	±	30%	
	CMD	%	60	60	60	60	60	60	70	80	80	90	90	90	90	±	30%	
ENERGY INDEX	EN ISO 10318	KJ/M ²	0.3	0.5	0.6	0.7	0.8	1.0	1.5	2.4	2.6	3.3	3.8	6.2	9.6	±	20%	
STATIC PUNCTURE RESISTANCE	EN ISO 12236	KN	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1.2	1.4	1.8	2.2	2.8	4.0	-	10%	
DYNAMIC PUNCTURE RESISTANCE (CONE DROP TEST)	EN ISO 13433	MM	>50	>50	45	40	30	20	16	6	2	2	0	0	0	+	20%	
PYRAMID PUNCTURE RESISTANCE	EN 14574	N	N/A	N/A	N/A	100	150	180	200	250	270	300	500	700	800	-	20%	
HYDRAULIC PROPERTIES																		
PERMEABILITY NORMAL TO THE PLANE	EN ISO 11058	MMS	110	100	80	60	50	40	30	25	25	20	20	20	20	-	30%	
IN-PLANE FLOW CAPACITY	EN ISO 12958	10-3L/MS	1.6	2.1	2.3	2.7	3.0	3.2	5.0	7.0	7.0	8.0	9.0	9.0	9.0	-	30%	
OPENING SIZE	EN ISO 12956	µM	65	60	55	55	55	45	45	35	35	35	30	30	30	±	30%	
DURABILITY PROPERTIES																		
WEATHERING RESISTANCE	EN 12224	PASSES EN 12224. IT IS HIGHLY RECOMMENDED THAT THE GEOTEXTILE IS COVERED WITHIN 15 DAYS FROM THE DAY OF INSTALLATION. THE MATERIAL CAN BE EXPOSED TO SUNLIGHT WITH A DEGRADATION OF THE MECHANICAL PROPERTIES DEPENDING ON SEASON.																
PRODUCT COMPOSITION		MADE FROM POLYESTER WHITE FIBRE. SPECIFIC WEIGHT OF POLYMER IS 0.38 KG/DM ³ . RAW MATERIAL IS STAPLE FIBRES, PRODUCED THROUGH NEEDLEPUNCHING AND CALANDERING. THE MATERIAL IS PRODUCED ACCORDING TO THE QUALITY MANAGEMENT SYSTEM OF EN ISO 9001:2008. IT FULFILLS THE REQUIREMENT OF EUROPEAN REGULATIONS RELATED TO CONSTRUCTION PRODUCTS AS PER 1213-CPR 3269.																
OXYDATION RESISTANCE	EN ISO 13438	FORECAST MINIMUM DURABILITY OF 5 YEARS FOR EVERY APPLICATION IN NATURAL GROUNDS WITH 4<PH<9 AND SOIL TEMPERATURE <25°C																

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PECT MULTI-COLOURED RECYCLED POLYESTER GEOTEXTILE FABRIC

PHYSICAL PROPERTIES		TEST METHOD	UNIT	TOLERANCE															
WEIGHT			G/M ²	150	200	250	300	350	400	500	600	700	800	1000	1200	1500	±	10%	
THICKNESS		EN ISO 9863-1	MM	1.00	1.20	1.40	1.60	1.80	2.00	2.30	2.60	2.90	3.30	4.00	4.50	6.40	±	20%	
MECHANICAL PROPERTIES																			
TENSILE STRENGTH	MD	EN ISO 10319	KN/M	1.0	1.6	2.0	2.4	2.8	3.2	4.0	5.4	6.7	8.0	10.0	12.0	15.0	-	10%	
	CMD	EN ISO 10319	KN/M	1.0	1.6	2.1	2.5	3.0	3.4	5.0	7.4	9.0	10.5	13.5	15.0	20.0	-	10%	
ELONGATION AT MAX LOAD	MD	EN ISO 10319	%	50	50	50	50	50	50	60	60	70	70	80	80	90	±	30%	
	CMD	EN ISO 10319	%	60	60	60	60	60	60	60	60	70	70	80	80	90	±	30%	
ENERGY INDEX		EN ISO 10319	KJ/M ²	0.3	0.4	0.6	0.7	0.8	0.9	1.4	1.9	2.7	3.2	4.7	5.4	7.9	±	20%	
STATIC PUNCTURE RESISTANCE		EN ISO 12236	KN	0.2	0.3	0.4	0.5	0.6	0.8	1.2	1.8	2.2	2.6	4.2	5.0	6.0	-	10%	
DYNAMIC PUNCTURE RESISTANCE (CONE DROP TEST)		EN ISO 13433	MM	>50	46	40	36	32	24	14	10	8	6	2	2	0	+	20%	
PYRAMID PUNCTURE RESISTANCE		EN 14574	N	N/A	200	300	400	450	500	600	800	950	1100	1500	1700	2000	-	20%	
HYDRAULIC PROPERTIES																			
PERMEABILITY NORMAL TO THE PLANE		EN ISO 11058	MMS	90	90	70	60	60	50	30	30	25	20	10	10	10	-	30%	
IN-PLANE FLOW CAPACITY		EN ISO 12958	10-3L/MS	2	2	2	3	3	3.2	5	7	7	8	9	9	9	-	30%	
OPENING SIZE		EN ISO 12956	µM	65	60	55	55	55	45	45	35	35	35	30	30	20	±	30%	
DURABILITY PROPERTIES																			
WEATHERING RESISTANCE		EN 12224		PASSES EN 12224. IT IS HIGHLY RECOMMENDED THAT THE GEOTEXTILE IS COVERED WITHIN 15 DAYS FROM THE DAY OF INSTALLATION. THE MATERIAL CAN BE EXPOSED TO SUNLIGHT WITH A DEGRADATION OF THE MECHANICAL PROPERTIES DEPENDING ON SEASON.															
PRODUCT COMPOSITION				MADE FROM MULTICOLOURED POLYESTER RECYCLED FIBRE. SPECIFIC WEIGHT OF POLYMER IS 0.38 KG/DMS . RAW MATERIAL IS STAPLE FIBRES, PRODUCED THROUGH NEEDLEPUNCHING AND CALANDERING. THE MATERIAL IS PRODUCED ACCORDING THE QUALITY MANAGEMENT SYSTEM OF EN ISO 9001:2008. IT FULFILLS THE REQUIREMENT OF EUROPEAN REGULATIONS RELATED TO CONSTRUCTION PRODUCTS AS PER 1213-CPR 3269.															
OXYDATION RESISTANCE		EN ISO 13438		FORECAST MINIMUM DURABILITY OF 5 YEARS FOR EVERY APPLICATION IN NATURAL GROUNDS WITH 4<PH<9 AND SOIL TEMPERATURE <25°C															

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