NON WOVENS

Brochure of

Geotextiles

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What are GEOTEXTILES?

The geotextiles manufactured by LOGROTEX are non-woven fabrics consisting of staple fibres of various sizes fixed together mechanically by needlepunching. These can be heat bonded to provide greater resistance. Their flat and permeable structure easily solves drainage, protection, reinforcement, separation and filtration problems.

ADVANTAGES

- Permeable
- Durable (mould and rot resistant)
- Highly absorbent
- Temperature resistant
- Versatile and flexible
- Widely applicable
- Mechanical protection for impermeable layers

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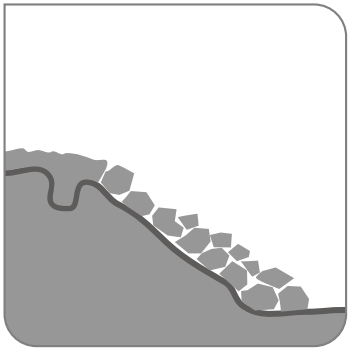
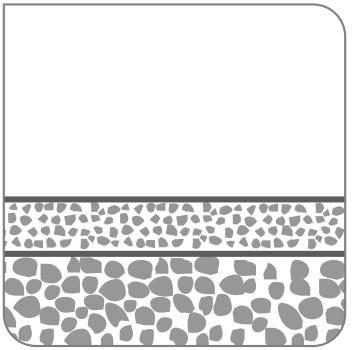
APPLICATIONS



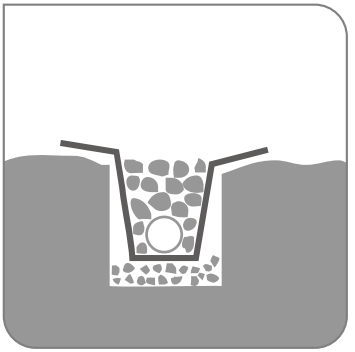
Reinforcement for graded or terraced slopes and fills.

Prevents lateral displacement of soils and confines material to its base, providing rigidity and improved distribution of loads.



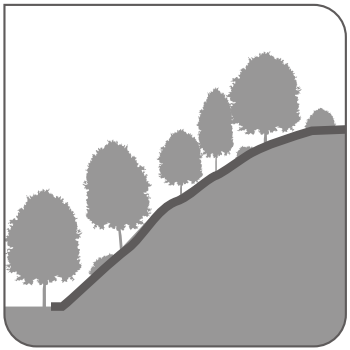
Separation for roads, railways, car parks and building foundations.

Separates layers of differing grain size, preventing particles from mixing. Acts as a permeable barrier to avoid contact between incompatible materials and prevents undesired movement of earth towards the base, holding it in place.



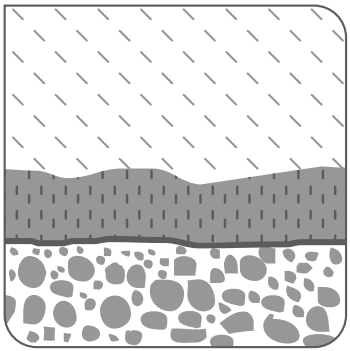
Drainage for ditches, vertical and horizontal drains and water collection areas.

Filters off excess water and avoids waterlogging.



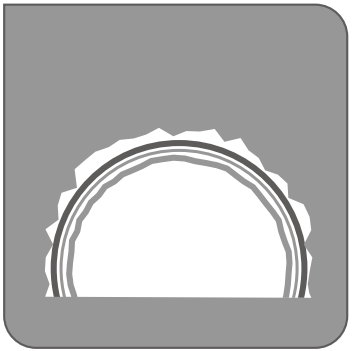
Erosion control.

Prevents displacement of base layers in slopes and weak subsoils. For soil retaining walls, riverbanks and coastal defence structures.



Filtration.

Prevents fine particles from migrating to other layers while allowing water through to reduce high hydrostatic pressure.



Protection.

Protects geomembranes (proofing) from puncturing, perforation and abrasion.

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RECOMMENDATIONS FOR INSTALLATION

- Geotextiles should be applied to smooth surfaces free of anything that could damage their structure.

- They can be unrolled using special equipment or manually, avoiding creases as far as possible.

- Joining one geotextile layer with another should create no more than 20 centimetres of overlap or that indicated by design specifications. These joins may be stitched, stapled or welded together.

- Geotextiles should not be fixed to the ground using stakes or anything that could damage their smooth structure.

- The material should not come into direct contract with either machinery or construction equipment and should be protected by a filler layer of 20-30 centimetres.

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POLYESTER GEOTEXTILE series 6

LOGROTEX uses virgin and substandard fibres fixed together by needlepunching to manufacture its PET geotextiles. Their strong resistance and antislip properties allow for enhanced mechanical and hydraulic performance. Their ability to remain stable upon exposure to UV rays, acids, alkalis and insect and microbe attacks proves them to be serviceable for long periods of time.

Extraordinary performance in separation, drainage, filtration, protection and reinforcement. Items manufactured range from 120 to 2,000 g/m^2.

TEST	UNIT OF MEASUREMENT	STANDARD	G-6012 120 g/m^2	G-6015 (*) 150 g/m^2	G-602 (*) 200 g/m^2	G-603 300 g/m^2
Longitudinal tensile strength	kN/m;-kN/m	UNE-EN-ISO 10319:2008	1.05 (–0.2)	1.35 (–0.2)	1.52 (–0.2)	4.05 (–0.2)
Longitudinal elongation	%; ±%	UNE-EN-ISO 10319:2008	98 (–5/+60)	95 (–5/+60)	45.00 (–5/+60)	75.82 (–5/+60)
Transverse tensile strength	kN/m;-kN/m	UNE-EN-ISO 10319:2008	1.25 (–0.2)	1.43 (–0.2)	1.65 (–0.2)	4.48 (–0.2)
Transverse elongation	%; ±%	UNE-EN-ISO 10319:2008	85 (–5/+60)	60 (–5/+60)	44.38 (–5/+60)	56.84 (–5/+60)
Static puncture resistance (CBR)	kN; -KN	UNE-EN-ISO 12236:2007	0.200	0.275 (–0.020)	0.600 (–0.020)	0.800
Dynamic perforation resistance (cone drop)	mm;+mm	UNE-EN-ISO 13433:2007	< 50	< 22	<18 (+1.0)	<17 (+1.0)
Protection efficiency	kN/m^2;-kN/m^2	UNE-EN-ISO 13719:2003			17.54x 10^3 (–3 x 10^3)	
Characteristic opening size	µm; ±µm	UNE-EN-ISO 12956:2010	70 (±10)	77 (±10)	85 (±10)	90 (±10)
Water permeability	m/s; –m/s	UNE-EN-ISO 11058:2010	7.03 x 10^{-2} (–0.2 x 10^{-2})	5.963 x 10^{-2} (–0.2 x 10^{-2})	2.22 x 10^{-2} (–0.2 x 10^{-2})	1.88 x 10^{-2} (–0.3 x 10^{-2})
In-plane water flow capacity	m^2/s;-m^2/s	UNE-EN-ISO 12958:2010			9.54x 10^{-6} (–0.954 x 10^{-6})	
Functions	Intended use		S+D+F	F+S	S+D+F+P	S+D+F

*Certification of conformity CE 0099/CPD/A42/0026; 0099/CPD/A42/0027 and 0099/CPD/A42/0059

**Values represent results obtained from the landmark study.

POLYESTER AND PROPYLENE GEOTEXTILE series 7

This PP/PET geotextile combines the high resistance and antislip properties of propylene together with the high durability and UV ray stability features of polyester. A versatile and economical option, adapting perfectly to prevailing construction requirements.

When greater strength is needed, we use only PP, since by its nature, superior mechanical properties are obtained."

Extraordinary performance in separation, drainage, filtration, protection and reinforcement. Items manufactured range from 200 to 900 g/m^2.

LOGROTEX non-wovens can also be heat bonded, increasing resistance to tensile stress. Both the needlepunched and heat bonded geotextiles are useful in all applications.

TEST	UNIT OF MEASUREMENT	STANDARD	G-703-PP-PET (*) 300 g/m^2	G-705-PP-PET (*) 500 g/m2	G-705-PP (*) 500 g/m2	G-706-PP (*) 600 g/m^2
Longitudinal tensile strength	kN/m;-kN/m	UNE-EN-ISO 10319:2008	4.09 (–0.5)	6.60 (–0.5)	13.57 (–0.5)	22 (–0.8)
Longitudinal elongation	%; ±%	UNE-EN-ISO 10319:2008	90 (–10/+40)	90 (–10/+40)	105 (–10/+40)	90 (–10/+40)
Transverse tensile strength	kN/m;-kN/m	UNE-EN-ISO 10319:2008	4.75 (–0.5)	9.30 (–0.5)	19.14 (–0.5)	32 (–0.8)
Transverse elongation	%; ±%	UNE-EN-ISO 10319:2008	75 (–10/+40)	75 (–10/+40)	80 (–10/+40)	75 (–10/+40)
Static puncture resistance (CBR)	kN; -KN	UNE-EN-ISO 12236:2007	0.795 (-0.002)	1.275 (–0.002)	2.210 (–0.020)	4.050(+0.5)
Dynamic perforation resistance (cone drop)	mm;+mm	UNE-EN-ISO 13433:2007	11 (+1.0)	7.8 (+1.0)	8.8 (+1.0)	1 (±1.0)
Protection efficiency	kN/m^2;-kN/m^2	UNE-EN-ISO 13719:2003	13.33x 10^3 (–3.33 x 10^3)	17.54x 10^3 (–3 x 10^3)	16.13x 10^3 (–3 x 10^3)	15.08x 10^3 (–3 x 10^3)
Characteristic opening size	µm; ±µm	UNE-EN-ISO 12956:2010	85 (±20)	70 (±20)	85 (±20)	55 (±30)
Water permeability	m/s; –m/s	UNE-EN-ISO 11058:2010	1.88 x 10^{-2} (–0.3 x 10^{-2})	1.66 x 10^{-2} (–0.4 x 10^{-2})	4.18 x 10^{-3} (–0.4 x 10^{-3})	2.27 x 10^{-2} (–0.23 x 10^{-2})
In-plane water flow capacity	m^2/s;-m^2/s	UNE-EN-ISO 12958:2010	23.74x 10^{-6} (–2.37 x 10^{-6})	29.26x 10^{-6} (–0.293 x 10^{-6})	12.85x 10^{-6} (–0.128 x 10^{-6})	8.43x 10^{-6} (–0.84 x 10^{-6})
Functions	Intended use		S+D+F+P	S+D+F+P	S+D+F+P	S+D+F+P

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POLYPROPYLENE GEOTEXTILE series 8

A non-woven geotextile of virgin polypropylene fibres. The fibres are joined by a mechanical system which compacts and entangles them through needlepunching and subsequent heat bonding processes.

This geotextile displays high resistance to compression and needlepunching and has superior hydraulic capacity and a compact structure. Its reinforcing qualities make it ideal for use in roads.

Enhanced performance in filtration and drainage prevents aggregates passing to underlying layers. The inorganic product remains completely stable upon exposure to extreme pHs and microbial activity.

TEST	UNIT OF MEASUREMENT	STANDARD	G-8012-PP(*) 120 g/m^2	G-803-PP (*) 300 g/m^2	G-805-PP (*) 500 g/m^2	G-809-PP (*) 900 g/m^2
Longitudinal tensile strength	kN/m;-kN/m	UNE-EN-ISO 10319:2008	2.71 (–0.1)	9.92 (–0.1)	14.84 (–0.1)	38.28 (–0.1)
Longitudinal elongation	%; ±%	UNE-EN-ISO 10319:2008		105 (–10/+40)	105 (–10/+40)	60 (–10/+40)
Transverse tensile strength	kN/m;-kN/m	UNE-EN-ISO 10319:2008	3.05 (–0.1)	13.95 (–0.1)	28.05 (–0.1)	55 (–0.1)
Transverse elongation	%; ±%	UNE-EN-ISO 10319:2008		110 (–10/+40)	80 (–10/+40)	70 (–10/+40)
Static puncture resistance (CBR)	kN; -KN	UNE-EN-ISO 12236:2007	0.600 (–0.020)	1.965 (–0.020)	3.145 (–0.020)	8.000 (–0.020)
Dynamic perforation resistance (cone drop)	mm;+mm	UNE-EN-ISO 13433:2007	24.20 (+1,0)	4.30 (+2,0)	3.2 (+1,0)	0 (+1,0)
Protection efficiency	kN/m^2;-kN/m^2	UNE-EN-ISO 13719:2003				
Characteristic opening size	µm; ±µm	UNE-EN-ISO 12956:2010	300 (±75)	159 (±40)	83 (±20)	60 (±20)
Water permeability	m/s; –m/s	UNE-EN-ISO 11058:2010	4.45x 10^{-2} (–0.7 x 10^{-2})	2.52 x 10^{-2} (–0.5 x 10^{-2})	7.89 x 10^{-3} (–2.75 x 10^{-3})	0.21 x 10^{-1} (–0.05 x 10^{-1})
Functions	Intended use		F+S	F+S	F+S	F+S

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Logrotex reserves the right to modify the values reflected in this catalogue without prior notice.

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LAUDIA

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