

Geotextile Hipertex a-collection

White nonwoven fabric packed in UV resistant plastic film. Approved in accordance with NorGeo-Spec 2012 and ATB VÄG.

Functions and properties

Geotextiles are used in the civil engineering industry primarily for their ability to separate layers, but are also used for drainage and filtration. geotextiles are also an excellent choice for protecting landfill liners. The most common geotextiles are made from polypropylene (PP) fibre which are needle punched and/or thermally bonded to high-strength fabric with good drainage properties.

Separation

The fabric prevents different aggregate fragments from blending under traffic loads or other dynamic loads. The fabric stabilises the aggregate preventing undesirable ground motion. Bearing capacity is maintained in road structures, railroad embankments, etc.

Filtration

The fabric is water-permeable but restricts the motion of particles, which would otherwise erode ground structures, pipe trenches, retaining walls or foundations.

Drainage

The fabric drains and wicks water away from the fabric layer. This may be necessary in, for example, clay-filled ground structures or landfills. The drainage properties diminish over time and should be supplemented with other drainage structures.

Protection

The fabric protects against external effects on, for example, landfill liners. The fibre fabric is also able to protect pipes and concrete structures. For protection, thick fabrics with high CBR values must be used.

NorGeoSpec 2012

Geotextiles classified according to the NorGeoSpec 2012 classification system. NorGeoSpec 2012 is a Nordic classification system which specifies requirement levels for each class of geotextiles. The geotextile satisfies all requirements in accordance with NorGeoSpec 2012.

Technical Data

Material	Polypropylene (PP)
Colour	White
Model	Filter cloth
Woven	No
Glass-fibre reinforced	No
On roll	Yes
Norm	NorGeoSpec2012

Article Number	Designation	Usage class	Width	Length	Delivery on roller	Weight	Unit
2310228	Geotextile	N1	1 m	25 m	25 m ²	90 g/m ²	m ²
2310229	Geotextile	N1	1,2 m	32 m	38,4 m ²	90 g/m ²	m ²
2310227	Geotextile	N1	1,25 m	10 m	12,5 m ²	90 g/m ²	m ²
19024243	Geotextile	N1	1.4 m	15 m	21 m ²	100 g/m ²	m ²
19024242	Geotextile	N1	1.4 m	50 m	70 m ²	100 g/m ²	m ²
19025041	Geotextile	N1	1 m	150 m	150 m ²	90 g/m ²	m ²
2418905	Geotextile	N1	3 m	35 m	105 m ²	90 g/m ²	m ²
19024701	Geotextile	N1	6 m	5 m	30 m ²	90 g/m ²	ST
2418906	Geotextile	N1	2 m	150 m	300 m ²	90 g/m ²	m ²
19025361	Geotextile	N1	4 m	150 m	600 m ²	90 g/m ²	m ²
19025046	Geotextile	N1	6 m	150 m	900 m ²	90 g/m ²	m ²
19047551	Geotextile	N2	2 m	120 m	240 m ²	135 g/m ²	KVM

Article Number	Designation	Usage class	Width	Length	Delivery on roller	Weight	Unit
19025362	Geotextile	N2	4 m	120 m	480 m ²	135 g/m ²	m ²
2418908	Geotextile	N2	5 m	120 m	600 m ²	135 g/m ²	m ²
19025047	Geotextile	N2	6 m	120 m	720 m ²	135 g/m ²	m ²
19047552	Geotextile	N3	2 m	120 m	240 m ²	190 g/m ²	m ²
19025363	Geotextile	N3	4 m	120 m	480 m ²	190 g/m ²	m ²
2418909	Geotextile	N3	5 m	120 m	600 m ²	190 g/m ²	m ²
19025048	Geotextile	N3	6 m	120 m	720 m ²	190 g/m ²	m ²
19025364	Geotextile	N4	4 m	120 m	480 m ²	260 g/m ²	m ²
19025049	Geotextile	N4	6 m	120 m	720 m ²	260 g/m ²	m ²
19025008	Geotextile	N5	6 m	75 m	450 m ²	340 g/m ²	m ²

Max. grain size for geotextile

Table prepared by CTH Geokons AS

Grain size (mm)

0 < D < 20	20 < D < 60	60 < D < 200	200 < D < 500	D < 500
N1	N2	N3	N4	N5

Properties	Max tolerance *)	Mandatory value 95% confidence interval				
		N1	N2	N3	N4	N5
Min. tensile strength (kN/m)	-10%	6	10	15	20	26
Min. tensile stress at max. load (%)	-20%	15	20	25	30	35
Max. cone drop diameter (mm)	+20%	42	36	27	21	12
Min. energy index (kJ/m)		1,2	2,1	3,2	4,5	6,5
Min. velocity index (10 ⁻³ m/s)	-30%	3	3	3	3	3
Max. typical aperture size (mm)	+/-30%	0,2	0,2	0,2	0,15	0,15
Max. tolerance – mass per unit area		+/-12%	+/-12%	+/-10%	+/-10%	+/-10%
Max. tolerance – static puncture resistance		+/-10%	+/-10%	+/-10%	+/-10%	+/-10%
*) Tolerance specified by the manufacturer, the table indicates maximum permitted tolerance in the accompanying CE mark documentation.						

Subsoil	Construc- tion	Traffic	Max. fill material grain size Dmax (mm)			
			< 60	60-200	200-500	> 600
Soft	Normal		3	4	5	5
			3	4	4	5
Soft	Favourable		3	3	4	5
			2	3	4	4
Solid	Normal		2	3	3	4
			2	2	3	3
Solid	Favourable		2	2	3	3
			2 *)	2	2	3

*) N1 can be used on infrequently trafficked roads, access roads or similar.

Subsoil	
Soft	Soft clay with undrained shear strength <25 kPa and peat
Solid	Medium to rigid clay with undrained shear strength <25 kPa, sand and gravel
Traffic	
High	500 vehicles per day
Normal	500 vehicles per day

Construction	
Normal	Two or more of the following conditions <ul style="list-style-type: none"> - Normal load construction traffic - Compacting with heavy and vibrating equipment - Construction traffic on fill layer with a thickness less than 300 mm
Favourable	For fill material with a max. grain size < 200 mm and thickness > 1.5 times the max. grain size