

Application-led nonwoven geotextiles for filtration, separation and protection

100% polyester continuous-filament, needle-punched nonwoven geotextiles. The KNP identifier tracks the published tensile-strength class. Select filtration properties to suit the retained soil and hydraulic duty; select survivability and protection properties to suit construction and service loading.

PRODUCT FORM

PET continuous filament | Needle-punched

White / natural colour | Project roll formats

PROPERTY	TEST METHOD	UNIT	KNP-09	KNP-12	KNP-15	KNP-18	KNP-21	KNP-25	KNP-30	KNP-36	KNP-48	KNP-54
Tensile strength MD/CD	ISO 10319	kN/m	9	12	15	18	21	25	30	36	48	54
Tensile elongation MD/CD	ISO 10319	%	40-80	40-80	40-80	40-80	40-80	40-80	40-80	40-80	40-80	40-80
Grab tensile strength	ASTM D4632	N	450	710	970	1,100	1,300	1,500	1,800	2,000	2,200	2,500
Grab elongation	ASTM D4632	%	40-80	40-80	40-80	40-80	40-80	40-80	40-80	40-80	40-80	40-80
CBR puncture strength	ASTM D6241 / ISO 12236	kN	1.6	2.0	2.4	2.9	3.4	4.0	5.4	6.4	8.0	8.6
Trapezoidal tear strength	ASTM D4533 / ISO 13937-2	kN	0.23	0.30	0.35	0.42	0.49	0.60	0.73	0.82	1.15	1.25
UV resistance after 500 h	ASTM D7238	% retained	70	70	70	70	70	70	70	70	70	70

APPARENT OPENING SIZE

0.05-0.30 mm

ASTM D4751. Confirm the project-specific value.

PERMITTIVITY

K x 10⁻¹ to 10⁻³ cm/s

K = 1.0-9.9. ASTM D4491 / ISO 11058.

AVAILABLE ROLL WIDTHS

2 / 2.5 / 3 / 4 / 5 / 6 m

Subject to exact-grade production confirmation.

AVAILABLE ROLL LENGTHS

50 / 100 / 150 / 200 m

Custom project lengths available by confirmation.

Filtration properties: the apparent-opening-size and permittivity ranges describe available manufacturing capability and are not fixed by tensile grade alone. Nominate or confirm the hydraulic properties for the project soil, gradient and flow condition. Published table values are minimum average roll values unless otherwise stated.

Preliminary application ranges

Starting ranges only - confirm the exact grade against project conditions and specification.

FUNCTION	TYPICAL STARTING RANGE	PRIMARY DUTY	CONFIRM BEFORE SELECTION
Filtration and drainage	KNP-09 to KNP-18	Retain soil while allowing controlled water movement.	Soil grading, fines, apparent opening size, permittivity, gradient and clogging risk.
Civil separation	KNP-12 to KNP-25	Limit intermixing through placement and service.	Subgrade condition, aggregate size, lift thickness, plant, trafficking and wet-season condition.
Geomembrane cushion	KNP-25 to KNP-54	Limit localised contact stress and liner strain.	Aggregate D50 and Dmax, shape, liner type and thickness, pressure, support and placement method.
Heavy protection	KNP-36 to KNP-54	High-survivability interface under severe placement conditions.	Maximum particle size, drop height, temporary trafficking, protrusions and deformation tolerance.

STANDARD BROKEN-NEEDLE CONTROL

Protecting the protection layer

KNP is needle-punched. The standard control targets residual ferrous needle fragments that could create a point load against an adjacent geomembrane.

01 Full-width magnetic recovery

In-line permanent magnetic roller across the fabric width.

02 In-process manual scanning

Both surfaces scanned at intervals not exceeding 30 minutes.

03 100% finished-roll detection

Tunnel detector verified with a 1.0 mm ferrous test piece.

04 Quarantine and traceability

Triggered material is isolated, rewound, recovered and re-inspected before release.

UV EXPOSURE MANAGEMENT

70% retained after 500 h

ASTM D7238 - published across the KNP range

This laboratory retention value is not a direct conversion to allowable site exposure time. Keep wrapped rolls off the ground, secure deployed fabric, record exposure and sequence cover placement to minimise unnecessary UV and weathering.

WHOLESALE PROJECT-DIRECT SUPPLY

Best suited to planned, container-scale requirements

Direct production and limited stockholding allow project-specific grade mixes, roll widths and roll lengths to be coordinated with shipping. This keeps project-delivered pricing competitive while retaining technical selection and one accountable project contact.

- Exact-grade TDS and project selection note
- Batch, release and inspection records by agreement
- Custom roll schedule and mixed-grade container planning
- Project-specific Australian / ISO / ASTM verification available

Use and acceptance: published values are based on current manufacturer data supplied to Kontain in July 2026. Final acceptance remains subject to the project specification, exact-grade confirmation, lot-specific documentation and any nominated conformance testing. This document supports product selection; it does not replace project engineering, installation controls or performance testing where required.