

# NON WOVEN NEEDLE PUNCHED GEOTEXTILE



## Description

ROCKAL Non-woven geotextile is a specialized fabric engineered for various civil engineering and environmental applications. Unlike traditional woven fabrics, non-woven geotextiles are manufactured by mechanically bonding or needle-punching synthetic fibers together, creating a mat-like structure. These synthetic fibers are commonly made from materials such as polypropylene or polyester, providing the geotextile with notable durability and resistance to environmental factors.

## Applications

- Road Construction
- Landfill Engineering
- Railway Construction
- Environmental Protection
- Retaining Walls
- Water and Coastal Engineering

## Storage

- Keep exclusively in the original packaging in an area shielded from moisture
- The opened rolls should be installed & covered within 21-14 days

## Tests & Certifications

- EN ISO 10319
- EN ISO 12236
- EN ISO 12956
- EN ISO 9864
- EN ISO 1-9863

## Features

### Material Composition

Rockal Non-woven geotextiles are commonly crafted from synthetic materials like polypropylene or polyester, offering both durability and resilience against environmental elements.

### Pore Size and Permeability

During the manufacturing process of Rockal non-woven geotextiles, it is possible to regulate the pore size. This control directly affects the permeability of the geotextile, enabling the passage of water while retaining soil particles.

### Filtering and Separation

Rockal Non-woven geotextiles find frequent application in soil and construction contexts, serving roles in filtration and separation. The function involves preventing the amalgamation of distinct soil layers while facilitating the unimpeded flow of water.

### Drainage Improvement

In drainage applications, Rockal non-woven geotextiles can be employed to enhance water flow, providing drainage paths while preventing soil erosion.

### Erosion Control

Rockal Non-woven geotextiles play a crucial role in erosion control initiatives by stabilizing soil and mitigating sediment loss. These geotextiles are applicable in projects focused on stabilizing slopes and protecting river banks.

### Cushioning and Protection

Rockal geotextiles may be used to provide cushioning and protection in various applications, such as beneath geomembranes in landfill liners or as a protective layer for geomembranes in pond liners.

## Technical specifications

Property	Test Method	UNITS	150	180	200	250	280	300	350	400	450	500	600	800	1000
Fabric Weight	5261 - ASTM D	g/m <sup>2</sup>	150	180	200	250	280	300	350	400	450	500	600	800	1000
Thickness Under 2KN/m <sup>2</sup>	5199 - ASTM D	mm	1.9	2.2	2.5	2.7	3	3.2	3.5	3.8	4.2	4.7	5.2	7	8.5
Grab Tensile Strength (M.D)	4632 - ASTM D	N	320	400	470	600	700	800	930	1000	1150	1200	1500	1800	2100
Grab Tensile Strength (C.D)	4632 - ASTM D	N	370	520	700	900	1100	1180	1500	1750	2000	2100	3000	3200	3500
Grab Elongation	4632 - ASTM D	%	>100	>100	>100	>100	>100	>100	>100	>100	>100	>90	>85	>80	>75
Strip Tensile Strength (M.D)	3 - 29073 EN	N	310	380	420	520	700	700	820	850	1050	1100	1300	1700	2000
Strip Tensile Strength (C.D)	3 - 29073 EN	N	400	630	700	900	1200	1200	1500	1800	2000	2100	2800	3100	3800
Puncture Strength	4833 - ASTM D	N	280	330	420	550	690	700	850	950	1100	1200	1500	2000	2400
Mullen Burst	3786 - ASTM D	SPI	200	290	300	360	400	450	530	630	700	770	900	1100	1300
Trapezoidal Tear (M.D)	4533 - ASTM D	N	150	180	200	250	280	300	350	400	450	500	650	800	1000
Trapezoidal Tear (C.D)	4533 - ASTM D	N	180	250	340	430	500	530	580	900	900	1000	1200	1500	1800
C.B.R. Test	4 - 6906 BS	N	1500	1800	2000	2500	2800	3200	3500	4000	4500	5100	6100	8100	10000
Apparent Opening Size	4751 - ASTM D	micron	110	75	75	75	75	75	75	75	75	75	75	75	75
Permeability	4491 - ASTM D	Cm/S	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Transmissivity 2KN/m <sup>2</sup>	4716 - ASTM D	L/M/H	150	160	170	185	190	200	200	220	300	300	380	380	420

## Installation

Clear debris and sharp objects from the site. Unroll the geotextile with sufficient seam overlap, following manufacturer specs and securing seams. Build over the geotextile for separation and filtration, regularly checking placement and integrity. Properly backfill to avoid damage, identify

irregularities and drainage issues on the surface, and use stakes or anchors to prevent movement. Secure the geotextile with staples or stakes, and add soil or aggregates as needed. Conduct a final inspection to ensure the geotextile is properly installed. Address any issues immediately to maintain effectiveness. Ensure all construction activities are completed without displacing the geotextile.

