

TECHGEO

nonwoven geotextiles

PP Staple Fiber Nonwoven Needle Punched Geotextile

TECHGEO



TECHFAB INDIA

At the heart of geosynthetic activity



Proudly distributed in New Zealand by:
Cosio Industries Ltd
27-33 Lansford Crescent,
Avondale, Auckland, NZ
www.cosio.co.nz
sales@cosio.co.nz
0800 109 093

TechGeo NonWoven Geotextile

The use of geotextiles in civil engineering applications has grown substantially since their first usage in 1960, Geotextiles are now widely applied in most of the Civil Engineering applications. The most commonly used Nonwoven Geotextile are Needle Punched due to their proven track record and versatility.

TechGeo nonwoven needle-punched geotextile manufactured by TechFab India Industries is produced from specially engineered UV stabilized 100% Polypropylene fibre Polypropylene yarn to form stable network of Staple fibers in order to ensure desired engineering properties in the fabric.

The characteristics of a Nonwoven Geotextile are determined by type of raw material, structure of fiber matrix and bonding method. There are three types of bonding mechanisms for manufacturing of Nonwoven Geotextile, Mechanical Bonding or Needle Punching in which randomly oriented short staple fibers or continuous filament layers (fleece) are bonded together through process of Needling; In Thermal bonding the short fibers are bonded together through Heating Process, In Chemical bonding the fibers are bonded together through chemical coating.

TechGeo nonwovens are produced from state of art fully automatic German Dilo plant from the UV stabilized Crimped staple fiber produced from 100% virgin PP.



Fig 1 : (a) Staple Fiber Plant (b) Nonwoven Manufacturing line from Dilo Germany

TechGeo Nonwoven Geotextile are manufactured through process of Needle-punching that involves forcibly entangling layers of loose staple fibres into three dimensional structure (fig 1b) by sequentially punching and pulling out barbed needles through the fiber matrix. TechGeo Nonwovens are produced with UV stabilized select Crimped staple fibers and firm interlocking bond ensured through German Dilo machine exhibit high abrasion and CBR puncture resistance.

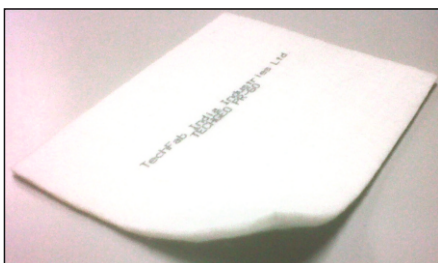


Fig: 1 a – TechGeo Nonwoven

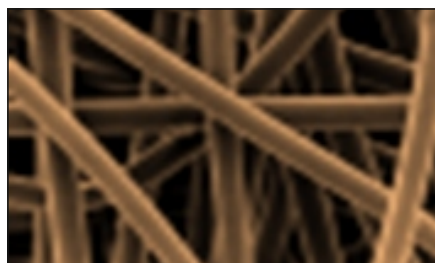


Fig:1b-Magnified View of Needle-punched Nonwoven

TechGeo Needle-punched nonwovens have higher elongation due to the flexible and non-brittle fibre junctions. Due to their superior elongation behavior TechGeo nonwovens can accommodate soil irregularities in better way and are more resistant to puncture and can absorb more impact energy. The compact and randomly oriented fiber matrix provide excellent filtration characteristics and hydraulic properties in TechGeo Nonwovens.

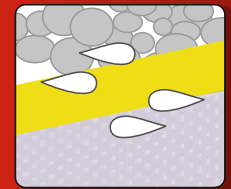


TechGeo NonWovens : An Overview

- ▮ Made of 100% PP stable fiber
- ▮ High UV and Abrasion Resistance
- ▮ Stable in pH range of 2 - 13 and resistant to biological degradation
- ▮ Available in 'N' AND 'H' series from 120 to 1200 GSM
- ▮ Upto tensile strength of 75Kn/m
- ▮ 'N' Range excellent filtration behavior, 'H' range thick and robust for Protection and Separation applications
- ▮ Excellent clogging resistance

TechGeo Engineering Functions

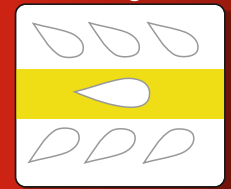
▮ Filtration



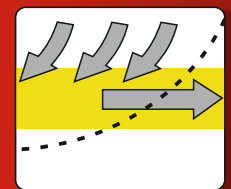
▮ Separation



▮ Drainage



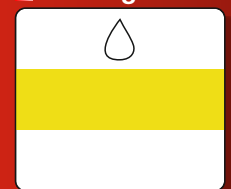
▮ Reinforcement



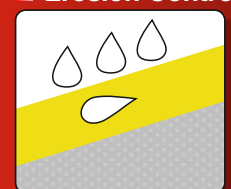
▮ Protection



▮ Sealing



▮ Erosion Control



How to select right TechGeo Grade?

Applications	Area / Sectors	TechGeo Functions	Key Properties
	Highway & Railways	Separation Filtration Reinforcement Drainage	Tensile Strength, Elongation CBR Puncture, Impact Energy Pore Size, Permeability
	River Bank & Coastal Protection	Filtration, Erosion Control	Pore Size, Permeability, UV Resistance, Abrasion Resistance, CBR Puncture, Impact Energy
	Waste Landfills & Ash Dikes	Protection, Filtration, Drainage	Mass, CBR Puncture, Tensile, UV Resistance, pH Stability, Chemical Resistance, AOS, Flow Rate, Permeability, Elongation, Cone Drop
	Tunnels & Waterproofing	Protection, Drainage	Mass, CBR Puncture, Tensile, UV Resistance, AOS, Flow Rate, Permeability, Cone Drop
	Hydro Projects, Dams & Reservoirs	Filtration, Protection Drainage	AOS, Flow Rate, Permeability, CBR Puncture, Tensile
	Canals	Drainage Filtration	Pore Size, Permeability, Flow Rate, Elongation, Tensile Strength
	Pavement Rehabilitation	Sealing	Polymer Melting Point, Asphalt Absorption, Tensile Strength, Tear Strength
	Architecture & Landscaping	Filtration	AOS, Flow Rate, Permeability

Why TechGeo Nonwovens?

- | High UV and Abrasion Resistance
- | Available upto 5.0 m width
- | ISO 9001 Certified
- | Stat-of-art manufacturing plant having 4000 Tonne per annum capacity
- | Backward Integration to manufacturing High Quality PP Staple Fiber for producing NM Raw Material
- | Reliability and Trust of TechFab India Brand
- | Technical Support from qualified Technical people
- | Well proven in the field
- | Approved in several Government Departments
- | NABL Accredited Laboratory with all Testing of Nonwoven available under one roof
- | Complete QC Test facilities in a modern lab as per ISO and ASTM standards



Important Notice

The information contained in this brochure is general in nature and does not cover any particular site or soil conditions. This is only for guidance purposes. It is up to the user to determine the suitability of product for their application.

Stock sizes available

PR15 (STRENGTH CLASS A) - 1.9M X 50M, 3.9M X 50M, CUT TO LENGTH SERVICE

PR20 (STRENGTH CLASS B) - 1.9M X 50M, 3.9M X 50M, CUT TO LENGTH SERVICE

PR25 (STRENGTH CLASS C) - 1.9M X 50M, 3.9M X 50M, CUT TO LENGTH SERVICE

PR35 (STRENGTH CLASS D) - 3.9M X 50M, CUT TO LENGTH SERVICE



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