FLORENCE CRAFT®
BY VANDITA CREATIONS

GEOTEXTILE

All Geotextile Products

FLORENCE CRAFT GEOTEXTILE

The use of Geotextiles in civil engineering application has grown up substantially since their first usage in 1965, Geotextile are now widely applied in most of the civil engineering application. The most Commonly used nonwoven Geotextile are needle punched due to their proven track record and versatility. FLORENCE CRAFT non-woven needle-punched Geotextile manufactured by Vandita Creations. Is produced from specially engineered UV stabilized 100% PP & PET staple fibre in order to ensure desired engineering properties in the fabric.

The Characteristics of a nonwoven Geotextiles are determined by type of raw material, structure of fibre matrix and bonding method. Commonly prevalent raw materials for nonwoven Geotextiles are polypropylene (PP) or Polyester (PET).

There are three types of bonding mechanisms for manufacturing of nonwoven Geotextile i.e. mechanical bonding or needle punching in which randomly oriented short staple fibers or continuous filament layers 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.

FLORENCE CRAFT Geo are nonwoven geotextile manufactured from high quality PP & PET staple fibres. The fibres are mechanically bonded through needle-punching to form a strong, flexible and dimensionally stable fabric structure, with optimum pore sizes and high permeability. The geotextile is resistant to chemicals and biological organisms normally founded in soils and is stabilized against degradation due to shorter exposure to ultraviolet radiation.

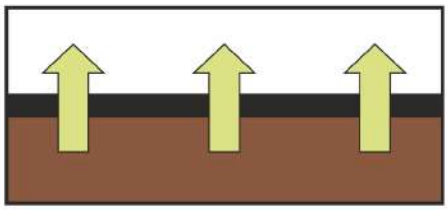
FLORENCE CRAFT GEO - Functions

FLORENCE CRAFT-Geotextile is made from the highest quality PP & PET fibers. It is a Nonwoven Geotextile, needle punched to form a strong fabric that relates its dimensional stability adding years to the life of any roadways, railways, landfill, landscaping, horticulture or civil environmental application. This Geotextile is resistant to UV degradation and biological, chemical environments normally found in soils.

Function of Geotextile

- **Filtration**

It allows water to move through the soil while retaining all upstream soil particles. It is used to prevent soils from migrating into drainage aggregate or pipes while maintaining flow through the system.

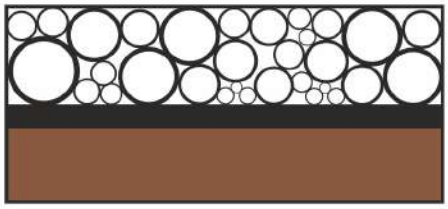


- **Drainage**

FLORENCE CRAFT- Geotex acts as a drain to carry fluid flow through less permeable soils. It dissipates pore water pressures at the base of embankments.

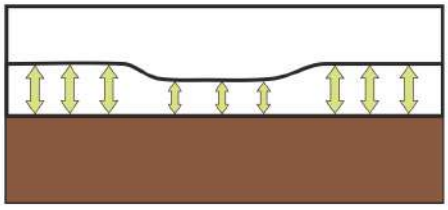
- **Separation**

It acts to separate two layers of soil that have different particle size distributions. This prevents base materials from penetrating into underlying soft subgrade soils, thus maintaining design thickness and integrity of the layer.



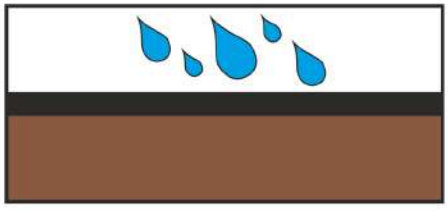
- **Protection**

It is used to cushion Geo-membrane liners to prevent liner puncture due to drainage media, stones or other sharp objects. NOWOFILL Nonwoven Geotextile are used as stress absorbing mechanical inter layers in asphaltic overlays.



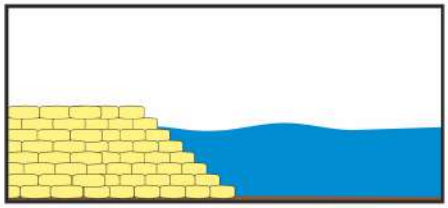
- **Barrier**

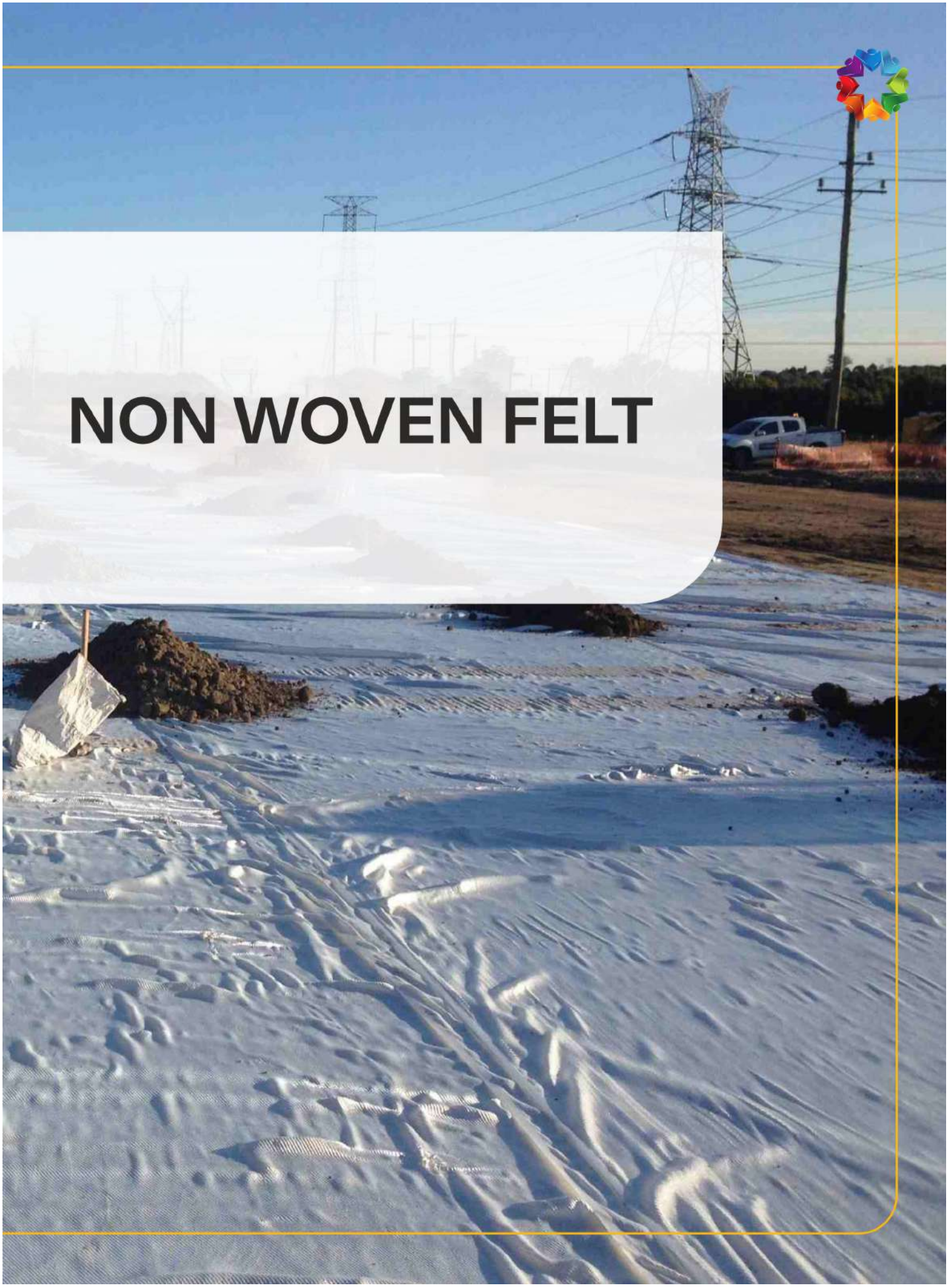
FLORENCE CRAFT- Geotex paving fabrics when saturated with the tack coat functions as a moisture barrier preventing entry of surface moisture into the pavement.



- **Containment**

They are used in making geo containers and geobags which are used in a wide range of applications.





NON WOVEN FELT

GEOTEXTILE NON WOVEN

Needle punching is the oldest method of producing nonwoven products. The web for needle punch nonwoven is made with the help of dry-laid technology mainly by carding process. This process involves forcibly entangling layers of loose staple fibres or filaments into a 3-D structure by alternately punching and pulling out beds of barbed needles. With needle punching or mechanical bonding, strong yet flexible and comparably thick nonwovens are produced.

Process Description:

Needle-punched nonwovens are manufactured by mechanically orienting and interlocking the fibers of a carded web. This mechanical interlocking is achieved with thousands of barbed felting needles repeatedly passing into and out of the web. The major components of the needle punch line and brief description of each are as follows:

Blender - The machine is where the raw materials are stored at a desired proportion of different types fibers (e.g., 40% PP and 60% PET)

Opener - It is where the raw materials are fed from the blender in order to reduce the size of fiber tufts from the blender to the hopper feed.

Hopper - The machine where the fibers are stored and are transferred for fiber carding.

Carding- The process where the entangled fibers are arranged into a parallel fibrous web.

Cross Lapper - The machine that continuously lays a web so that its fibers are oriented in cross direction. The web is laid on the conveyor moving at right angles.

Needle Punching - The process in which the web is bonded mechanically to each other by a series of needles. The designs of products are being controlled in this line. The operations consist of a pre-needler, drafter and a finish needle loom.

Calendering - In this process a smoother product by heating up to a certain (melting) temperature depending on the raw materials used.

Winding & Cutting - The final product is being wound into rolls and being cut into a specified width in this line.

Application of Needle-Punch Non Woven :

The major Application and End-usages of needle punch fabrics are:

Geotextiles : Needle punch geotextiles are used in functions like

Separation,

Filtration,

Reinforcement,

Drainage & erosion control and

Find applications in roads, railways, air runways, coastal shore protection, etc.

Needle punch carpets: They are used in passenger cars as flooring material.

Other Miscellaneous Applications :

Automotive Headliners

Filtration

Mattress / Furniture

Insulation Felts, etc.

Technical Data

FLORENCE CRAFT GEOTEXTILE are NonWoven Geotextiles manufactured from high quality fibres. The fibres are mechanically bonded through needle-punching to form a strong, flexible and dimensionally stable fabric structure, with optimum pore sizes and high permeability. GEOTEX is resistant to chemicals and biological organisms normally founded in soils and is stabilized against degradation due to shorter exposure to Itraviolet radiation. FLORENCE CRAFT GEOTEXTILE confirms to the following property values.

FLORENCE CRAFT PET GEOTEXTILE SERIES TECHNICAL DATA SHEET

Property	Unit	Test Standard	FCG-06	FCG-08	FCG-10	FCG-12	FCG-15	FCG-20	FCG-25	FCG-30	FCG-35	FCG-40	Tolerance
Colour	-	-	WHITE / OFFWHITE / BLACK / GREY										
Material	-	-	PET Polyester Staple Fibre										
Process	-	-	Advance Needle Punch Technology										
Thickness @ 2 kpa	mm	ASTM D 5199	0.9	1.0	1.2	1.5	1.8	2.0	2.2	2.4	2.75	3.0	
Tensile Strength (MD/CD)	kn/m	ISO 10319 ASTM D 4595	1.0/1.0 1.0/1.0	1.5/1.5 1.5/1.5	2.0/2.0 2.0/2.0	3.0/3.0 3.0/3.0	4.0/3.5 4.0/3.5	4.5/4.0 4.5/4.0	5.0/4.2 5.0/4.2	6.5/5.5 6.5/5.5	7.5/6.0 7.5/6.0	9.0/7.2 9.0/7.2	
Tensile Elongation (MD/CD)	-	ISO 10319 ASTM D 4595	50/50 50/50	50/50 50/50	50/50 50/50	50/50 50/50	50/50 50/50	50/50 50/50	55/55 55/55	55/55 55/55	55/55 55/55	55/55 55/55	+/- 10%
CBR Puncture Resistance	N	ISO 12236 ASTM D6241	400 400	500 500	700 700	900 900	1200 1200	1800 1800	2200 2200	2800 2800	3000 3000	3500 3500	
Tearing Strength	Kn/m	-	0.04	0.05	0.08	0.1	0.12	0.16	0.2	0.24	0.28	0.33	
Standard Width*	Meter	-	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	
Roll Length*	Meter	-	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	

FLORENCE CRAFT PP GEOTEXTILE SERIES TECHNICAL DATA SHEET

Property	Unit	Test Standard	FPG-06	FPG-08	FPG-10	FPG-12	FPG-15	FPG-20	FPG-25	FPG-30	FPG-35	FPG-40	Tolerance
Colour	-	-	WHITE / OFFWHITE / BLACK / GREY										
Material	-	-	Virgin Polypropylene Fibre										
Process	-	-	Advance Needle Punch Technology										
Thickness @ 2 kpa	mm	ASTM D 5199	0.75	0.8	0.85	0.9	1.3	1.6	1.8	1.9	2.3	3.0	
Tensile Strength (MD/CD)	kn/m	ISO 10319 ASTM D 4595	1.75/1.75 1.75/1.75	2.5/2.5 2.5/2.5	4.0/4.0 4.0/4.0	6.5/6.5 6.5/6.5	9/10 9/10	11/13 11/13	13.5/15.5 13.5/15.5	16.0/18.5 16.0/18.5	18.0/20.5 18.0/20.5	22.0/24.0 22.0/24.0	
Tensile Elongation (MD/CD)	-	ISO 10319 ASTM D 4595	50/50 50/50	50/50 50/50	50/50 50/50	50/50 50/50	50/50 50/50	55/55 55/55	55/55 55/55	55/55 55/55	55/55 55/55	60/60 60/60	+/- 10%
CBR Puncture Resistance	N	ISO 12236 ASTM D6241	150 150	300 300	500 500	1100 1100	1500 1500	2050 2050	2600 2600	3100 3100	3600 3600	4100 4100	
Tearing Strength	Kn/m	-	0.25	0.55	1.00	1.62	2.25	2.75	3.37	4.0	4.5	5.5	
Standard Width*	Meter	-	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	1.00 to 3.50	
Roll Length*	Meter	-	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	100 to 300	

- The values published in this leaflet are to the best of our knowledge true and correct. The product specification may change at any time without prior notice. No warrantly is expressed or implied.

LANDSCAPING

FLORENCE CRAFT GEOTEXTILE Landscape fabric is a needle punched polyester geotextile. The permeable non-woven landscape fabric is ideal for landscape projects where weed control, soil separation and ground stabilization is required. Porous weed block fabrics allow water infiltration promoting good drainage while suppressing weed growth.

WATER PROOFING

FLORENCE CRAFT GEOTEXTILE designed for this purpose, are developed from 100% polyester fiber, which is thermally bonded to provide a waterproofing membrane for the buildings. Different places where this waterproofing membrane can be used includes:landscaping, strip drains, parking lots, and other places. These Nonwoven are highly durable in nature, easy to carry and lay, due to which they can be ideally used for the metal roofs and in the concrete mixture.

POND LINER

Pond lining is one of the most common applications for geomembrane use. Advanced test methods allow for the smallest holes to be detected to truly achieve a perfect containment system. Florence Craft offers advanced geomembranes that can be used as a primary containment barrier for high temperature liquids and provide outstanding chemical compatibility.

GEOBAGS

The Non woven Geobags is made out of Geotextiles fabric that is inhale stitched from three sides and is open from one side. It is designed to be filled with soil and is installed while the construction of marine and hydraulic structures. The geo bag or Nonwoven Geotextile bag is a geo-synthetic product that is made out of polyester, polypropylene or polyethylene and is used for the protection of hydraulic structures and riverbanks from severe erosion and scouring.

SEPARATION & FILTERATION

FLORENCE CRAFT GEOTEXTILE perform the functions of separation and filtration in the construction of sub-base granular layers. Geotextiles are permeable and allow water to filter through, while separating and larger stone or soil particles from passing. This separator / filter function prevents the intermixing of granular sub base layers and the passage of stone particles which could cause the failure of the surface or pavement structure.

LANDFILL

FLORENCE CRAFT GEOTEXTILE nonwovens are used in critical subsurface drainage systems, soil separation and geomembrane liner protection against containment within landfills. These geotextiles provide the required strength and abrasion resistance to withstand installation and application stresses to create an effective, long-term drainage solution.

EROSION CONTROL

FLORENCE CRAFT GEOTEXTILE erosion control products for applications such as surface protection, protecting the structural stability of soils and retaining soil on slopes. Included in the range are biodegradable or non-biodegradable, seeded or unseeded erosion mats and three dimensional geocells used for retaining soils on embankments. GEOTEX non woven protecting building infrastructure, drainage systems, tree roots under drives and paths, reservoir and landfill liners and membranes.

Roof Garden

FLORENCE CRAFT GEOTEXTILE provides excellent drainage over the whole base area of the soil layer in addition to providing additional water proofing protection. This product is also environmental friendly; it absorbs and holds 10-12 times its weight of water, acts as capillary dispersion layer and performs the function of geotextiles separator filter.

ROOT BARRIER

FLORENCE CRAFT GEOTEXTILE are used to protect buildings, walls, paths, drainage pipes, cables and lawns from potential damage caused by root development. Tree roots grow very close to the surface and are the cause of considerable damage. Structures with shallow foundations can be undermined. Damaged pipes, or pipes with faulty joints, can become blocked by roots. Root growth is also known to cause desiccation of soils to the extent that soil shrinkage can result in parts of the foundation no longer being supported. When this occurs structures may subside and crack, and in these circumstances expensive underpinning may be the only solution.

DRAINAGE

FLORENCE CRAFT GEOTEXTILE are widely used for drainage in earth and construction works. The drainage function is often confused with the filtration function. When a geo-textile forms part of a drainage system, where the geo-textile is used to separate a soil and a coarse-grained drainage layer, the function is filtration. Drainage layers are used in civil applications to remove moisture or fine particles from the system.

Geo-Membrane

FLORENCE CRAFT Geo-Membrane [HDFE SHEET]

FLORENCE CRAFT Geo-membrane are very low permeability synthetic HDPE membrane liners or barriers made from PP used with any geotechnical engineering related material so as to control fluid migration in a man-made project, structure or system. They are used exclusively as liquid or vapor barriers and have wide application in broad areas of environmental and transportation engineering practice, as well as in Geo-technical engineering. Within the environmental applications, an area is the containment of solid waste materials.

Advantages:

- Ease of molding or shaping
- Durability under all environmental conditions
- Good mechanical strength and toughness
- Very good tear strength and elongation
- Excellent resistance to abrasion
- Good barrier to moisture
- Excellent UV resistant
- Very good impermeable properties

Application:

Pond Liners

The Clean Water Act has Required Most Publicly Operated Waste Water Treatment Plants to Install Lagoon Liner Systems to Prevent Contaminants from Entering Groundwater Sources or Streams. In Addition, Pond Liners can Also be Used in Application Such as Golf Courses, Amusement Parks, Resorts, Agriculture & Aquaculture.

Landfill

The Primary Purpose of Geo membrane Liner in a landfill is to protect the groundwater from being contaminated. FLORENCE CRAFT Geo membrane are Resistant to Most Wastes & Exceed The Requirements of impermeability. Hazardous Waste Landfills Require Double-Liners & Leachate Collection / Removal Systems. Sanitary Landfills May Require a Single Liner With a Leachate Collection / Removal System.

Canal Liners

FLORENCE CRAFT Geo-membrane are viable Alternative to Concrete and Compacted Earth for Lining Canals to Reduce Seepage. Geo membrane can be Used as an Expedient Method to Repair Existing Deteriorated Concrete Linings.

Secondary Containment

Tank Farms are Lined to Prevent Groundwater Contamination in The Event of a Chemical Spill. The Secondary Containment System can be Placed on Concrete or Directly on The Ground. These Liner Systems for Secondary Containment can be very Sophisticated Utilizing Elaborate Attachment to Tank & Other Structure.

Mining

The Use of Geo-membrane May Result in More Productive Mining. New Processes Involving The Heap Leach Method of Precious Metal Extraction Using Chemical Solution have Resulted in Low Cost Extraction from Low Grade Ores. The Use of Flexible Geo-membrane Liners Prevents The Contamination of The Soil & Groundwater by These Chemical Solutions.

Cap & Closures

FLORENCE CRAFT Geo-Membrane are Used in Landfill Caps to Prevent Fluid Flow into The Landfill, Thereby Reducing or eliminating The Generation of Waste Liquid After Filing The Landfill. The Cap is also Designed to Trap & Properly Vent The Gases Generated During Decomposition of Organic Waste. Another Advantage is That The Completed Cap Allows for Deficient Revegetation & Restoration of The Land.

Geo-Membrane [HDFE SHEET]

FLORENCE CRAFT Geo-membrane Specifications

	Performance Properties	ASTM	GM-50	GM-75	GM-100	EL 6060^{HD}
Index	Thickness	D5199	0.5 mm	0.75 mm	1.0 mm	1.5 mm
	Tensile Strength at Break (MARV)	D638	21 N/mm	25 N/mm	31.5 N/mm	44.5 N/mm
	Elongation at Break (MARV)	D638	1000%	1000%	1000%	1000%
	Trapezoidal Tear	D751	200 N	280 N	400 N	480 N
	Punchure Resistance (MRAV)	D4833	194 N	236 N	298 N	400 N
Performance	Hydrostatic Burst Strength	D751	85 psi	120 psi	166 psi	270 psi
	Axi-Symmetric Strain (MARV)	D5617	40%	50%	80%	80%
	Critical Cone Height (Large Scale Puncture Test)	D5514	2.0 inches 50 mm	2.0 inches 50 mm	2.0 inches 50 mm	2.0 inches 50 mm
	Dynamic Puncture Test				306 psi	560 psi
	Ozone Resistance 100 pphm @ 40°C	D1149 168 hrs	No Cracks Observed			
	Flexibility Cycles Without Cracking	D6182	8000			
	Stress Crack Under Constant Load	D5397	> 1000 hrs			
	Solvent Vapour Permeability ASTM Fuel C ASTM | RM 902	D814	≤10 gramsmm^{2}hr ≤10 gramsmm^{2}hr			
	Methane Permeability	D1434	3.11 X 10^{-4} m^3/m^2.day			
	Water Vapor Permeability	F1249	3 X 10^{-13} cm/sec			
	Certifications (Potable Water) NSF 61 AS/NZ 4020		Pass			
	Toxicity to Aquatic Organism	Environment Canada RM- 13 & 14	No Toxic Effects Were Found on Rainbow Trout & Daphnia Magna after the Exposure Period.			
Endurance	Brine Resistance @ 90°C HPOIT Retained	D 1693 2400 Hrs	1000 mins			
	High Pressure Oxidative Induction Time	D 5885	>2000 mins			
	UV Resistance Strength Retained of Original Sample	D 4329 30,000 hrs	90%			
	Coefficient of liner Thermal Expansion	D 696	1.4 X 10^{-4} m/m/°C 7.8 X 10^{-5} ft/ft/°F			

Notes: This Product Meet or Exceeds GRI-GM 17 Specifications | Tested at 20 inches/min | Measured With a Gage Length of 1.5 inches | This Test Measures Out of Plane Response of a Material to a force that is applied perpendicular to The Initial Plane of Geo-membrane Sample. | This Test Simulates The Relative Puncture Resistance of a Geo-membrane When Subjected to Gradually Increasing Loads. | Measured on 30 mil Thickness FLORENCE CRAFT Recommends Testing Geo-membrane Series before Use to Compatibility with The Specific Aquatic Species.

Drainage Cell

FLORENCE CRAFT Drainage Cell

FLORENCE CRAFT Drain cell are high strength and lightweight linked drainage cell that are particularly intended for waterproofing and sub-surface drainage membrane defence. These are man-made from high forte polypropylene and are utilized in numerous applications like planter, terrace gardens, and podium systems, landscape decks, basement retaining walls, sports fields, pond filtration systems, agri-horti usages etc.

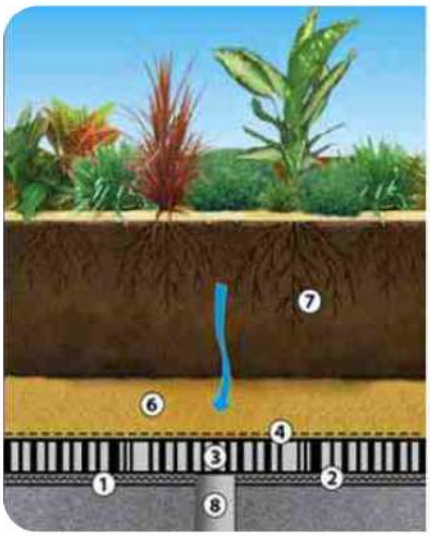
Advantages:

- Excellent water discharge capacity.
- Minimum soil depth required.
- Easy & Fast Installation.
- Minimum irrigation of water.
- Lightweight and High Compressive Forte
- Large superficial annulled ratio
- Enduring Free Flow
- Horizontal and vertical usage
- Sluggish to organic acids, alkalis and salts
- U. V. Resilient and Maintenance Free
- Little cost, convenient and fast installation

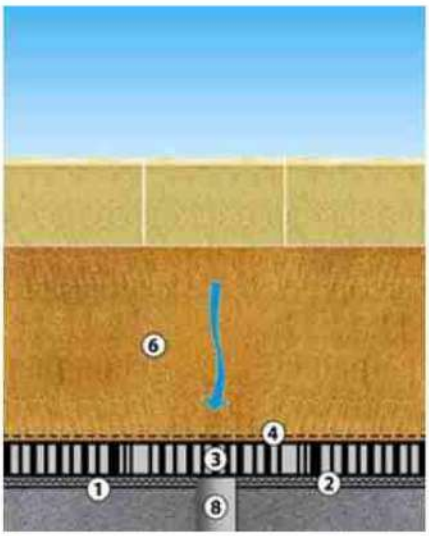
Applications:

- Vertical
- Horizontal
- Bridge Abutments
- Golf Courses
- Landfills
- Landscaping
- Retaining Walls
- Road Edge
- Sports Field
- Tunnels
- Golf Courses
- Green roofs
- Landscaping
- Paving
- Planter boxes
- Roadways
- Sports Field

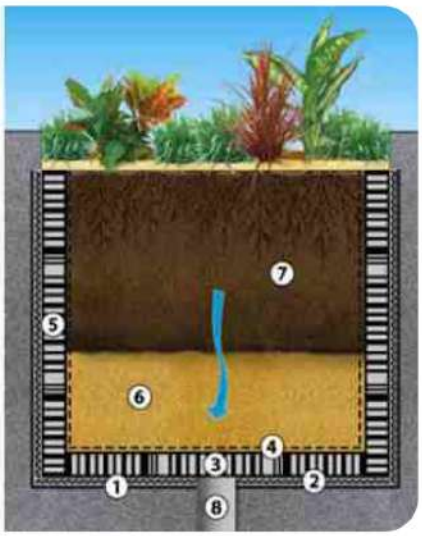
Roof Garden



Paving



Planter Box



1. Waterproof Membrane
2. Protection Board
3. Drainage Cell
4. Geotextile Fabric
5. Drainage Cell
6. Coarse Washed River Sand
7. Soil Mix
8. Outlet Pipe

Drainage Cell Specifications:

Technical Data:

Drainage cell

Height:	20/25/50 mm
Width:	500/1000mm
Length:	500/1000mm
Weight:	3kg/sqm
Surface void:	>65%
Volume void:	30 litres/sqm
Compressive strength:	>1500kPa
Drainage capacity:	>14400 litres/h/sqm
Service temperature:	-30c + 120c
Material:	Recycled polypropylene

Filter fabric

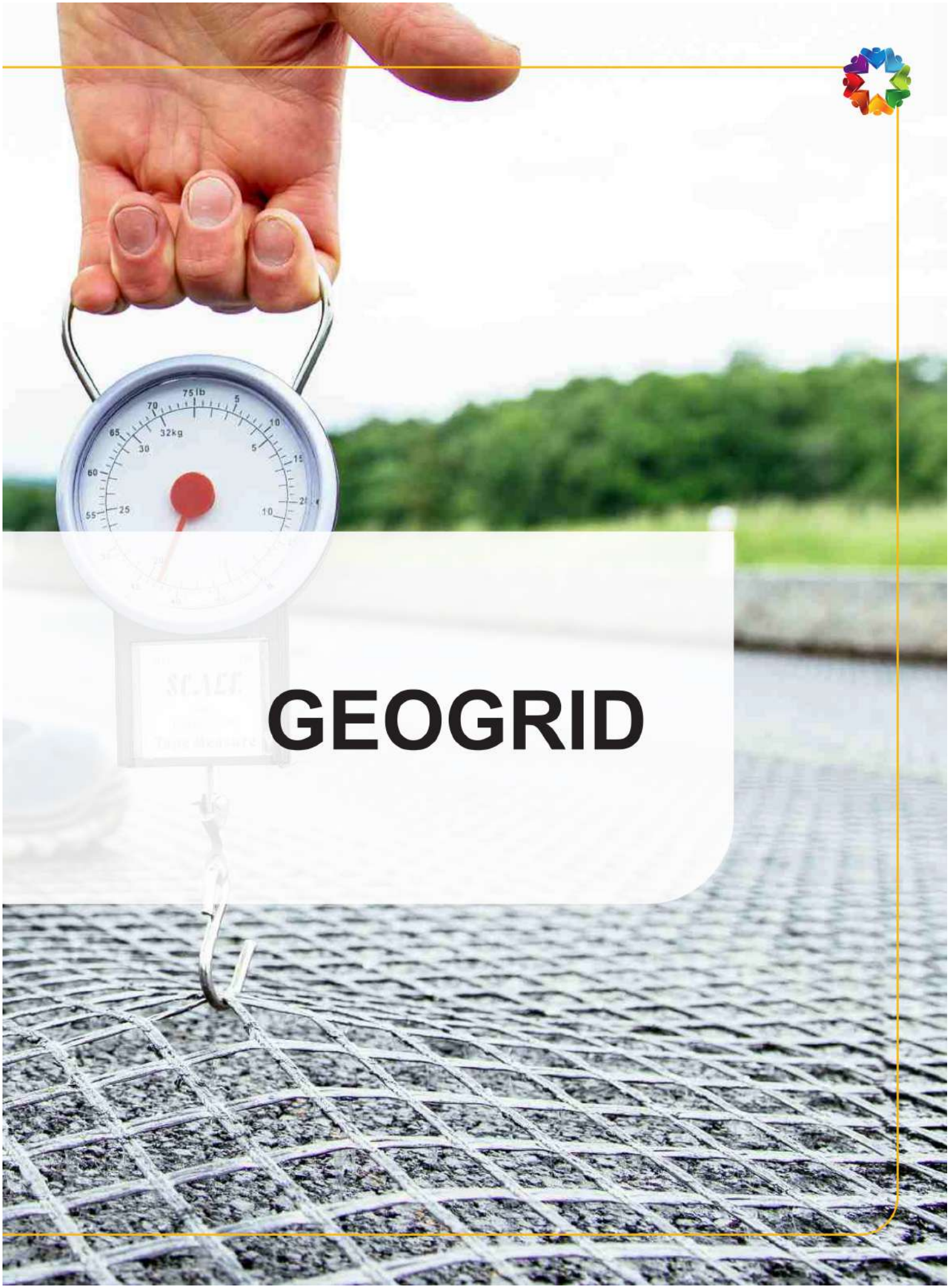
Thickness:	1.2mm
Width:	1.5/3.0m
Pore size:	.150mm
Permeability:	0.29cm/seg
Permitivity:	2.7 seg -1
Flow rate:	6925 litres/min/m2
Material:	Polypropylene/PET

Installation Procedure:

1. Place the drainage cell over the surface of the membrane and butt together (interlocking is not required). For additional protection a layer of 3mm protection board is recommended under the drainage cell.
2. Cut the drainage cell where required using a hand or circular saw.
3. Place the filter fabric over the drainage cell allowing for a 150mm overlap at each seam. Allow for additional fabric to cushion the edges of the drainage cell around the perimeter against the waterproof membrane and walls.
4. Install the drainage cell vertically to the walls of the planter boxes if required and cover with filter fabric. Allow sufficient overlap to the horizontal sections.
5. Lay a 50-100mm layer of washed coarse river sand to act as a filtration layer over the fabric.
6. Lay the soil profile to the required depth. Please note that a minimum of 300mm of cover is required before allowing vehicles and machinery to traffic over the surface.

GEOTEX DRAINAGE CELL SPECIFICATION (25mm)

-	Standard Used	Metric	Imperial
Width		Upto 1000mm	39.37"
Length		Upto 1200mm	47.24"
Height		20/25/50mm	1.0'
Surface Area		85 % void	
Material		100% recycled polypropylene	
Biological & Chemical Resistance		Unaffected by moulds and algae, soil-bourne chemicals, bacteria and bitumen	
Service Temperature		-30°C to 120°C	-22°F to 248°F
Compressive Strength/ Ultimate Load	ASTM D1621	±205.56 t/m2	±306.80 psi
Flow Rate per unit width	ASTM D4716	>240 Lt/min	>63.40 gals/min
Sizes	1000mm X 1200mm		
	500mm X 600mm		



GEOGRID

FLORENCE CRAFT GEOGRID

Geogrid is Geosynthetic Material Used to Reinforce Soils and Similar Materials. Geogrids are Commonly Used to Reinforce Retaining Walls, As Well As Subcases or Subsoil Below Roads or Structures. Soils Pull Apart Under Tension. Compared to Soil, Geogrids are Strong in Tension. This Fact Allows Them to Transfer Forces to A Larger Area of Soil Than Would Otherwise be The Case. Geogrid Products are Designed for Reinforcement and Characteristically are Integrally Connected to Elements Separated by in-Plane Apertures.Geogrids Form a Distinct Category of Geosynthetics Designed for Reinforcement. These Products are Characterized by a Relatively High Tensile Strength and a Uniformly Distributed Array of Large Apertures (Openings Between the Longitudinal and Transverse Elements). The Apertures Allow Soil Particles on Either Side of The Installed Sheet to Come into Direct Contact, Thereby Increasing The Interaction Between The Geogrid and Some Soils. Also, The Apertures Ensure Vertical Drainage of a Reinforced Free-Draining Soil. These are Two Types of Geogrid-

BIAXIAL GEOGRID:

Biaxial Geogrid Range is Manufactured Out of Polypropylene by a Unique Punching & Drawing Process & Provide an Ideal Solution for Soil Stabilisation, Sub Base Reinforcement, Foundation Engineering & Other Highway Challenges. Compacted Granular Material Partially Penetrates Over Biaxial Geogrid & Projects Through The Apertures, Which Gives Interlocking Action Between The Particles & The Grid. This Interlocking Enables The Grid to Resist Horizontal Shear Form The Fill & Mobilise The maximum Bearing Capacity of a Soft Sub Soil.

Application:

- Road Construction, Heavy Duty Pavements.
- Railway Track Bed Stabilization.
- Base Reinforcement / Soil Stabilization.
- Foundation Engineering.
- Track Bed Stabilization.
- Reinforced Soil Wall.
- Bridge Abutment.
- Slope & Landscape Repair.
- Roadway Embankment.
- Asphalt Reinforcement.
- Foundation of Oil Storage Tanks.
- Erosion Control.
- Mining Operation.
- Environment & Waste Management System (WMS).

POLYESTER GEOGRID:

Polyester Geogrid are Manufactured by Utilising a Complex Knitting Process Using High Tenacity, High Oriented Polyester Filament to Provide Superior Engineering & Long Term Design Strength Properties. Polyester Geogrid is Dimensionally Stable with Uniform Network of Apertures Providing Significant Tensile Reinforcement Capacity in Two Principle Directions. The Polyester Geogrid is Engineered to be Mechanically & Chemically Stable, In Both Harsh Construction Installation Phase & in Aggressive Soil Environment (ph Level 2.0 - 12.0). Polyester Geogrid are Biologically Unaffected by Soil Micro-Organisms. A Black PVC Saturation Coating Provides Further Chemical, Mechanical, As Well As Ultraviolet Protection.

BIAXIAL GEOGRID TECHNICAL DATA SHEET

PHYSICAL PROPERTIES		TEST METHOD	UNIT	GB150	GB200	GB250	GB300	GB400
Aperture Size [2]	MD		MM	48	44.7	38.9	42.4	39.7
	CD		MM	41.4	42.9	38.6	39.9	42.5
Roll Lenth [4+5]			M	50	0	50	50	50
Roll Width [4]			M	3.9	3.9	3.9	3.9	3.9
Tensile Properties								
Ultimate Tensile Strength [1]	MD	ASTM D6637	Kn/m	17.8	24.4	27.4	32.8	38.9
	CD	ASTM D6637	Kn/m	15.1	20.1	25.7	32.0	39.1
Strain at Ultimate [2]	MD	ASTM D6637	%	11.5	8.9	14.7	15.4	19.8
	CD	ASTM D6637	%	7.6	7	9.6	7.9	9.8
Tension at 5% Strain [1]	MD	ASTM D6637	Kn/m	11.3	19.7	20.5	23.7	27.1
	CD	ASTM D6637	Kn/m	11.4	16.5	21.1	25.7	27.8
Junction Strength [2]	MD	GRI-GG2	Kn/m	16.9	26	27.6	31.3	37.1
	CD	GRI-GG2	Kn/m	15.6	18.9	24.6	29	35.7
Tension at 2% Strain [1]	MD	ASTM D6637	Kn/m	6.5	10.1	9.8	10.9	14.8
	CD	ASTM D6637	Kn/m	6.8	8.8	11.9	13.2	15.6
Flexural Rigidity [2]	MD	ASTMD 1388 {MODIFIED}(3)	mg-cm	52659	509221	1002145	1885537	3581836
	CD	ASTMD 1388 {MODIFIED}(3)	mg-cm	165377	503875	1151286	2003728	3581476

POLYESTER GEOGRID TECHNICAL DATA SHEET

PROPERTIES	TEST METHOD	UNITS	GP35	GP50	GP70	GP100	GP150
Tensile Properties							
Strain at Ultimate [2]	ASTM D 6637	%	15.9	13.8	14.3	15.3	16.1
Ultimate Strength [1]	ASTM D 6637	Kn/m	58.8	89.1	95.5	133.9	211.1
Tension at 5% Strain [1]	ASTM D 6637	Kn/m	14.5	23	27.3	28.2	42.1
Design Properties							
Longterm Design Strength in the MD	GR1-CG4b	Kn/m	32.56	49.82	53.87	73.82	109.19
Co-Efficient of Direct Sliding-cds	ASTM D 5321		0.88	0.88	0.88	0.88	0.88
Co-Efficient of Interaction-ci	ASTM D 6706		0.85	0.85	0.85	0.85	0.85
Creep Reduced Strength [1]	ASTM D 5262	Kn/m	37.74	56.49	60.07	85.11	126.27
Physical Properties							
Roll length [3]	MINIMUM	M	50	50	50	50	50
Roll length [3]	MINIMUM	M	3	3	3	3	3

*As per Manufacturer Specification.

*The values published in this leaflet are to the best of our knowledge true and correct. The product specification may change at any time without prior notice. No warrantly is expressed or implied.

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