SUNTECH®

Fabric For Years

An ISO 9001:2015 Certified Company

SUNTECH GEOTEXTILE PVT. LTD.

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About SUNTECH®

SUNTECH® GEOTEXTILE incorporated in the year 2013 is an organization born out of this very philosophy, using state-of-the-art technology, process and infrastructure, combined with world class professionals and human resources, **SUNTECH**® GEOTEXTILES are committed to provide its expertise through its products in Civil engineering, Environmental protection, Furniture and Bedding, Filtration, Automotive Industry etc.

SUNTECH® GEOTEXTILE is dedicated to provide quality Technical Textile to meet today's advanced engineering requirements for Stabilizing, Separation, Filtration, Reinforcement and Erosion Control.

WHY SUNTECH®?

SUNTECH® GEOTEXTILE Private Limited is an ISO 9001:2015 certified company located in central INDIA with advantageous geographical location.

SUNTECH® GEOTEXTILE that is now the benchmark for the industry with its innovative products created with the world class facilities.

SUNTECH® GEOTEXTILE products are distinguished for its QUALITY & ECONOMY.

SUNTECH® GEOTEXTILE works on 360Degree improvement basis, what this all mean for you is faster lead time and greater flexibility in product line to meet your growing demand and changing needs.

SUNTECH® GEOTEXTILE serve with unmatched quality, dedicated work force in order to achieve 100% customer satisfaction.

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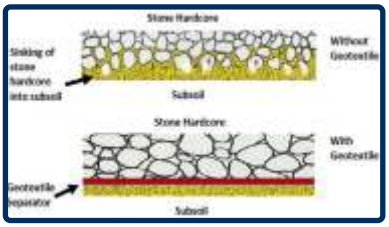
FUNCTIONS

SUNTECH® GEOTEXTILE

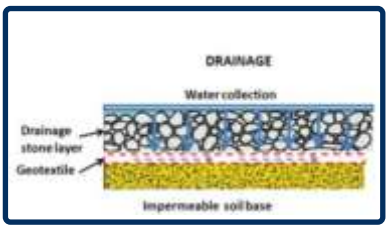
SEPARATION

SUNTECH® GEOTEXTILE will prevent two soil layers of different particle sizes from mixing with each other.



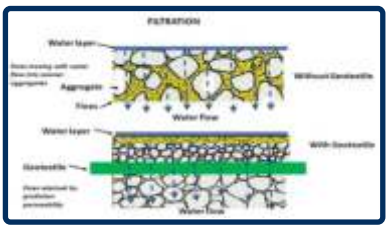
DRAINAGE

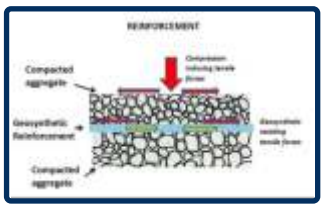
SUNTECH® GEOTEXTILE will efficiently collect superfluous water from structures, such as rainwater or surplus water, from the soil and discharge it.



FILTRATION

SUNTECH® GEOTEXTILE are an ideal interface for reverse filtration in the soil. In all soils water allows fine particles to be moved. Part of these particles will be halted at the filter interface; some will be halted within the filter itself while the rest will pass into the drain. The complex needle-punched structure of the **SUNTECH®** GEOTEXTILE enables the retention of fine particles without reducing the permeability of the drain.





REINFORCEMENT

SUNTECH® GEOTEXTILE are used to reinforce earth structures by means of fill materials. Thanks to their high soil fabric friction coefficient and high tensile strength, they are an ideal reinforcement solution.

PROTECTION

SUNTECH® GEOTEXTILE are an ideal protection from erosion of earth embankments by wave action, currents or repeated drawdown. A layer of **SUNTECH®** GEOTEXTILE can be placed so as to prevent leaching of fine material. They can be used for rock beaching or as mattress structures. They can even easily be placed under water.

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SUNPAVE PAVING FABRIC

USED IN – PAVED & UNPAVED ROADWAYS

SUNPAVE are made from polypropylene fibres that are tangled together by a needle-punching process with heat bonded on one side to form a strong, flexible and dimensionally stable fabric structure.

SUNPAVE are resistant to chemicals and biological organisms normally found in soil and is stabilised against degradation due to short-term exposure to ultraviolet radiations.

SUNPAVE are manufactured with optimum bitumen retention capacity, high tensile strengths and low elongations, allowing them to distribute loads, reduce rutting and extend the life of paved and unpaved roadways.

Features :

SUNPAVE has high melting point, so can stand against temperature of Bituminous Mixture.

SUNPAVE are made of most durable Polypropylene Fibers.

SUNPAVE are resistant to Acidic & Alkaline environments.

SUNPAVE affinity to Bituminous liquid coat ensures excellent bond between them.

SUNPAVE exhibits high Tensile & Elongation ensures deformation without rupture.

PRODUCT	UNITS	AS PER MORT&H SPECIFICATION	SUNTECH PAVING FABRIC	TEST METHOD
Tensile Strength	N	450	450	ASTM D 4632
Elongation	%	≥ 50	≥ 50	ASTM D 4632
Asphalt Retention	Kg/10 sq.m	10	10	ASTM D 6140
Melting Point	°C	150	150	ASTM D 276
Surface Temperature	-	Heat Bonded One Side Only	One Side Heat Bonded	Visual Inspection

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SUNTECH® NON - WOVEN GEOTEXTILE

USED IN
Highways | Coasta l & **W**aterways | Landfill

USED FOR
Filter **S**eparators | Ground Stabilization

PRODUCTS:
SG 120, SG200, SG300, SG400, SG500

SUNTECH® Standard Geotextiles enhance the performance and design life of granular layers by providing the separation & filtration function. **SUNTECH®** Standard Geotextiles general use includes ground stabilisation (between the sub-base and subgrade) and around drainage materials

PROTECTION FROM INTERMIXING OF GRANULAR MATERIAL AND SOIL

SUNTECH® Standard Geotextiles provides an effective solution to the problem of constructing a stable granular layer over soft foundation soils. When stone is placed directly on a soft subgrade, the imposed load often causes intermixing of two layers. This results in contamination of the stone layer and a resulting loss in bearing strength, surface rutting and deformation at the sub-base/subgrade interface.

PROTECTION FROM INGRESS OF FINES INTO DRAINAGE

Whether it's a granular drain or a geosynthetic alternative such as open geocellular units, **SUNTECH®** Standard Geotextiles are ideal for preventing the ingress of fines.

SUNTECH® Standard Geotextiles filters/separators are used extensively in the construction of:

- Paved and unpaved roads
- Railways
- Concrete Floors
- Parking Area

Product Grade	SG120	SG200	SG300	SG400	SG500
Roll Width*(m)	4.5	4.5	4.5	4.5	4.5
Roll Length(m)	100	100	100	50	50
Roll Weight(kg)	55	90	135	90	112

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SUNTECH® GEO BAGS

SUNTECH® GEO BAGS are made of Non Woven Geotextile fabrics that are stitched from two sides and open from one side. **SUNTECH**® GEO BAGS designed to be filled with soil and are installed while the construction of marine and hydraulic structures. The **SUNTECH**® Non Woven Geotextile bags are a geo-synthetic product that are made out of polypropylene and is used for the polyster/protection fibres of hydraulic structures and riverbanks from severe erosion and scouring & flood control.

SUNTECH® GEO BAGS can also be customized in different sizes and forms that suits your requirement of design and installation. The **SUNTECH**® GEO BAGS can be placed on dry land and can also be installed in water of any depth.

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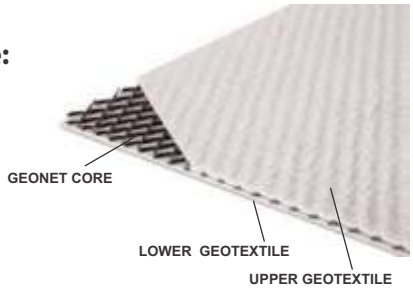
SUNTECH® GEOCOMPOSITES

SUNTECH® Geocomposites consist of a combination of geotextile and geogrid; or geogrid and geomembrane; or geogrid and geotextile and geomembrane; or any one of this three materials with another material (e.g. various soils, deformed plastic sheets, steel cables or steel anchors. Geocomposites are used in construction and civil engineering applications for drainage applications. Drainage is defined as the collection and transportation of rainwater, groundwater or other fluids such as leachates and gases. Geocomposite drainage systems are being increasingly used as a more effective and economic alternative to traditional granular based solutions.

Principles of the functions afforded by geosynthetics for drainage are:

- Distributes pressure
- Transports water to the collector drain
- Protects waterproofing from damage when trench is backfilled
- Removes excess water from the soil
- Prevents the collector drain from splitting up with fine soil particles



SPECIFICATIONS :

GEONET DRAINAGE		
PROPERTY	**TEST METHOD**	**VALUE**
Mass, gm/m2	ASTM D 5261	520
Density	ASTM D 1505	0.94 g/cm3
Carbon Black Content	ASTM D 4218	2%
Melt Flow Index	ASTM D 1238	< 1

DRAINAGE GEOCOMPOSITE		
PROPERTY	**TEST METHOD**	**VALUE**
Mass, gm/m2	ASTM D 5261	780
Thickness at 2 Kpa	ASTM D 5199	7.2
Tensile Strength MD/CD Kn/m2	ASTM D 7179	21/16

GEOTEXTILE FILTRATION		
PROPERTY	**TEST METHOD**	**VALUE**
Mass, gm/m2	ASTM D 5261	130
Grab Strength-N	ASTM D 4632	510
Puncture Strength-N	ASTM D 4833	255
AOS - mm	ASTM D 4833	0.25
Water Flow l/mnt/m2	ASTM D 4491	3800

APPLICATION OF COMPOSITE GEOTEXTILE

- Geocomposite used as barriers / separation layers to separate and contain polluted Soil or waste and avoid migration of pollutants to the surrounding soil or waste and avoid migration of pollutants to the surrounding soil or water.
- They can be mounted on solid frames to build below ground physical barriers i.e. separation walls.
- In railways applications, geocomposites can replace the sand layers separating the track ballast from the foundation, performing the same function of stopping the upward migration of Fines.
- Leachate in landfill, pond living, drainage where frost leave or salt migration problem, main forced walls or slope. Highway pavement, airfield pavement, railroad right-of-way.

- Slope protection
- Venting of gas
- Sub-grade enhancement
- Wave damage protection
- Leak detection layers
- Drainage Geomembrane protection

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SUNTECH® GEOGRID

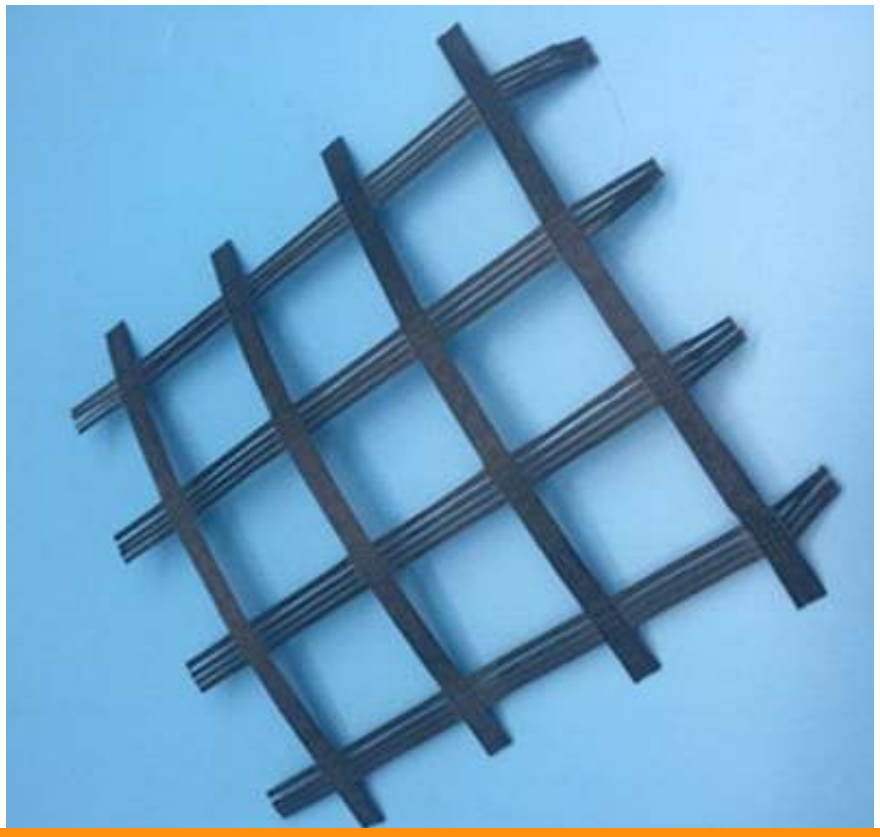
SUNTECH® Geogrid is geosynthetic material used to reinforce soils and similar materials. Geogrid are commonly used to reinforce walls, as well as subbases or subsoils below roads or structures. Soil pull apart under tension compared to soil, geogrid are strong in tension.

Geogrid is a polymeric material made up of many polymers like polyethylene, polyvinyl alcohol polypropylene etc. It is one of the most important inventions in geosynthesis which is used as a reinforcing material. They formed by joining intersecting ribs. They have large open spaces in between the ribs known as "apertures'.

Geogrid can be classified in to two layers based on the stress transfer or direction of stretching during manufacture as –

A) **Uniaxial Geogrid –** It is stretched only along longitudinal direction. Thus the stress is transferred only along that axis; even the tensile strength is more in longitudinal direction when compared to transverse direction in uniaxial geogrid.

B) **Biaxial Geogrid –** It is stretched along two directions (longitudinal and transverse), thus the stress is equally distributed along both directions.



Advantages

- Geogrid Promotes soil stabilization.
- It is a good remedy to retain soil from erosion.
- Higher load bearing capacity.
- Geogrid are flexible in nature. They are known for their versatibility.
- Geogrid have high durability reducing maintenance cost. They are highly resistant against environmental influences.
- No difficulty in material availability.

Application

- Geogrid stabilize soil mass.
- Creates a composite soil mass of increased strength.
- Much higher loads can carried by the soil structure.

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SUNTECH® HDPE Geomembrane

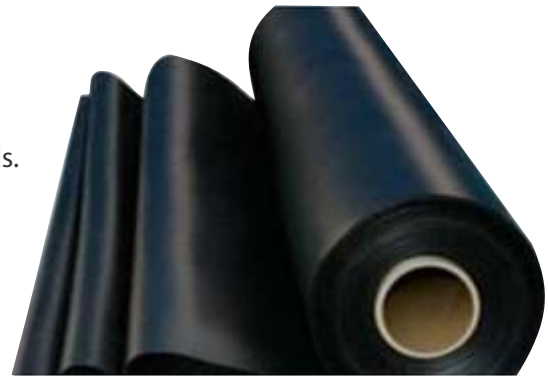
SUNTECH® High Density Polyethylene **(HDPE) Geomembrane** liners are used in a wide range of containment applications. Available in smooth, textured, white, conductive and high temperature variations, this material provides excellent durability and chemical resistance properties and is reliable in exposed applications, offering great ultraviolet protection and ageing resistance from the intense stresses of weather.

The best thing about the HDPE is that it can be easily moulded and welded together and the use of uv Stabilizers improves its weather resistance.
Geomembrane is a kind of waterproof material with basic raw material of high polymer.

HDPE Geomembrane are used in many different lining

Applications

- Landfills.
- Mining.
- Tanks & Vessel.
- Concrete tank liners.
- Power Plants.
- Vaccum Forming.
- Pond liners.
- Fences.
- Storage sheds.



Advantage

- Broad chemical resistance.
- Good low temperature properties.
- Very low permeability.
- Excxellent chemical resistance.
- Good weld strength.
- Relatively inexpensive.
- Recyclable.

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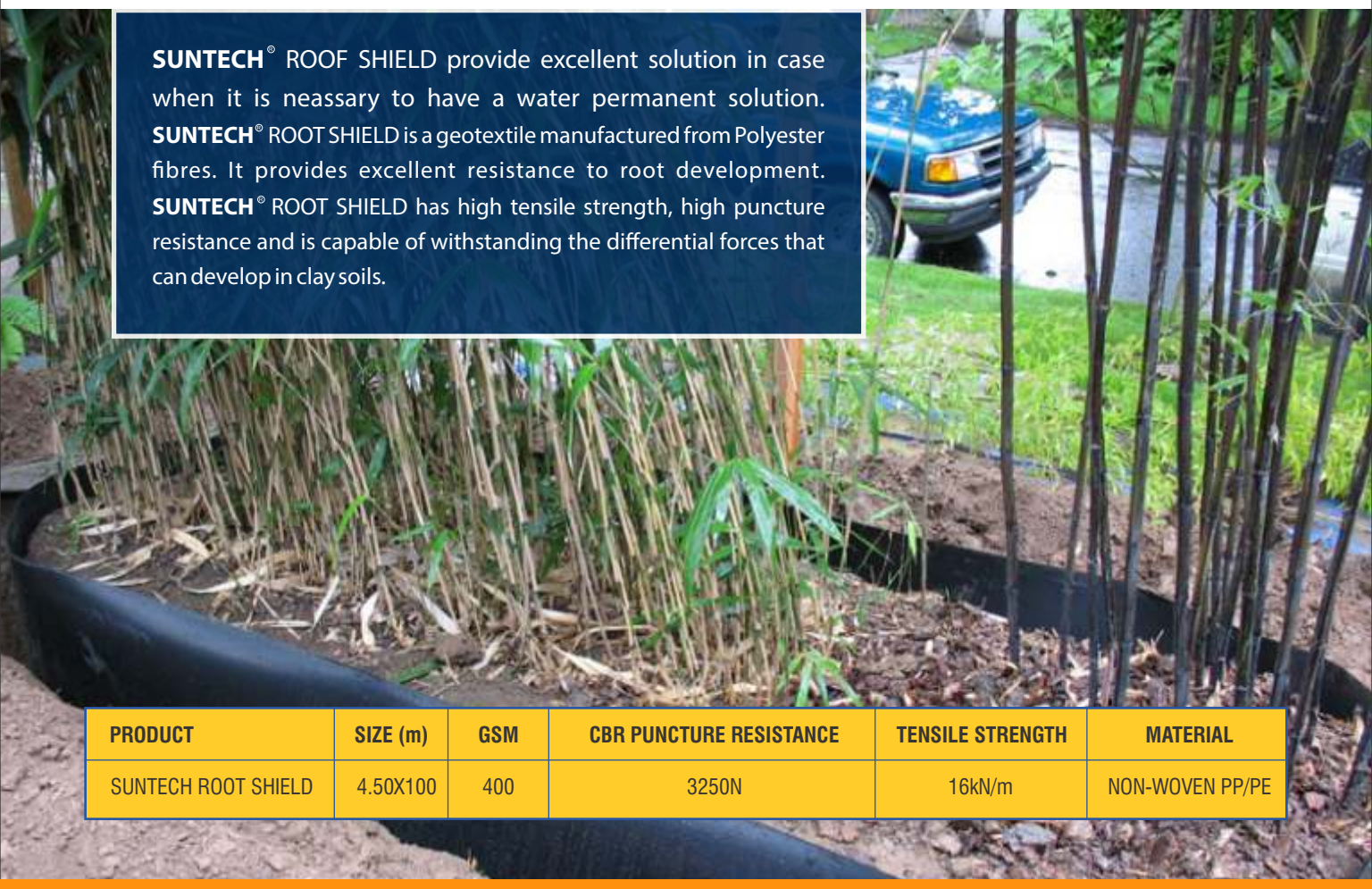
SUNTECH® ROOT SHIELD

SUNTECH® ROOT SHIELD Control barrier to protect buildings, walls, paths, access roads, drainage pipes and underground cables from root damage.

SUNTECH® ROOT SHIELD are used to protect buildings, walls, paths, drainage pipes, cables and lawns from potential damage caused by root development. 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.

SUNTECH® ROOF SHIELD provide excellent solution in case when it is neassary to have a water permanent solution. **SUNTECH®** ROOT SHIELD is a geotextile manufactured from Polyester fibres. It provides excellent resistance to root development. **SUNTECH®** ROOT SHIELD has high tensile strength, high puncture resistance and is capable of withstanding the differential forces that can develop in clay soils.



PRODUCT	SIZE (m)	GSM	CBR PUNCTURE RESISTANCE	TENSILE STRENGTH	MATERIAL
SUNTECH ROOT SHIELD	4.50X100	400	3250N	16kN/m	NON-WOVEN PP/PE

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SUNTECH® WEED SHIELD

SUNTECH® WEED SHIELD Geotextile for landscaping, gardening and construction applications.

SUNTECH® WEED SHIELD suppresses weeds in landscaping and garden applications without chemical use, it is designed to allow the passage of water, oxygen and nutrients while blocking weeds.

SUNTECH® WEED SHIELD is installed at the interface between soil and a decorative layer such as bark chippings, stone chippings, pebbles or gravel.

The **SUNTECH**® WEED SHIELD is easy to cut, simple to position, flexible to adapt to uneven ground.

SUNTECH® WEED SHIELD is supplied in roll sizes to suit small gardens to large landscape project. Some more features of **SUNTECH**® WEED SHIELD are :

- **Ideal for landscaping, garden beds.**
- **Maintenance free and resistant to microbiological and chemicals.**
- **Weed-control fabric which avoids the use of chemicals**
- **Lightweight and simple to install**

PRODUCT	SIZE (m)	GSM	CBR PUNCTURE RESISTANCE	TENSILE STRENGTH	MATERIAL
SUNTECH WEED SHIELD	1.6X300	150	1400N	7kN/m	NON-WOVEN PP/PE

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SUNTECH® DRAINAGE CELL

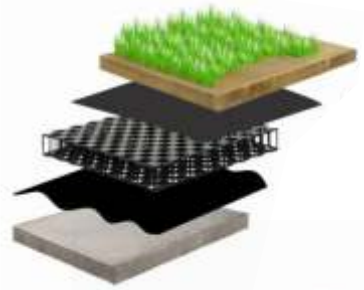
SUNTECH® Drainage cell are lightweight, high strength modular drainage cell which are especially designed for sub - surface drainage and waterproofing membrane protection. Drainage cell are manufactured from high strength polypropylene, having height of 20 & 30 mm and are easy to install, by interlocking them horizontally and vertically. The drainage cell also acts as a protection layer over water proofing membranes, and also creates a thermal insulation barrier. The open surface design and high internal void volume enables the rapid capture and transport of high water volumes. the roots of plants and grass can take this water through capillary action and will help in the growth of these plants.

ADVANTAGES

- Excellent water discarge capacity.
- Minimum soil depth required
- Easy & Fast Installation.
- Minimum Irrigation of water.

APPLICATION

- Retaining Walls
- Tunnels
- Landscaping
- Golf Courses
- Paving
- Bridge abutments
- Road Edge
- Landfills
- Sports Field



SUNTECH® GEO CELL

SUNTECH® Geocell are made of high density Polypropylene strip that are ultrasonically welded to from an extremely welded to from an extremely strong honey comb configuration soil, sand aggregate concrete and other fill material is place within the installed Geocell solving a variety of engineering and construction challenges. Geocell are compartment containers that can be used as a load transfer platform and widely accepted all over the world. Geocell are joined together to form a stiff foundation. These Geocell systems are effective in soil. Especially where the heavy loading is expected, the ground conditions can be improved with use of Geocell Mattresses.

APPLICATION

- Soil stabilization
- Retaining well
- Slope erosion control
- Slope platforms
- Tree platform

ADVANTAGES

- Bidirectional drainage
- easy installation
- High void index
- High resistance

FEATURES

- Great strength
- Quality tested
- Dimensional accuracy
- Durability
- High strength

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SUNTECH GEOTEXTILE PVT. LTD.

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