



OCEAN GLOBAL™

GEO TEXTILES

IN PURSUIT OF
A CLEAN GREEN
ENVIRONMENT



BUILDING
SUSTAINABLE
INFRASTRUCTURE
THROUGH
INNOVATION

sales@oceangeosynthetics.com



About Us

Who We Are

Founded in 1998 and based in New Delhi, Ocean Global is a leading provider of eco-conscious engineering and geosynthetic solutions. We specialize in tackling soil-related challenges with innovative, durable and sustainable products.

What We Do

With over two decades of experience, we deliver advanced geosynthetic solutions backed by strong manufacturing, seamless service and the latest technology.

Our Vision and Mission

We aim to build smarter and greener infrastructure for a cleaner tomorrow—offering reliable, tailored solutions that exceed expectations.

What We Offer

We have dedicated units to handle production and quality control. We also pride ourselves on having an exclusive research and development wing.



Certifications & Compliance

- ISO 9001: 2015
- ASTM & BIS Standard Testing
- In-house QA/QC Labs



Facilities

Manufacturing Plant:

Jhajjar, Haryana, India
(strategic proximity to Delhi)

Warehouse: Mundka,
New Delhi, India

Sectors We Serve

Ocean Global products are deployed across the most demanding industries. From government infrastructure to environmental engineering, our geosynthetics ensure safety, stability and savings.

 Roads & Highways Separation, filtration, and reinforcement systems	 Environmental Protection Land rehabilitation, erosion control	 Railways Subgrade stabilization, slope protection, drainage layers
 Ports & Aviation Ground improvement, spill containment	 Waste Management Landfill liners, Waste water treatment, Leachate barriers	 Urban Infrastructure Waterproofing, landscaping
 Hydro & Irrigation Reservoir linings, Gabion retaining structure, Dewatering tubes	 Defence & Border Roads Reinforced access, Mountain engineering	 Agriculture Pond lining, Biofloc system, water storage tank
 Oil & Gas Drill sumps, containment berms, Oil & gas storage tanks	 Ground engineering & tunneling Slope protection & landslide prevention, Waterproofing, Basal reinforcement	 Power & Mining Dust suppression lining, erosion protection



Geotextiles Functions

Six Essential Roles. One Reliable Foundation.

At Ocean Global, we've been pioneering geosynthetic innovation since 1998. Over the years, we have continually expanded and refined our total geosynthetic solutions to meet the evolving needs of modern infrastructure and environmental engineering.

We go beyond just supplying products — our team provides comprehensive technical support, project-specific specifications and design services to help you identify the most effective and economical solution for your project requirements.



Filtration

Allows the passage of water while restricting the movement of soil particles. Our high-quality geotextiles provide effective filtration across a wide range of soil types thus allowing water to pass freely while preventing soil erosion or clogging.

Applications: Landfills, drainage, earth embankments, Basal reinforcements



Separation

Prevents mixing of different soil layers and materials thereby maintaining the structural stability on the ground. It ensures long-lasting performance in roads, railways and construction projects by creating a stable barrier between dissimilar layers.

Applications: Road constructions, railways, waterproofing and foundation works.



Reinforcement

Geotextiles enhance ground stability by resisting stress, reducing deformation and strengthening weak subgrades. Placed at the base or sub-base, they improve load distribution while minimizing the need for excess soil or gravel. Ideal for haul roads, compounds, piling platforms, embankments, slopes, bunds and retaining walls.

Applications: Haul roads, compounds, piling & working platforms, embankments, slopes, bunds, walls



Drainage

Geotextiles help collect and transport fluids, reducing the need for thick aggregate layers and providing a cost-effective, consistent and protected drainage solution.

Applications: French drains, open ditches



Protection

Geotextiles act as a stress-absorbing layer, reducing damage to adjacent surfaces and extending the life of underlying materials. Ideal for areas prone to wear and tear, they offer reliable protection for soils, grasses, membranes and gravel zones, ensuring durability and long-term performance.

Applications: Embankments, car parks, bunds, walls, landfills, attenuation tanks, Artificial lakes



Containment

Geotextiles placed beneath geomembranes serve as a protective cushion, preventing punctures and stress, filtering contaminants, improving drainage and ultimately extending the lifespan of geomembranes at construction and containment sites.

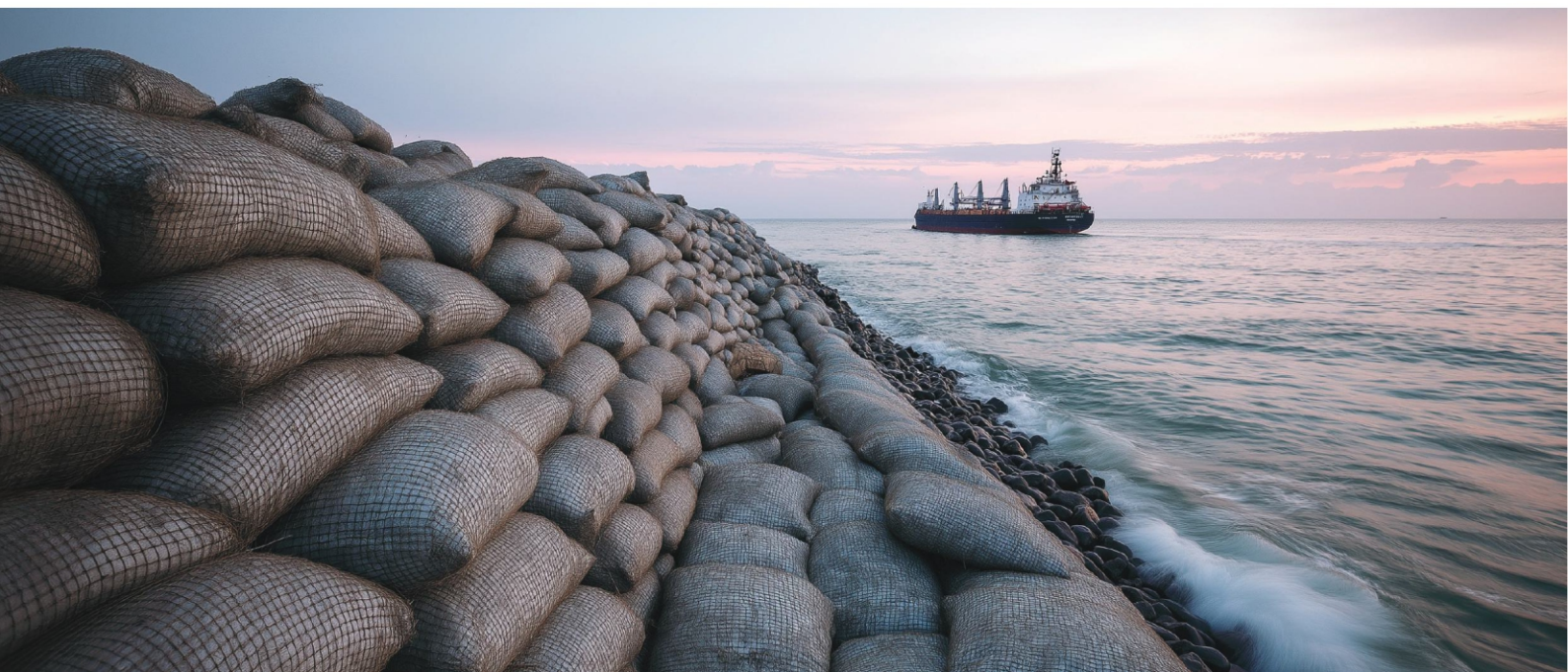
Applications: SUDs, ponds, lakes, lagoons, landfills



Ocean nonwoven geotextiles are needle-punch manufactured and mechanically bonded. Needle punching improves the strength and hydraulic performance of the geotextiles. The nonwoven geotextiles fabrics are either polyester, polypropylene or polyamide.

Applications

- Asphalt overlay
- Erosion control
- Road stabilisation
- Rail road support
- Coastal protection
- Subsurface drainage
- Landscaping
- Landfills
- Basal reinforcements



Ocean Geotextiles (PP)

Needle-punched staple fiber polypropylene high tensile nonwoven geotextiles designed for filtration, separation, drainage, protection and reinforcement applications. They function under highly alkaline & acidic environments with inbuilt properties of UV resistance, chemical & biological degradation normally encountered at construction sites.

Technical Specifications of Nonwoven Geotextiles (PP)

		Properties	Unit	Test	PP-90	PP-100	PP-111	PP-421	PP-520	PP-201	PP-30	PP-401	PP-501	PP-600	PP-700	PP-800	PP-1000
PHYSICAL	MASS PER UNIT AREA	G/M ²	ASTM D-5261	90	100	120	150	200	250	300	400	500	600	700	800	1000	
	TOLERANCE	±	ASTM D-5261	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
	THICKNESS AT 2KPA	MM	ASTM D-5199	0.5	0.65	0.8	0.9	1.2	1.5	1.8	2.4	2.8	3.5	4.2	5.0	5.4	
	ROLL SIZE	MTR	AS PER CUSTOMER REQUIREMENT														
MECHANICAL	TENSILE STRENGTH (WIDE WIDTH)	KN/M	ASTM D-4595	5	6	7	9.6	12	15	20	27	34	39	42	45	51	
	TENSILE STRENGTH ELONGATION	%	ASTM D-4595	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	
	GRAB TENSILE STRENGTH	N	ASTM D-4632	320	360	450	550	720	850	1050	1450	1800	2100	2450	2700	3300	
	GRAB TENSILE ELONGATION	%	ASTM D-4632	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	
	TRAPEZOIDAL TEAR STRENGTH	N	ASTM D-4533	110	120	150	175	250	320	400	500	630	690	750	870	1200	
HYDRAULIC	PUNCTURE STRENGTH (CBR)	N	ASTM D-6241	1000	1100	1300	1500	2100	2600	3100	4100	5100	6300	7200	8100	10000	
	APPARENT OPENING SIZE (AOS)	MICRONS	ASTM D-4751	100	100	100	100	80	80	80	75	<75	<75	<75	<75	<75	
	FLOW RATE AT 50MM HEAD	L/M ² /S	ASTM D-4491	100	100	90	80	70	50	45	40	35	30	25	20	20	
	UV RESISTANCE @ 500 HRS.	% STRENGTH RETAINED	ASTM D-4355	70	70	70	70	70	70	70	70	70	70	70	70	70	

Note:-The above values are derived out of tests conducted in our in-house test laboratory in strict compliance with ASTM D4439 and ASTM D4354. Ocean Non Wovens solely reserves full right to alter/modify the above reported values without having any obligation to any agency using the above information in form whatsoever. Given values are TYPICAL (average) values. While the information is presented as a true and accurate representation of attributes of the products to the best of our knowledge, no expressed or implied warranties are made ad Ocean assumes no responsibility or liability with regard to the use of this information. The values are average roll values in which all the properties are having-10% tolerances except elongation, permittivity, flow rate, permeability & AOS which are +/- 10% tolerance values. ("≥" symbol represents greater than and equal to minus tolerance is not applicable to these values.)

Ocean Geotextiles (PET)

Needle-punched nonwoven geotextiles composed of high-tenacity polyester staple fibers are engineered to provide dependable performance in filtration, separation, drainage, protection and reinforcement functions. These geotextiles are designed to endure demanding environmental conditions with inherent resistance to UV exposure chemical degradation and biological activity making them well-suited for use in both alkaline and acidic environments typically encountered in infrastructure, landscaping and environmental engineering applications.

Technical Specifications of Nonwoven Geotextiles (PET)

	Properties	Unit	Test	GT-60	GT-90	GT-100	GT-111	GT-421	GT-520	GT-201	GT-30	GT-401	GT-501	GT-600	GT-700	GT-800	GT-1000
PHYSICAL	MASS PER UNIT AREA	G/M ²	ASTM D-5261	60	90	100	120	150	200	250	300	400	500	600	700	800	1000
	TOLERANCE	±	ASTM D-5261	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
	THICKNESS AT 2KPA	MM	ASTM D-5199	0.3	0.5	0.6	0.6	1	1.1	1.5	1.7	2	2.6	3.5	4	4.25	5
	ROLL SIZE	MTR	AS PER CUSTOMER REQUIREMENT														
MECHANICAL	TENSILE STRENGTH (WIDE WIDTH)	KN/M	ASTM D-4595	1	2	2.5	3	4	6	7.5	9.7	13.5	17	20	25	29	3
	TENSILE STRENGTH ELONGATION	%	ASTM D-4595	>30	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50
	GRAB TENSILE STRENGTH	N	ASTM D-4632	100	200	230	275	345	450	540	600	750	900	1000	1250	1400	1800
	GRAB TENSILE ELONGATION	%	ASTM D-4632	>40	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50
	TRAPEZOIDAL TEAR STRENGTH	N	ASTM D-4533	40	80	90	110	150	190	225	250	350	425	510	570	630	720
HYDRAULIC	PUNCTURE STRENGTH (CBR)	N	ASTM D-6241	150	350	400	500	750	1100	1350	1500	1800	2000	2150	2400	2700	3300
	APPARENT OPENING SIZE (AOS)	MICRONS	ASTM D-4751	300	150	150	150	100	90	80	80	75	<75	<75	<75	<75	<75
	FLOW RATE AT 50MM HEAD	l/M ² /S	ASTM D-4491	120	100	100	90	80	60	55	50	40	40	30	20	20	20
	UV RESISTANCE @ 500 HRS.	% STRENGTH RETAINED	ASTM D-4355	70	70	70	70	70	70	70	70	70	70	70	70	70	70

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Woven Geotextiles

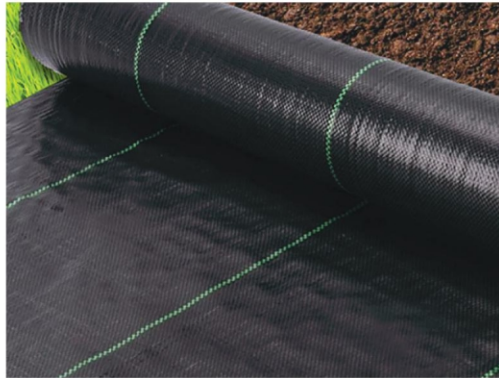
Woven Geotextiles has high load bearing capacity due to which they are most suitable for civil construction applications.

Features

- Superior resistance
- Better permeability
- Rot-resistant
- Biological degradation resistant
- UV resistant Chemically inert
- High tensile strength, low elongation
- Can handle very high loads

Applications

- Road stabilization
- The embankment on soft ground
- Railroad support
- Rip Rap support
- Aggregate separation
- Erosion control





Installation Guidelines

The successful use of geotextiles in these applications requires proper installation. The basic steps of proper installation include:



1. Unloading & Storage:

- Unload rolls under installer supervision by using straps or proper lifting devices.
- Keep rolls dry, wrapped in waterproof, UV-resistant covers.
- Store on undamaged surface, at least two inches above surface.



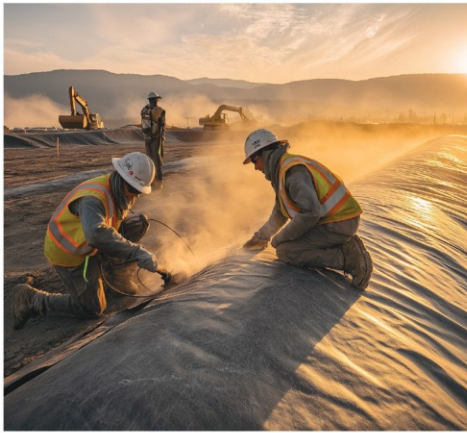
2. Subgrade Preparation:

- Clear subgrade of stumps, rocks, and sharp objects.
- Remove all vegetation, roots, and topsoil.
- Excavate and backfill soft/unsuitable spots with select material.



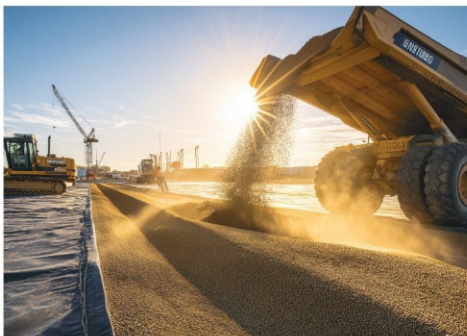
3. Placement:

- Unroll fabric from stable perimeter areas (anchor point).
- Follow layout plan, do not drag fabric over subgrade.
- Ensure smooth, wrinkle-free placement.



4. Jointing:

- Ensure at least 300mm overlap between rolls.
- Increase overlap to 500mm on soft or uneven surface.
- Geotextiles $>200\text{g/m}^2$ can be welded for stronger joints.
- Overlap 100–200mm, heat with a propane burner and press to fuse.
- Avoid overheating if material is damp or fusion is difficult, use a 500 mm overlap



5. Repairs :

- Identify damaged or uneven areas on the geotextile layer.
- Patch with new geotextiles, ensuring proper overlap and anchoring.
- Each patch must extend at least 500 mm beyond the edge of the damaged area.



6. Compaction:

- Initial compaction: bulldozer “walking” over fill.
- Final compaction: vibratory roller (first without, then with vibration).
- Patch and replace fabric if damaged during compaction.



7. Construction Monitoring

- Regularly check subgrade strength and adjust design if needed.
- Use visible rutting and flagged areas to identify weak spots.



Clientele





Blogs

Flood Risk Management with Geotextile and Geotube Technology

Geotextile and Geotube technologies offer innovative, low-cost and eco-friendly solutions for flood risk management and coastal protection. These permeable fabric systems, filled with sand and water are used to build temporary or permanent structures like revetments, dykes and shoreline barriers. Unlike conventional methods, they reduce CO₂ emissions, minimize excavation needs and support biodiversity. Their application in India is helping safeguard infrastructure from rising sea levels and erosion, making them ideal for sustainable development and climate resilience.

[Learn more at:

<https://oceangeosynthetics.com/flood-risk-management-with-geotextile-and-geotube-technology/>

What is Geotextile Membrane used for?

Geotextile membranes are synthetic, permeable fabrics used in a variety of civil and environmental engineering applications. Designed to separate, reinforce, filter, drain and protect these durable materials are essential in road construction, erosion control, landscaping, dam construction and more. Available in woven, non-woven and polyspun forms, geotextiles are known for their high strength, resistance to degradation and versatility. Their applications range from stabilizing soil layers and preventing weed growth to enabling effective drainage and protecting structures from erosion—making them an indispensable solution in sustainable infrastructure.

[Learn more at:

<https://oceangeosynthetics.com/what-is-geotextile-membrane-used-for/>



Landslide & Slope Protection using Gabion Retaining Walls

Gabion retaining walls are an effective, eco-friendly solution for stabilizing slopes and mitigating landslides, especially in vulnerable hilly regions. Constructed from double-weld mesh and filled with on-site material, these structures offer strength, flexibility and excellent drainage. Ideal for areas affected by soil erosion, groundwater rise and slope failure, gabions resist lateral earth pressure and can reach heights up to 30 feet. Their corrosion-resistant galvanized coating ensures durability in extreme climates, while fast installation and minimal maintenance make them a cost-efficient choice. Ocean Geosynthetics offers reliable, customizable gabion systems for a range of geotechnical applications.

[Learn more at:

<https://oceangeosynthetics.com/landslide-mitigation-and-slope-protection-with-gabion-retaining-wall/>

Geosynthetics in Construction of Roads Subgrade Stabilization with Geogrids

India's rapidly growing road network demands innovative, durable solutions for long-term performance—especially in areas with poor subgrade conditions. Geosynthetics, particularly geogrids, have emerged as a cost-effective and eco-friendly alternative to traditional methods. By improving load distribution, increasing soil confinement and reducing subgrade deformation, geogrids significantly enhance road stability and lifespan. Ideal for expressways, highways and rural roads alike, they also reduce maintenance needs and carbon footprint. Trust Ocean Geosynthetics, a leading geogrid manufacturer in India, for reliable, high-quality reinforcement solutions tailored to your infrastructure needs.

[Learn more at:

<https://oceangeosynthetics.com/geosynthetics-in-construction-of-roads-subgrade-stabilization-with-geogrids/>



Our Projects

A closer look at our geotextiles solutions in action — showcasing installations and product performance.



Geotextiles laying for a sanitary landfill project in Uttar Pradesh



Geotextiles laying for a power plant project in West Bengal



Other infra projects

Other Product Lines



Geomembranes



Geobags



Gabion Boxes



Geogrid



Geocomposite Materials



Erosion Control Mats & Blankets



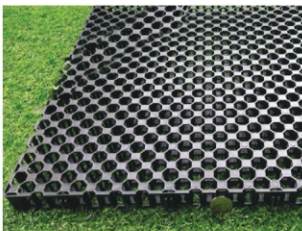
Geocells



Geopipes



Rockfall Protection & Barriers



Drainage Cell



Dimple Drain Board



Anti Hail Netting



Geo Tube Dewatering Containers



GCCM



GCL

Let's Connect

Whether you need product samples, technical advice, or a full-scale design+delivery solution, our team is here to help.

PHONE

011 45120291
+91 8447226007
+91 9811107978

EMAIL

sales@oceangeosynthetics.com

WEB

www.oceangeosynthetics.com



Follow us



Corporate Office

RR-24, 3rd Floor, Mianwali Nagar, Main Rohtak Road, Peeragarhi,
New Delhi – 110087, India



Warehouse

Plot No. 1 & 2, Bhagya Vihar, Rani Khara Road, Near Mundka
Metro Station, New Delhi - 110081, India



Manufacturing Plant

45 Km Stone, Delhi-Rohtak Road, Jhajjar, Bahadurgarh,
Haryana - 124507, India