



OCEAN GLOBAL™

GEOBAGS

Engineered protection
for coastal and riverbelts

BUILDING
SUSTAINABLE
INFRASTRUCTURE
THROUGH
INNOVATION

sales@oceangeosynthetics.com



About Us

Who We Are

Founded in 1998 and headquartered in New Delhi, Ocean Global is a leading provider of eco-conscious engineering and advanced geosynthetic solutions. We specialize in tackling soil-related challenges with innovation, 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 sustainability for critical projects worldwide. Trusted by industry leaders and public agencies alike, our solutions deliver long-term performance and protection in every sector we serve.



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





What Are Geobags

Geobags are advanced geosynthetic containers engineered to deliver robust, adaptable and sustainable solutions for erosion control, hydraulic protection and structural reinforcement. Manufactured from high-strength nonwoven or woven geotextiles, these sand-filled bags are deployed in a wide range of environments—from riverbanks and coastlines to flood-prone urban areas and critical infrastructure sites. Geobags are designed to absorb hydraulic energy, prevent soil loss and provide long-term stability, making them indispensable for both emergency response and permanent installations.

Engineered Functions for Superior Protection



Erosion Control

Geobags act as a flexible, permeable barrier that prevents soil erosion caused by water flow, wave action or rainfall. By stabilizing vulnerable slopes, riverbanks and shorelines, geobags help maintain land integrity and protect valuable assets.

Applications: Riverbank stabilization, coastal erosion protection, slope and embankment reinforcement



Flood Protection

Deployed rapidly in flood-prone areas, geobags serve as temporary or permanent barriers that redirect or contain flood-waters. Their modular design allows for quick installation, making them ideal for emergency response and disaster mitigation.

Applications: Flood embankments, temporary flood barriers, urban flood defense, emergency response during natural disasters



Shoreline & Riverbank Protection

Geobags dissipate wave energy and reduce the impact of flowing water, protecting shorelines, riverbanks and embankments from scouring and undercutting. This function is critical for the long-term preservation of natural and engineered water boundaries.

Applications: Coastal defense structures, riverbank and canal lining, port and harbor protection, wetland restoration



Structural Reinforcement

Used in the construction of embankments, levees and retaining walls, geobags provide essential structural support. Their high tensile strength and durability enable them to withstand significant loads and environmental stresses, ensuring the integrity of critical infrastructure.

Applications: Embankment and levee construction, slope stabilization for highways and railways, foundation support for hydraulic structures



Environmental Protection & Restoration

Geobags are environmentally friendly, allowing for vegetation growth and habitat restoration. Their permeable structure supports natural water flow and filtration, making them suitable for eco-sensitive projects and sustainable land management.

Applications: Habitat restoration projects, vegetated riverbanks and shorelines, wetland creation and enhancement, sustainable landscaping





Nonwoven Geobags

Nonwoven geobags are manufactured using advanced needle-punch technology, resulting in a robust, permeable fabric with superior filtration, separation and reinforcement properties. Made from high-quality polyester (PET) or polypropylene (PP), these geobags are designed to withstand harsh environmental conditions, resist UV degradation and deliver long-term durability in demanding applications.

Performance Highlights

- **High Filtration Efficiency:**
Allows water to pass through while retaining soil particles, preventing erosion and soil loss.
- **Excellent Durability:**
Resistant to UV rays, chemicals and biological degradation for long service life.
- **Superior Flexibility:**
Conforms to complex site geometries and adapts to ground movement without compromising performance.
- **Rapid Installation:**
Lightweight and easy to handle, enabling quick deployment in both emergency and planned projects.
- **Cost-Effective Solution:**
Reduces the need for traditional hard armor systems, offering a sustainable and economical alternative.

Ocean Geobags (PP)

Ocean Global's Polypropylene (PP) nonwoven geotextiles geobags are designed for demanding applications where durability, flexibility and cost-effectiveness are essential. Manufactured using advanced needle-punch technology, these geobags offer excellent filtration, high tensile strength and resistance to UV, chemicals and biological degradation. Their lightweight, permeable structure makes them ideal for rapid installation in both emergency and long-term projects.

Technical Specifications of Nonwoven Geobags (PP)

PROPERTIES	UNIT	TEST METHOD	300 GSM	400 GSM
BAG DIMENSION	M	IN-HOUSE	1.03 x 0.70	1.03 x 0.70
MASS PER UNIT AREA	GSM	ASTM D5261	300	400
THICKNESS AT 2 KPA	MM	ASTM D5199	2.58	3.05
TYPE OF GEOTEXTILE	-	IS 16653:2017	100% PP	100% PP
WIDE TENSILE STRENGTH	KN/M	ASTM D4595	17.8	≥20
ELONGATION	%	ASTM D4595	64.7	≥55
TRAPEZOIDAL TEAR STRENGTH	N	ASTM D4533	460.8	≥472
CBR PUNCTURE STRENGTH	N	ASTM D6241	2950	4050
PERMITTIVITY	S ⁻¹	ASTM D4491	0.8	1.1
PERMEABILITY	L/M ² /S	ASTM D4491	40	45
APPARENT OPENING SIZE	μM	ASTM D4751	75	75
UV RESISTANCE @500 HRS	%	ASTM D4355	80	80

PP Geobags can be manufactured in custom sizes to meet unique project requirements.

The above values are derived out of tests conducted in our in-house test laboratory in strict compliance with ASTM and IS standards. Ocean Global solely reserves full right to alter or modify the above information in any form whatsoever. Given values are TYPICAL (average) values. While the information is presented as a true and accurate representation of the attributes of the products to the best of our knowledge, no expressed or implied warranties are made and Ocean Global 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 ±8% tolerances.

Ocean Geobags (PET)

Ocean Global's Polyester (PET) nonwoven geotextiles geobags are designed for projects that demand exceptional strength, durability and resistance to environmental stress. Manufactured using high-tenacity polyester fibers and advanced needle-punch technology, these geobags deliver superior filtration, high tensile strength and outstanding resistance to UV, chemicals and biological degradation. PET geobags are ideal for long-term, high performance applications in challenging environments.

Technical Specifications of Nonwoven Geobags (PET)

PROPERTIES	UNIT	TEST METHOD	300 GSM	400 GSM
BAG DIMENSION	M	IN-HOUSE	1.03 x 0.70	1.03 x 0.70
MASS PER UNIT AREA	GSM	ASTM D5261	≥300	≥400
THICKNESS AT 2 KPA	MM	ASTM D5199	≥3	≥3
TYPE OF GEOTEXTILE	-	IS 16653:2017	100% PET	100% PET
WIDE TENSILE STRENGTH	KN/M	ASTM D4595	≥15	≥20
ELONGATION	%	ASTM D4595	≥50	≥50
TRAPEZOIDAL TEAR STRENGTH	N	ASTM D4533	≥340	≥450
CBR PUNCTURE STRENGTH	N	ASTM D6241	≥3000	≥4000
PERMITTIVITY	S ⁻¹	ASTM D4491	≥1.25	≥1.10
PERMEABILITY	L/M ² /S	ASTM D4491	≥60	≥40
APPARENT OPENING SIZE	μM	ASTM D4751	≤75	≤75
UV RESISTANCE @500 HRS	%	ASTM D4355	≥80	≥80

PET Geobags can be manufactured in custom sizes to meet unique project requirements.

The above values are derived out of tests conducted in our in-house test laboratory in strict compliance with ASTM and IS standards. Ocean Global solely reserves full right to alter or modify the above information in any form whatsoever. Given values are TYPICAL (average) values. While the information is presented as a true and accurate representation of the attributes of the products to the best of our knowledge, no expressed or implied warranties are made and Ocean Global 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 ±8% tolerances.

Woven Geobags

Ocean Global's woven geotextiles geobags are manufactured from high-tenacity polyester (PET) or polypropylene (PP) yarns, providing exceptional tensile strength, dimensional stability and resistance to environmental degradation. These geobags are specifically designed for applications where high load-bearing capacity and long-term durability are critical. Woven geotextiles geobags are ideal for demanding civil, marine and hydraulic engineering projects, offering reliable performance in the most challenging environments.

Performance Highlights

- **High Load-Bearing Capacity:**

Withstands significant mechanical stresses, making it suitable for embankments, retaining walls and heavy-duty hydraulic structures.

- **Superior Dimensional Stability:**

Maintains shape and structural integrity under varying loads and site conditions.

- **Excellent Permeability:**

Allows controlled water flow while preventing soil migration, ensuring effective filtration and drainage.

- **UV and Chemical Resistance:**

Engineered to resist degradation from sunlight, chemicals and biological agents for long service life.





Installation Guidelines

Proper installation is critical to ensuring the long-term effectiveness and durability of geobag solutions. Ocean Global provides comprehensive installation guidelines to help engineers, contractors and site teams achieve optimal results in every project. Each step directly underpins performance – placing nonwoven geotextiles prevents fines migration and stabilizes the base; controlled filling and sealing ensure uniform unit weight and prevent leakage; precise positioning with staggered joints maintains profile and stability; layered placement with overlap and light compaction promotes interlock and resistance to hydraulic forces; proper installation protects filtration, structural integrity and long-term service life.



1. Placement of Geotextiles Layer

Lay nonwoven geotextiles fabric over the prepared subgrade. This layer acts as a separation and filtration barrier, preventing soil migration and enhancing the durability of the installation.



2. Filling Process

Fill geobags with specified material (usually sand or soil) using quality control measures to ensure uniformity and prevent overfilling. Each bag should be filled to the recommended level and securely sealed to prevent leakage or displacement.



3. Positioning and Alignment

Carefully position geobags according to the project design, either manually or using mechanical equipment. Stack the bags in layers with proper overlaps and staggered joints to ensure structural integrity. Pay special attention to alignment and slope to maintain uniformity and aesthetics.



4. Layering and Compaction

Stack geobags in multiple layers as required by the design, ensuring proper overlap and compaction between layers. Use light compaction equipment if necessary to achieve a stable, interlocked structure.



5. Finishing and Inspection

Trim and tuck any excess geotextiles fabric for a clean finish. In high-energy zones, install additional anchoring systems if required. Conduct a thorough final inspection to ensure proper alignment, compaction and finish.



Esteemed Clientele

Ocean Global is proud to be the trusted partner of leading organizations across infrastructure, engineering and environmental sectors. Our geosynthetic solutions are relied upon by industry leaders and government agencies for critical projects throughout India and internationally.



TATA PROJECTS
Simplify.Create



GOVERNMENT OF ASSAM
WATER RESOURCES



Ministry of Jal Shakti, Government of Uttar Pradesh
IRRIGATION & WATER RESOURCES DEPARTMENT
Serving the Nation Since 1823



Blogs

Explore our knowledge center to discover how innovative solutions are shaping the future of construction and environmental management.

Role of Geobags in Environmental Engineering

The role of Geosynthetics in civil and environmental engineering is not new. They have been around for more than three decades now with widely established and acknowledged benefits. With innovations and advancements in technologies, the geosynthetics global market size is increasing and how! The long lifespan, durability and multifaceted uses of geosynthetics make them popular materials to work with, not to forget the low cost. One such all-in-one geosynthetic is the geobag, deployed in erosion control, drainage and filtration.

Read more:

<https://oceangeosynthetics.com/role-of-geobags-in-environmental-engineering/>

How Geotextiles bags makes Civil Engineering Easier?

A geotextiles bag, also known as a geobag, is a large synthetic fabric bag used for various civil engineering and environmental applications. Geotextiles bags are typically filled with soil, sand or other granular materials and then stacked or arranged to form structures such as retaining walls, breakwaters or erosion control barriers. They can also be used for shoreline protection, land reclamation and sediment containment in water bodies. The geotextiles material used in the bag provides filtration and erosion control properties while allowing water to pass through.

Read more:

<https://oceangeosynthetics.com/how-geotextile-bags-makes-civil-engineering-easier/#strong-what-are-geo-bags-specification-strong>

Best Geobags Seller in North East India

In India, Ocean Global is a well-known producer and manufacturer of geosynthetic materials. Geotextiles, geogrids, geomembranes, geocomposites and geonets are among the geosynthetics manufactured in Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.

Ocean Global creates geobags that are both affordable and long-lasting. Because of their versatility in function and availability in a variety of sizes, they can be used for a variety of projects depending on the needs of the client.

Read more:

<https://oceangeosynthetics.com/best-geobag-sellers-in-north-east-india/>

Geo Bags Uses & Prices

Ever after Geobags were started to be used, the product has been a transition in arresting riverbank and protecting beaches, as well as providing strong protection against floods. In this blog, we will examine the applications and advantages of geobags. Yet, before starting the discussion, let's figure out what a 'geobag' is. Geobags are built out of woven polyester and polypropylene fabrics that are filled with sand and soil.

Read more:

<https://oceangeosynthetics.com/geo-bags-uses-prices/#prevention-of-soil-erosion-at-river-banks>



Our Projects

A closer look at our geobags solutions in action.



Installation of Ocean Geobags for flood fighting at Brahmaputra river-front project, Assam

Project 2



Ocean Geobags installed for riverbank protection, Bihar



Other Product Lines

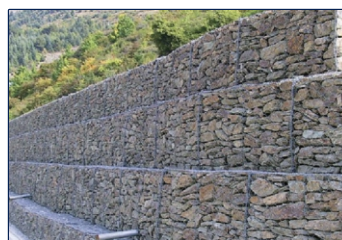
Discover more geosynthetic
solutions from Ocean Global.



Geomembranes



Geotextiles



Gabion Boxes



Geogrid



Geocomposite Materials



Erosion Control Mats



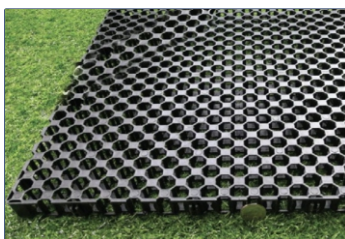
Geocells



Geopipes



Rockfall Protection Barriers



Drainage Cells



Dimple Drain Boards



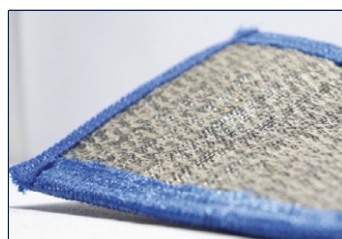
Anti - Hail Netting



Geotubes



GCCM



GCL

Let's Connect

Reach out to our team for expert advice, product solutions or to discuss your next project. Whether you need product samples, technical advice or a full-scale design and delivery solution, we are committed to supporting your project's success at every stage.

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