



OCEAN GLOBAL™

EROSION CONTROL BLANKETS

*Sustainable by nature.
Engineered for performance.*

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



Erosion Control Blankets

Erosion control blankets (ECBs) are rolled products made from natural fibers such as coir and jute. Installed over a prepared seeded surface, they provide immediate and temporary stabilization of disturbed soils. ECBs dissipate rainfall impact, slow shallow overland flow and hold seed and topsoil in place while conserving moisture for faster germination. Open-weave and nonwoven constructions add surface roughness and filtration, supporting root development until vegetation becomes self-sustaining. The fibers biodegrade without leaving plastic residue and gradually integrate with the soil. Coir generally offers higher strength and longer service life, while jute is a cost-effective choice where rapid vegetation is expected.

Functional Capabilities and Use Cases



Erosion Protection

Erosion control blankets provide immediate cover to disturbed soils, dissipating raindrop energy and interrupting sheet flow. Coir and jute mats secure seed and topsoil during the vulnerable early phase; as vegetation establishes, the fibers biodegrade, leaving a stable root mat.

Applications: Fill slopes, road and rail embankments, berms, detention basin side slopes



Runoff Velocity Moderation

Open-weave coir adds surface roughness that lowers near-surface velocities and shear on slopes and grassed waterways. Correct shingle-lapping and anchoring maintain stability until vegetation matures. Verify site hydraulics against product limits.

Applications: Grassed swales and roadside ditches, canal shoulders, low-energy streambanks, outfall aprons



Vegetative Establishment and Moisture Conservation

The blankets create a protected microclimate that reduces crusting and seed displacement while conserving surface moisture. Jute acts like a thin mulch for rapid green-up; coir retains moisture longer where establishment is slower.

Applications: Hydroseeded or broadcast-seeded slopes, native restoration, urban landscaping, windy or high-sun exposures



Sediment Control and Filtration

By holding fines and intercepting mobilized sediments, the mats limit turbidity and off-site transport. Where filtration/separation is required, needle-punched coir nonwovens provide controlled permeability and reduce fines migration into subgrades.

Applications: Slopes draining to water bodies, wetland creation/restoration zones, bioswales, topsoil over coarse subgrade



Environmental Integration and Sustainability

Manufactured from 100% natural fibers, coir and jute mats biodegrade without microplastic residue and are available in wildlife-safe constructions. They deliver temporary erosion control with minimal visual impact while contributing organic matter back to the soil.

Applications: Parks and campuses, riparian buffers, eco-sensitive sites, projects with sustainability mandates.





Coir Nonwoven Geotextile Mats

Coir nonwoven mats are needle punched blankets manufactured from natural coconut fiber. They provide immediate surface stabilization with filtration and moisture retention on gentle slopes and landscaped areas. The compressible fiber matrix conforms to irregular ground, secures fine soils while allowing infiltration and creates a protected microclimate that accelerates germination and early root growth. As vegetation establishes, the mat biodegrades and returns organic matter to the soil.

Performance Highlights

- **Moisture Retention:**
Fibers hold surface moisture and reduce evaporation, supporting faster germination.
- **Filtration and Separation:**
Interlocked fibers retain fines while allowing infiltration to maintain a stable seedbed.
- **Seedbed Protection:**
Reduces raindrop impact and shallow flow to limit crusting and seed displacement.
- **Conformability:**
Drapes over irregular ground for uniform soil contact and consistent performance.
- **Rapid Installation:**
Lightweight sheets cut and place easily with standard staples or biodegradable stakes.
- **Biodegradable Construction:**
Natural coconut fiber decomposes without plastic residue and enriches the soil.
- **Durable in Service:**
Lignin-rich coir provides longer in-ground life compared with many natural fibers.
- **Versatile Use:**
Performs well as a surface cover or under mulch, and integrates with coir logs or wattles in bioengineering works.

Ocean Coir Nonwoven Mats with PP Net

This variant stitches a polypropylene net to the upper face of the coir nonwoven to increase handling strength and service durability. The net stabilizes seams, distributes loads to staples and resists abrasion during placement and early storm events. It helps prevent lift under wind, improves edge security on steeper grades and tolerates light construction traffic during installation. The reinforced surface maintains mat integrity around overlaps and penetrations, making it suitable for embankments exposed to intense rainfall and for linear waterways with low to moderate velocities.



Technical Specifications of Coir Nonwoven Mats

PROPERTIES		400 GSM	700 GSM	TEST METHOD
MATERIAL		100% COIR	100% COIR	-
PP NET (MM)		9 x 9	9 x 9	-
MASS PER UNIT AREA (GSM)		400 - 410	690 - 720	ASTM D 5261
THICKNESS (MM)		6 - 7	7 - 9	ASTM D 5199
WIDTH (MTR)		UP TO 2.4	UP TO 2.4	-
LENGTH (MTR)		UP TO 50	UP TO 50	-
APPARENT OPENING SIZE		NIL	NIL	ASTM D 4751
TENSILE STRENGTH (KN/M)	MC	1.95	2.95	ASTM D 4595
	CROSS	1.42	2.62	ASTM D 4595
GRAB BREAKING LOAD	MC	70	70	ASTM D 4632
	CROSS	49	69	ASTM D 4632

Parameters can be modified to meet unique project requirements. Conditions apply.

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.

Ocean Coir Nonwoven Mats with Green Shade Net

This construction integrates a green shade net on the exposed face to reduce light penetration and surface temperatures while conserving moisture in the seedbed. The shaded microclimate limits evaporation, supports uniform germination and helps suppress early weed growth. The green finish blends with landscaped surroundings and reduces visual contrast on high-visibility sites such as parks, campuses and roadside medians. Use where moisture conservation and aesthetics are priorities, especially in hot, dry or windy conditions.



Technical Specifications of Coir Nonwoven Mats

PROPERTIES		450 GSM	650 GSM	TEST METHOD
MATERIAL		100% COIR	100% COIR	-
MASS PER UNIT AREA (GSM)		450	650	-
THICKNESS (MM)		8	10	ASTM D 5199
WIDTH (M)		2.8	2.8	-
LENGTH (M)		50	50	-
UV RESISTANCE @500 HRS		80% MIN	80% MIN	ASTM D 4355
WATER FLOW (M/SEC)		2.7	2	-
DRY TENSILE STRENGTH (KN/M)	MD	7.35	9	ASTM D 4595
	CD	7	8	ASTM D 4595
WET TENSILE STRENGTH (KN/M)	MD	6.65	7	ASTM D 4595
	CD	5.25	4.95	ASTM D 4595
ELONGATION AT FAILURE	MD	36%	36%	ASTM D 4595
	CD	31%	31%	ASTM D 4595

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Coir Woven Geotextile Mats

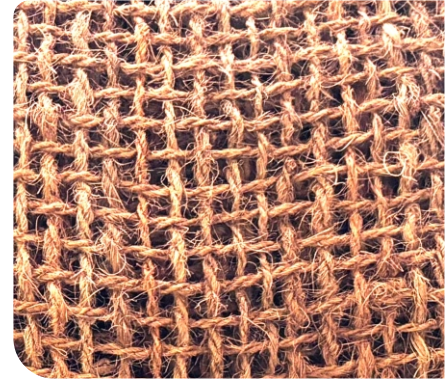
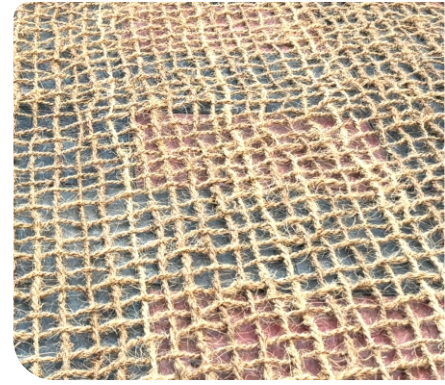
Coir woven geotextiles are open mesh erosion control mats produced from twisted coconut fiber yarns. The mesh introduces surface roughness, reduces near-surface velocity and holds seed and soil in place while vegetation establishes. Coir's high lignin content provides reliable tensile capacity and an extended functional life compared with many natural fibers. These mats are suited to slopes exposed to intense rainfall and to channel shoulders carrying low to moderate flow. As vegetation develops, the fabric gradually biodegrades and integrates with the topsoil.

Performance Highlights

- **High Tensile Strength:**
Twisted coir yarns provide dependable reinforcement on slopes and channel shoulders.
- **Extended Functional Life:**
Lignin-rich fibers slow biodegradation and maintain protection longer.
- **Hydraulic Roughness:**
Open mesh increases surface roughness to reduce near-surface velocity and shear.
- **Soil and Seed Retention:**
Apertures hold topsoil, mulch and seed in place during rainfall.
- **Ground Conformity:**
Flexible fabric drapes over irregular terrain for full soil contact and uniform performance.
- **UV and Weather Tolerance:**
Natural fibers withstand sunlight exposure and daily thermal cycles.
- **Anchoring and Seam Stability:**
Edges and overlaps secure easily for long runs and steep gradients.
- **Plastic-free and Wildlife Safe:**
Natural construction avoids entanglement risk and leaves no synthetic residue.

Ocean Coir Woven Mats

Open weave coir geotextiles are woven from twisted coconut fiber yarns into stable meshes that provide durable surface protection and soil retention on exposed ground. Ocean Global offers multiple constructions with controlled yarn count, aperture size and mass to balance tensile capacity, service life and hydraulic openness for slopes and grassed waterways. The specification table presents the principal mechanical, hydraulic and weathering characteristics for engineering review and submittals.



Technical Specifications of Coir Woven Mats

PROPERTIES		400 GSM	700 GSM	900 GSM	TEST METHOD
MATERIAL		100% COIR	100% COIR	100% COIR	-
MASS PER UNIT AREA (GSM)		400	700	900	IS 15686
THICKNESS (MM)		6.5 to 7	6.5 to 7	6.5 to 7	IS 15868
WIDTH (MTR)		2	2	2	IS 12503
LENGTH (MTR)		50	50	50	IS 12503
BREAK LOAD, DRY (KN/M)	MD	10	14	16.5	IS 16635
	CMD	8	10	12	IS 16635
PEAK LOAD, DRY (KN/M)	MD	12	16	18	IS 16635
	CMD	9	11	12.5	IS 16635
ELONGATION, DRY (%)	MD	30.5	32	34	IS 16635
	CMD	30	31	31	IS 16635
DIAMETER (YARN)	MD	4.3	4.3	4.3	-
	CMD	4.45	4.45	4.45	-

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Jute Geotextile Mats

Jute geotextile mats are open-weave fabrics woven from natural jute yarns for short-term surface stabilization. The mesh shields the seedbed from raindrop impact, reduces crusting and helps keep seed and topsoil in place while vegetation establishes. The fabric drapes closely over irregular ground for uniform contact and acts like a light mulch that moderates temperature and surface moisture. Jute degrades relatively quickly, making it well suited to projects that target rapid green cover. Typical service life is about 6 to 12 months, subject to climate and exposure.

Performance Highlights

- **Fast Establishment:**
Encourages rapid germination and early root development under a protected microclimate.
- **Excellent Drape:**
Conforms closely to uneven surfaces for uniform soil contact everywhere.
- **Seed and Soil Retention:**
Mesh holds topsoil, seed and mulch during rainfall events and wind exposure.
- **Moisture Moderation:**
Provides shading and reduces surface drying for better seedbed conditions.
- **Lightweight Handling:**
Cuts easily, positions quickly and anchors with standard field staples.
- **Cost Effective:**
Natural fiber solution offering dependable coverage for large project areas.
- **Compatible With Seeding Methods:**
Works with hydroseeding or broadcast seeding for efficient establishment on varied sites.

Ocean Jute Geotextile Mats



Jute geotextile mats are open weave fabrics woven from natural jute yarns for short-term surface stabilization where rapid revegetation is planned. The mesh shields the seedbed from raindrop impact, reduces shallow overland flow and holds seed and topsoil in place. The fabric moderates surface moisture and conforms to irregular ground for uniform contact and reliable coverage.



Technical Specifications of Jute Geotextile Mats

PROPERTIES	TYPE 1	TYPE 2	TYPE 3	TEST METHOD
MATERIAL	100% NATURAL	JUTE FIBER	-	-
CONSTRUCTION	PLAIN WEAVE	-	-	-
WEIGHT @20% MR (GSM)	730	500	292	IS 2387:1969
MAXIMUM LENGTH (METER)	68	68	68	IS 1954:1990
WIDTH (CM)	122	122	122	IS 1954:1990
ENDS/DM	7	6.5	11	IS 1963:1981
PICKS/DM	7	4.5	12	IS 1963:1981
THICKNESS (MM)	7	5	3	IS 7702:1975
APERTURE SIZE (MM)	12 x 12	13 x 20	8 x 7	IS 2405:1980
MAXIMUM BREAKING LOAD (N/10 CM)				
MACHINE DIRECTION (WARP)	1200	1040	1000	IS 1969:1985
CROSS DIRECTION (WEFT)	1200	790	1000	IS 1969:1985
MAXIMUM ELONGATION AT BREAK (%)				
MACHINE DIRECTION (WARP)	10	11	12	IS 1969:1985
CROSS DIRECTION (WEFT)	12	15	12	IS 1969:1985

Parameters can be modified to meet unique project requirements. Conditions apply.

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Installation Guidelines

Correct installation governs performance and vegetation success. Place mats on a prepared and seeded surface, orient with the flow, maintain full soil contact, and anchor with the correct staples or stakes. Follow the steps below and use the indicated tools for consistent, repeatable results.



1. Pre-install Checks and Layout

Confirm slope geometry, roll schedule and overlap plan. Mark crest, toe and side edges with a string line or chalk so rolls track straight. Verify roll orientation if using PP net or green shade net.

Use: Measuring tape, string line, chalk or marking paint, permanent marker for roll IDs, clinometer or smartphone slope app.



2. Site Preparation and Seedbed

Shape to final grade, remove stones, clods and debris, smooth the surface to a firm, friable finish. Place topsoil where required, then apply seed and soil amendments and press seed into the soil for contact. Lightly moisten dry surfaces so the mat seats tightly.

Use: Shovel and spade, landscape rake, hand tamper or light roller, broadcast seeder or hand seeding pan, hose with spray nozzle or water truck.



3. Crest Anchor Trench

Cut an anchor trench along the crest approximately 150 mm deep and 150 mm wide. Set the leading edge of the mat into the trench, pull it taut without stretching, backfill with soil and compact firmly. Where multiple rolls start at the crest, overlap edges inside or immediately below the trench.

Use: Spade or trenching hoe, tape measure, string line, hand tamper, compactable backfill.



4. Roll Placement and Soil Contact

Position the roll at the crest with the netted face up if using PP net or green shade net. Unroll downslope in the direction of runoff, smoothing the mat so it lies flat with no wrinkles or voids. Do not drag the mat over sharp objects.

Use: Roll lifter or pry bar for handling, rake or stiff push broom for seating, utility knife or shears for trimming.



5. Overlaps and Seams

Shingle-lap in the flow direction 100 to 150 mm at roll ends and 50 to 100 mm at side joints. Stagger end laps so seams do not align across the slope. At curves, cut wedges and re-lap to maintain coverage without bunching.

Use: Measuring tape to verify lap widths, chalk to pre-mark seam lines, utility knife or heavy shears for clean cuts.



6. Fastening Pattern & Anchor Density

Secure edges, seams and centerlines with steel U-staples or biodegradable stakes. Drive pins with the crown flush to the mat, keeping fibers intact. Place 2.5–3.5 fasteners per square metre on gentle slopes and 3.5–5 per square metre on steeper sections with closer spacing at crests, toes, overlaps, curves and penetrations.

Use: Staple driver or post driver for production work, hammer or mallet in tight areas, pins or stakes in the specified length.



7. Intermediate Check Trenches on Long Slopes

For slopes longer than 9 to 15 metres, install transverse check trenches at regular intervals to prevent slippage. Fold the mat into each trench, backfill and compact, then continue the run with the same shingle-lap.

Use: Spade or trenching hoe, hand tamper, measuring tape, chalk for spacing marks.



8. Toe Termination and Edges

At the toe, either cut a 150 by 150 mm trench, embed the mat, backfill and compact, or extend the mat onto the flat and pin at close spacing. Along side edges, maintain straight alignment and increase pin density.

Use: Spade, hand tamper, measuring tape, staple driver or mallet with additional pins.



9. Transitions and Penetrations

At culverts, fences, posts and headwalls, trim neatly, lap around the penetration by at least 150 mm and increase anchoring around the cut. At grade breaks and swales on the slope, add extra pins and extend laps.

Use: Utility knife or shears for neat cutouts, measuring tape for lap control, additional pins or stakes, chalk to outline cuts.



10. Watering and Inspection

Water gently after installation to settle fibers and support germination without displacing seed. Inspect after the first significant rainfall and after each maintenance cycle. Re-pin lifted edges, patch torn areas with pieces that extend 150 mm beyond the damage on all sides and reseed bare spots.

Use: Hose with fine spray or water truck, extra mat offcuts for patches.

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.



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Blogs

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

Biodegradable Erosion Control Matting, the Clean Green Choice for Erosion Control

Productive land and fertile soil is the most significant geo-resource. Every year, there is a loss of approximately 24 billion tonnes of this non-renewable resource. A natural phenomenon occurring over the millennia due to climatic and geological changes, soil erosion is more of a global threat now.

Fertile soil loss is primarily through degradation and erosion. There are also the factors of no protective vegetation, forest clearing and overgrazing. The maximum erosion usually occurs in the name of development and urbanization.

Read more:

<https://oceangeosynthetics.com/biodegradable-erosion-control-matting-the-clean-green-choice-for-erosion-control/>

A Comprehensive Guide on What is Jute Geotextile

Jute is a rain-fed crop that has historically been used for wrapping. However, as time has passed, it has demonstrated its incredible plasticity by displaying a variety of unique morphological characteristics that have opened up new options for diversification. Jute Geotextile (JGT) is an important jute product with a wide range of applications. It has a wide range of applications, including civil engineering, soil erosion management, road pavement building and riverbank protection.

Read more:

<https://oceangeosynthetics.com/a-comprehensive-guide-on-what-is-jute-geotextile/>

Geotextiles in Sports Engineering

Can Geotextiles play a role in sports engineering? Absolutely. In the field of sports engineering as well, the versatile Ocean Geotextiles are wonderful tools that resolve myriad problems.

With the constant use and overuse of sports fields, there is bound to be a decline in the surface quality. Weather plays an important role too in the degradation of the quality of the turf. Extreme sun exposure, rains and use during various sports render the field and turf unfit over a period of time. As with most sectors, Geotextiles provide an innovative and cost-efficient solution to turf woes as well.

Read more:

<https://oceangeosynthetics.com/geotextiles-in-sports-engineering/>

Case Study: Kailasa Hills Project: Strengthening Infrastructure with Ocean Non Wovens' Geosynthetics

The Kailasa Hills project in Chintamani, Karnataka, is a prime example of geosynthetics' role in sustainable infrastructure development. Ocean Non Wovens, a leading geosynthetics manufacturer and supplier, played a crucial role in this project by providing high-quality materials tailored for soil stabilization, erosion control and geotechnical reinforcement.

Read more:

<https://oceangeosynthetics.com/kailasa-hills-strengthening-infrastructure/>





Our Projects

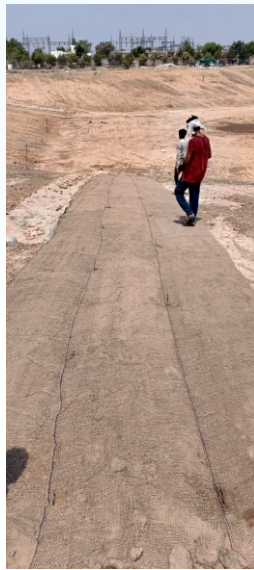
A closer look at our geobags solutions in action.



Ocean Jute Geotextiles Installed for Slope Stabilization in Waterpond Project



Project 2



Installation of Jute Geotextiles on Slopes for Industrial Site Development

Other Product Lines

Discover more geosynthetic solutions from Ocean Global.



Geomembranes



Geotextiles



Gabion Boxes



Geogrid



Geocomposite Materials



Geobags



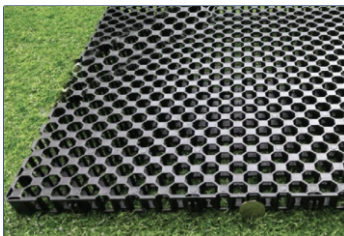
Geocells



Geopipes



Rockfall Protection Barriers



Drainage Cells



Dimple Drain Boards



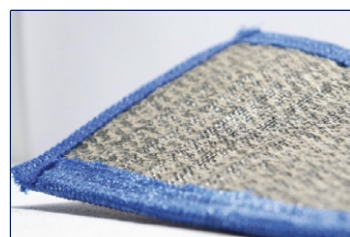
Anti - Hail Netting



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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