



OCEAN GLOBAL™

GEOSYNTHETIC CEMENTITIOUS COMPOSITE MATS (GCCM)

**RELIABLE.
DURABLE.
FIELD-PROVEN.**



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



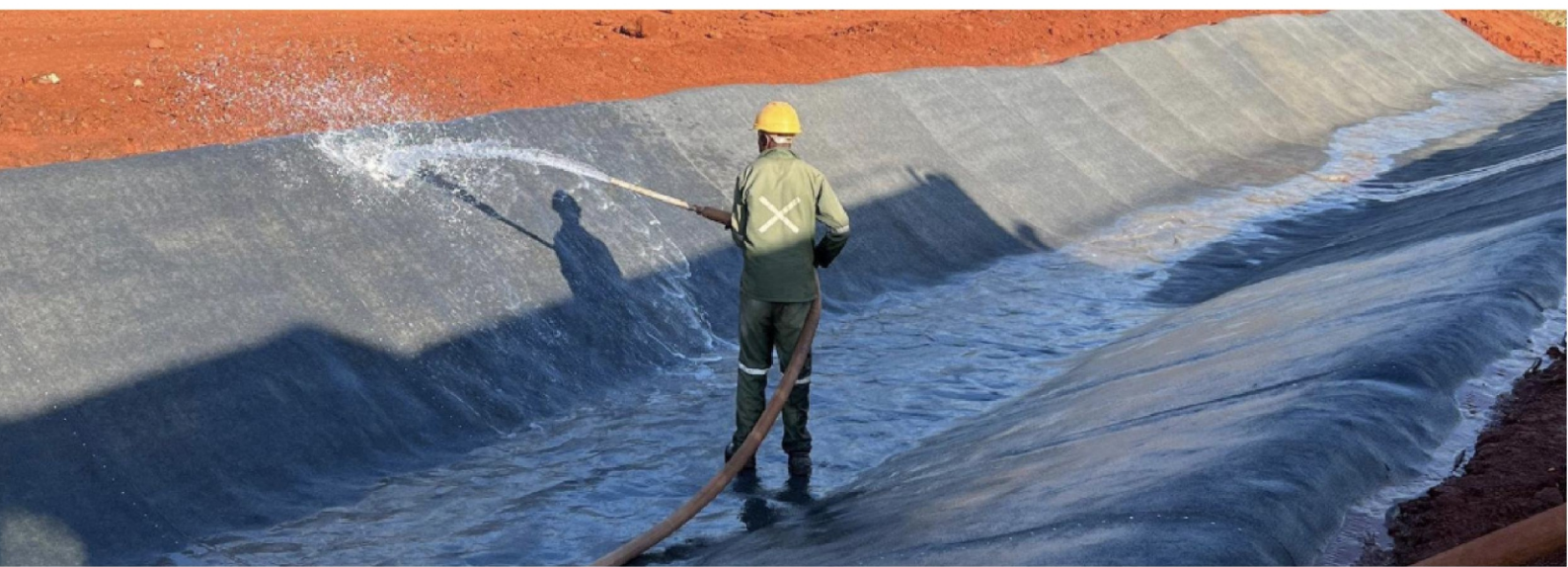
Facilities

- 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



What is GCCM?

Geosynthetic Cementitious Composite Mats (GCCM) are flexible, concrete-filled geotextile mats that harden when hydrated, forming a durable fiber-reinforced concrete layer. They are ideal for erosion control, slope protection, channel lining and more.

Key Features of Ocean GCCM

Easy to Transport and Install

Supplied in compact rolls, GCCM can be easily moved to remote or hard-to-access locations without the need for large transport vehicles. Installation is quick, simple and requires minimal labor.

No Heavy Equipment or Formwork Required

GCCM eliminates the need for traditional concrete mixing, formwork or curing processes. It can be laid directly onto the surface and shaped to fit complex contours and uneven terrain with ease.

Rapid Setting After Hydration

Once hydrated with water, the cement-sand core activates and begins setting within minutes. Within 24–48 hours, it forms a solid, durable concrete layer, significantly reducing project timelines.

Excellent Resistance to Harsh Conditions

GCCM is engineered to resist extreme weather conditions, UV radiation, fire exposure and chemical corrosion. It's ideal for both temporary and permanent applications in demanding environments.

Sustainable and Eco-Friendly

Using less water, material and energy than traditional concrete methods, GCCM offers a lower carbon footprint. It minimizes site disruption and reduces waste, making it an environmentally responsible choice.



Applications

Ocean GCCM is a versatile solution designed to meet the demands of modern civil, environmental and industrial projects. Its adaptability, ease of installation and high durability make it suitable for a wide range of applications across challenging terrains and conditions. Below are some of the key areas where our GCCM proves highly effective:



Slope Protection

Used to stabilize and protect slopes such as roadside embankments, landfills, mountains and cuttings from surface erosion and rainfall impact. Provides long-term durability even on steep or irregular surfaces.



Channel & Ditch Lining

Provides a fast, effective and low-maintenance solution for lining drainage channels, stormwater ditches and canals. Prevents water infiltration and erosion while allowing controlled flow.



Culvert Headwalls & Outfalls

Protects culvert inlets and outlets from scouring, undercutting and washout. GCCM forms a robust surface that reduces the need for traditional concrete works in confined or difficult-to-access areas.



Concrete Replacement

An excellent alternative to poured or shotcrete concrete, especially in remote locations where transporting materials or machinery is challenging. Requires only water to activate.



Secondary Containment

Ideal for lining containment areas for fuel, oil or chemical storage. Its chemical resistance and impermeable layer help prevent environmental contamination and meet regulatory compliance.



Riverbank & Shoreline Protection

Used to control erosion along rivers, streams and coastal areas. Provides an effective barrier against water flow while allowing vegetation growth in the long term, supporting ecological balance.



Why Choose Ocean GCCM?

Ocean GCCM stands out as a dependable, high-performance material designed to meet the demands of today's infrastructure, environmental and industrial projects. Built for flexibility and strength, it simplifies installation while ensuring long-term resilience, even in harsh environments. Whether you're facing complex ground conditions or tight project timelines, Ocean GCCM delivers efficient, lasting results where it matters most.



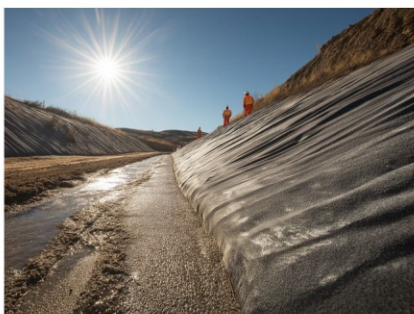
Fast and Simple Installation

GCCM can be installed quickly without the delays of traditional concrete methods. Just unroll, secure and hydrate — saving time, labor and project costs.



Minimal Equipment Required

No need for concrete mixers, heavy formwork or complex machinery. Only basic tools and water are required, making it ideal for both large and small-scale applications.



Fiber-Reinforced Concrete Layer

Once hydrated, GCCM forms a strong, durable concrete layer reinforced with high-strength fibers — ensuring structural integrity and long-lasting performance.



Excellent Durability and Resistance

Engineered to withstand harsh weather, UV radiation, fire and chemical exposure. Designed for demanding environments and long-term use.



Reduced Carbon Footprint

Requires significantly less material, transport and water compared to conventional concrete, making it a more sustainable and eco-conscious solution.



Ideal for Hard-to-Access Locations

Lightweight and rollable design allows for easy transport and installation in remote, sloped or confined areas where traditional construction is not feasible.

Technical Specifications

CHARACTERISTICS	STANDARD	GCCM	EN 13253, EN 13254, EN 13255, EN 12356 and EN 13257 (System 2+)
Thickness	ASTM D5199	7.00 (±1 mm) 8.00 (±1 mm) 10.00(±1 mm) 12.00 (±1 mm)	
Mass per unit area	ASTM D5993	7.90 (±10%), 9.50 (±10%) 10.56 (±10%), 12.58 (±10%)	
Maximum Tensile Strength Longitudinal (kNm) Transversal (kNm)	ASTM D6768	Max 20, Max 18	
Elongation at break Longitudinal (%) Transversal (%)	ASTM D6768	≥20 ≥15	
Static puncture resistance (CBR)(N)	ASTM D5494	≥3000	
Dynamic puncture resistance (mm)	ASTM D5494	0	
Durability	ASTM D5721	NDPE (not concerned)	
Bending resistance (MOR)	ASTM D8058	Class 1 (Category A4)	EN 12467 (System 4)
Fire resistance	EN 13501-1	B-s1,d0	
Dangerous substances	EN 12467	NPD	
Water impermeability	ASTM D5887	No drop of water	
Durability – Warm water resistance	EN 12467	RL≥0.75	
Durability – Soak-dry resistance	EN 12467	RL≥0.75	
Durability – Freeze-thaw resistance	ASTM D8058/C1185	RL≥0.75	
Durability – Heat rain resistance	EN 12467	Conform	
CHARACTERISTICS COMPLEMENTRIES			
Compressive strength (Mpa)	ASTM D8329		Above 40
Setting start (min)	EN 196-3		
Roll Size		2.4m or 4.8m Wide x 20.84m	

Note:-The above values are derived out of tests conducted in our in-house test laboratory. Ocean Non Wovens solely reserves full right to alter/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 Non Wovens 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 +/-5% 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).



Installation Guidelines

The successful performance of Ocean GCCM depends on proper installation. When installed correctly, the material forms a strong, durable and low-maintenance concrete layer suitable for a wide range of applications. Follow these essential steps:



Unroll the GCCM Over the Prepared Surface

Begin by preparing the ground or substrate to ensure it is free from loose debris, sharp objects, and significant voids. Unroll the GCCM over the surface, ensuring it lies flat and conforms closely to the terrain. For large areas, use overlap joints of minimum 100 mm, adjusted as required for site conditions and install under the supervision of the Project Manager.



Secure Using Nails, Pins or Sandbags

To prevent movement during hydration and curing, secure the GCCM using ground nails, U-shaped pins, pegs or sandbags. Apply fixings along overlaps, edges and corners at recommended intervals. On sloped or windy sites, additional ballast may be required.



Hydrate with Clean or Saline Water Until Fully Saturated

Use clean water (potable, non-potable or even saline) to thoroughly soak the material. Spraying is the most common method, but immersion is also effective. Ensure the entire surface is fully hydrated – water should seep through the fabric and emerge from the bottom layer. Avoid partial hydration, as it can lead to uneven setting.



Cure by Keeping It Moist for at Least 48 Hours

Begins to set quickly. To ensure full strength development, keep the GCCM surface moist and protected from excessive drying for at least 48 hours. This may involve periodic rewetting or covering with a plastic sheet, depending on weather conditions. After curing, the material forms a hard, durable and erosion-resistant concrete layer.



Accessories and Tools

For proper GCCM installation, keep essential tools ready: utility knives for trimming, measuring tape for alignment, gloves and safety gear for handling, hammers/mallets for fixing and water hoses for hydration. For curing, use plastic sheets and for larger projects, lifting equipment or rollers may be needed. The right tools ensure efficiency, safety and durability.



Clientele



AB INFRA BUILD LTD



Our Projects

A closer look at our Geosynthetic Cementitious Composite Mat (GCCM) in action — highlighting seamless installations and superior performance across challenging environments.



Ocean Gccm Applied in Mountain Terrains for Drainage Purpose (Project 1)



Ocean Gccm Applied in Mountain Terrains for Drainage Purpose (Project 2)

Other Product Lines



Geomembranes



Geobags



Gabion Boxes



Geogrid



Geocomposite Materials



Erosion Control Mats & Blankets



Geocells



Plastic Cell Filled Concrete



Rockfall Protection & Barriers



Drainage Cell



Dimple Drain Board



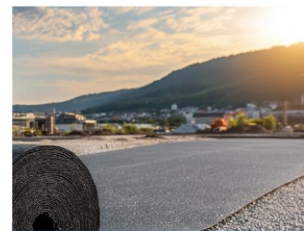
Anti Hail Netting



Geo Tube Dewatering Containers



Geotextiles



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