



Macro Sheet India Limited

A Company where quality matters

WIDE RANGE OF ANTI-SEEPAGE & WATERPROOFING PE MEMBRANES.



**FIELD OF APPLICATION
FOR
MACRO® PE GEOMEMBRANE (HDPE/ LLDPE)**

WASTE LANDFILL

DAM / RESERVOIRS

CANAL

AGRICULTURE FARM POND

AQUACULTURE/ DECORATIVE POND

MINING / OIL & GAS PROJECTS

BUILDING CONSTRUCTION

ROAD, BRIDGES, RAILWAY TRACK

ASH STORAGE LAGOON



LEADING MANUFACTURER, SUPPLIER & EXPORTER OF WIDE RANGE OF

PE GEOMEMBRANE (HDPE/ LLDPE) FILM / SHEET / LINER & OTHER GEOSYNTHETIC PRODUCTS



COMPANY'S MESSAGE

At Macro Sheet India Limited, we are committed to delivering innovative, high-performance geomembrane solutions that are durable, reliable, and cost-effective. Our focus on quality, advanced technology, and customer satisfaction has positioned us as a trusted name across agriculture, irrigation, water resources, and infrastructure sectors.

We believe that long-term success is built on *trust, performance, and service excellence*. Backed by skilled engineers and a dedicated workforce, we ensure consistent product quality and dependable after-sales support—because customer satisfaction does not end at delivery.

Driven by innovation and responsibility, we also remain committed to environmental protection and sustainable development.

WHO ARE WE

MACRO SHEET INDIA LIMITED is a Public Limited company incorporated in Rajasthan, India, and established in 2021. The company is certified to ISO 9001:2015 (Quality Management), ISO 14001:2015 (Environmental Management), and ISO 45001:2018 (Occupational Health & Safety Management) standards, reflecting our commitment to quality, sustainability, and workplace safety.

We manufacture Co-Extruded Multilayer HDPE and LLDPE Geomembrane Sheets in thicknesses ranging from 0.3 mm to 3.0 mm, with sheet widths of up to 6.0 meters, at our modern manufacturing facility in Jaipur, Rajasthan. The plant offers strong logistics connectivity and an annual production capacity exceeding 8,640 MT.

Alongside in-house production, we source geotextiles and a comprehensive range of geosynthetic products from reputed global manufacturers, enabling us to deliver a complete All-in-One, One-Stop Solution for geosynthetic requirements.

Supported by skilled professionals and advanced technology, MACRO SHEET INDIA LIMITED serves environmental protection, water conservation, and civil engineering sectors across India and international markets, with a vision to become a globally trusted leader in sustainable, safe, and high-performance geosynthetic solutions.

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Our Thoughtful Mission

Our mission is to deliver flawless service through on-time delivery, zero defects, and consistent quality assurance, supported by regular quality audits and continuous product development.

Our Ambitious Vision

Our vision is founded on strong quality policies and rigorous quality control. We are committed to maintaining high production standards and ensuring timely delivery of products and services that meet global specifications at competitive prices. With a fully equipped laboratory operating round the clock and a dedicated team overseeing every stage of production and quality control, we achieve excellence through continuous improvement, clear objectives, and teamwork.

Our Motto

**To produce superior quality, build lasting customer loyalty,
and deliver excellence in customer satisfaction.**

We have accepted the challenge of making

*Our Planet "Earth" Greener,
Pollution Free And Healthy.*



MACRO® RANGE OF PRODUCTS



HDPE / LLDPE GEOMEMBRANE / FILM / SHEET / LINER

(Manufactured as per IS 16352:2020 / IS 2508:2024 / ASTM / MOEF / CPCB and meeting all technical requirements of GRI-GM13 & GRI-GM17)*

Thickness Range: 0.3 mm (300 micron) to 3.00 mm (3000 micron)

Width: Up to 6 meters

Surface Finish: Smooth

Colour- Black (other colours can be customized according requirement)

Role size- 50/100 Meter (As per requirement also)



OTHER GEOSYNTHETICS

PP Woven & Non-Woven Geotextiles

Geocells

Geocomposites

Geogrids

Geonets

Geosynthetic Clay Liners (GCL)

FEATURES OF MACRO® HDPE & LLDPE GEOMEMBRANES

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Geomembranes are low-permeability synthetic liners designed to act as effective barriers against fluid migration. MACRO® HDPE and LLDPE Geomembranes are widely used for containment of hazardous and non-hazardous fluids that may contaminate soil or surrounding structures.

HDPE Geomembranes offer excellent chemical resistance, UV stability, and long-term durability, making them ideal for landfills, reservoirs, and industrial containment systems. LLDPE Geomembranes provide superior flexibility and elongation, making them suitable for applications requiring enhanced stress crack resistance and adaptability to uneven subgrades.

These properties make **MACRO®** Geomembranes a reliable and preferred solution for waterproofing, sealing, and environmental protection applications.



PROPERTIES OF MACRO® HDPE & LLDPE GEOMEMBRANES

(Complying with IS 16352:2020 / IS 2508:2024 / GRI-GM13 / GRI-GM17)

- Very low permeability, providing an effective hydraulic and contaminant barrier
- High tensile strength and elongation at break as per applicable standards
- Excellent chemical resistance to acids, alkalis, salts, and hydrocarbons
- Superior resistance to ultraviolet radiation and weathering
- High resistance to environmental stress cracking (ESCR)
- Excellent puncture, tear, and impact resistance
- Thermal stability over a wide service temperature range
- Inert, non-toxic, and safe for contact with soil and water
- High seam strength with excellent weldability using thermal fusion methods
- Proven long-term durability and aging resistance

LLDPE Geomembranes conforming to GRI-GM17 provide higher flexibility and elongation, while HDPE Geomembranes conforming to GRI-GM13 offer higher stiffness and chemical resistance.

OUR PLANT FACILITY

Our manufacturing facility is equipped with state-of-the-art flat sheet extrusion technology (T-Die system) for the production of HDPE and LLDPE Geomembrane sheets—introduced for the first time in India. This advanced technology offers:

- ☐ Precise and uniform control over sheet thickness
- ☐ Excellent dimensional stability
- ☐ No fold lines
- ☐ Higher welding speed
- ☐ Superior surface uniformity

Sheet thickness is a critical parameter as it directly influences temperature gradients, material behavior, and long-term performance. Variations during stretching or bending can adversely affect project outcomes. With superior thickness control, MACRO® HDPE & LLDPE Geomembranes exhibit minimal shrinkage, enhanced durability, and extended service life. Uniform thickness enables faster welding and reduced installation time, ensuring efficient and timely project completion. Excellent dimensional stability also minimizes folding under sunlight exposure, resulting in superior performance and long-lasting geomembrane integrity.

*Plant Designed for Manufacturing the Product to meet
Indian Standards IS 16352:2020, IS 2508:2024,
and global GRI G-M-13 & G-M-17 requirements*



FIELD OF APPLICATION FOR MACRO® HDPE GEOMEMBRANE

MACRO® HDPE & LLDPE GEOMEMBRANE Landfill Liner / Canal Liner / Dam Liner / Pond Liner

High Density Polyethylene (HDPE) Geomembrane is known for its excellent UV and temperature resistance, high chemical stability, durability, and cost-effectiveness. Its ability to be manufactured in higher thicknesses makes it one of the most widely used geomembranes globally. HDPE is the preferred solution for landfills, ponds, canals, dams, and reservoirs.

Linear Low Density Polyethylene (LLDPE) Geomembrane offers enhanced flexibility, higher elongation, and superior stress crack resistance, making it ideal for applications involving uneven subgrades and complex geometries.

MACRO SHEET INDIA LIMITED offers a comprehensive range of HDPE and LLDPE Geomembrane Liners designed to meet the requirements of all major lining applications.

WASTE LANDFILL LINER

MACRO® HDPE Geomembrane acts as an impermeable barrier that prevents leachate migration into subsoil, groundwater, and nearby water bodies. Installed at the base of landfills, it creates a secure containment system similar to a "bathtub" effect.

Our landfill geomembranes are also widely used as:

Bottom liners

Cap covers

Floating covers for leachate ponds

Protecting soil and groundwater



This system effectively traps toxic by-products and supports long-term environmental protection.

CANAL LINER



HDPE Geomembranes are a proven alternative to concrete and compacted soil canal linings. They significantly reduce seepage losses, improve water delivery efficiency, and offer long service life.

Even if concrete linings deteriorate over time, the geomembrane beneath continues to prevent seepage, ensuring uninterrupted performance. LLDPE Geomembranes are used where higher flexibility is required.

Reducing water loss, improving irrigation efficiency

DAM LINER

Saving every drop of water

Over time, concrete dams lose watertightness due to cracks, leaching, and deformation. MACRO® HDPE Geomembrane provides an effective upstream waterproofing solution, ensuring long-term leakage prevention. With excellent mechanical strength and durability, MACRO® Geomembranes offer a cost-effective and reliable solution for dams,



POND LINER APPLICATIONS

Agriculture Farm Ponds

Geomembranes play a critical role in water conservation for irrigation and horticulture. MACRO® HDPE Geomembranes prevent seepage, ensure long-term water storage, and support government-backed pond lining schemes under agricultural and horticulture missions.



Aquaculture Ponds, Artificial Lakes & Decorative Ponds

MACRO® HDPE & LLDPE Geomembranes provide a smooth, inert, and non-toxic lining system that:

- ☐ Prevents seepage and soil contamination
- ☐ Reduces disease risks
- ☐ Improves yield and profitability



Their use has become a best practice in shrimp and fish farming across India.

RESERVOIRS

HDPE Geomembranes are widely used as an alternative to clay liners in reservoirs and ponds. Their impermeability, strength, and durability make them ideal for irrigation, drinking water storage, industrial use, aquaculture, and hydropower projects.



INFRASTRUCTURE & CONSTRUCTION APPLICATIONS

Roads, Highways, Bridges & Under Railway Tracks

Geomembranes act as:

- ☐ Waterproofing layers
- ☐ Separation barriers between soil and aggregates
- ☐ Protection against subgrade contamination
- ☐ Seepage barriers beneath pavements
- ☐ Reducing ballast degradation
- ☐ Improving track stability
- ☐ Enhancing long-term performance



Building Construction

MACRO® Geomembranes are used under foundations, slabs, roofs, and tiles to prevent moisture ingress, structural damage, mold, and chemical contamination.

Mining

MACRO® HDPE Geomembranes provide secure containment for:

- ❑ Heap leach pads
- ❑ Tailings ponds
- ❑ Evaporation ponds
- ❑ Wastewater treatment systems

Their superior chemical and UV resistance ensures long-term performance in aggressive mining environments.



Oil & Gas Projects

HDPE Geomembranes serve as primary and secondary containment barriers, preventing hydrocarbon leakage and protecting soil and groundwater from contamination.

Ash Storage Lagoons

In thermal power plants, MACRO® HDPE Geomembranes are used to line ash ponds and lagoons, preventing leachate seepage and protecting land and water resources.



HDPE & LLDPE GEOMEMBRANE LINERS BY MACRO SHEET INDIA LIMITED



For projects requiring reliable geomembrane liners, MACRO SHEET INDIA LIMITED is a trusted manufacturer with proven expertise. We produce a comprehensive range of HDPE and LLDPE Geomembranes and supply our products across India and international markets.

HDPE Geomembranes are manufactured with a density of 0.940 g/cc and above and fully comply with the technical requirements of GRI-GM13*.

LLDPE Geomembranes, engineered to meet GRI-GM17* requirements, offer superior flexibility, higher elongation, and excellent stress crack resistance, making them ideal for uneven subgrades and complex lining applications.

UNIQUE FEATURES OF MACRO® HDPE & LLDPE GEOMEMBRANE SHEETS

- ❑ Ease of Deployment & Faster Installation
- ❑ Suitable for civil engineering, tunneling, pond lining, landfill, mining, and waste containment applications
- ❑ Advanced Manufacturing Strength
- ❑ Manufactured using Flat Sheet Extrusion (T-Die) Technology
- ❑ Uniform thickness ensures higher welding speed and superior seam quality Installation performed using hot wedge heat sealing
- ❑ Faster execution supports on-time project completion
- ❑ Ensures high mechanical strength, excellent aging resistance, and consistent performance
- ❑ LLDPE provides enhanced flexibility for complex site conditions
- ❑ Longer Service Life
- ❑ Minimal sheet shrinkage ensures reliable performance in all climatic conditions
- ❑ Reduced thermal expansion minimizes wrinkles and improves liner-to-subgrade contact Lower risk of damage during backfilling, ensuring long-term durability



APPLICATION AREA



IRRIGATION



AGRICULTURE



FISHERIES



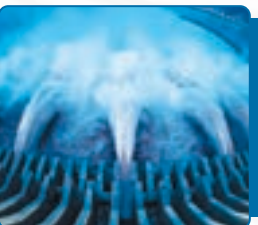
CONSTRUCTION



INFRASTRUCTURE



ROADS & HIGHWAYS



WATER



WASTE



HYDRO ELECTRIC POWER



OIL REFINERY



MINING



AIRPORT



FERTILIZER



CHEMICAL



SUGAR



STEEL



SALT



INDUSTRIAL-WWTP



RAILWAY



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Prevent It From Getting Polluted.*

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