

# A strong future rises on unseen foundations!

Under the **GEO MERT** Geosynthetics Solutions brand, our main goal is to establish long-term collaborations and be a reliable solution partner for your business. Thanks to our strong connections in both international and Turkish markets, we conduct detailed market research on your behalf, identify the most suitable resources, and manage every stage of the process meticulously and safely.

With 11 years of experience in the geosynthetics sector, a strong supplier portfolio, and solid business partnerships, we are delighted to bring you together with a wide range of geosynthetic products under our brand, where we offer production and consultancy services as your international business partner.

**GEO MERT** Geosynthetics is a well-established brand specializing in the supply and export of geosynthetic products. With an extensive product range including HDPE Geomembrane, PVC Geomembrane, TPO Geomembrane, EPDM Geomembrane, PVC Waterstop, Geotextile, Geogrid, Geocell, GCL, Dimple Sheet, Bituminous-Proof Membrane and Concrete Carpets, and protection panels, we provide high-quality solutions for both infrastructure and superstructure projects. We also offer engineering and application services, as well as product supply and international road and sea freight services, ensuring competitive prices.

Our vision is to establish the most efficient service network that delivers high-quality and reliable products directly from the manufacturer to the end user at competitive prices, providing sustainable solutions tailored to your needs. As **GEO MERT** Geosynthetics Solutions, our aim is to be the key that opens the doors of Turkiye for your business.

While walking this path together, our only expectation is to open the doors of fair, reliable, and honest trade hand in hand with you, growing and developing more each day. I will be more than happy to receive your valuable feedback.

Please do not hesitate to contact me via email or mobile phone for any questions or requests you may have.

Turkiye  
Discover  
the potential



ENVIRONMENTAL  
SENSITIVE



FOCALITY ON  
RECYCLING



POWER  
SAVE



NO HAZARDOUS  
SUBSTANCES



ENVIRONMENTALLY  
FRIENDLY



HDPE  
GEOMEMBRANE



TPO  
GEOMEMBRANE



DIMPLE  
SHEET



EPDM  
GEOMEMBRANE



GEOCELL



BENTONITE  
CLAY LINER



PVC  
GEOMEMBRANE



GEOTEXTILE



PVC WATERSTOP  
TAPE



GEOGRID



CONCRETE  
CARPET



HDPE  
T-GRIP



# HDPE Geomembrane

Geomembrane derives its name from the combination of the English words “**GEO**,” meaning earth or ground, and “**MEMBRANE**,” meaning a separating or selective barrier. As the name implies, Geomembrane (or Geosynthetic Membrane) refers to synthetic insulation sheets used for separation and impermeability purposes on soil, concrete, rock, surfaces, and foundations.

The use of geomembranes is not limited to subsoil applications. Depending on their properties, they can also serve as a final layer in building foundations, ponds, dams, agricultural reservoirs, and similar applications.

## Product Features

- Highly resistant to chemicals.
- UV resistant.
- Rough surface reduces friction.
- Highly resistant to organic and inorganic solutions.
- Extremely resistant to cracks.
- Resistant to natural conditions.
- Resistant to punctures and jumps.
- Low permeability.

**HDPE Geomembranes** are produced in layers of various widths and thicknesses by processes such as extrusion and calendering of the mixture formed by adding various substances such as polymer resin and antioxidants, plasticizers, fillers, carbon black and lubricants to the raw material. **HDPE Geomembranes** are resistant to chemicals, have low permeability, provide high resistance to puncture and cracking, are long-lasting, have high strength and elongation, have many advantages such as UV resistance, flexibility, ease of application and low cost.

**HDPE Single-Sided Textured Geomembrane** is placed on the material to prevent slipping by using textured geomembranes, and the number of roughness per m<sup>2</sup> of roughness height increases the adhesion and friction coefficient and prevents slipping. Thus, it helps to hold onto the ground better and provides ease during application. **HDPE Geomembranes**, which are produced in different thicknesses according to the application areas for high and medium slope land conditions, are also produced as textured in order to be suitable for the field slope.



# PVC Geomembrane

**PVC Geomembranes** are prepared with polyvinyl raw material, additional dye chemicals and auxiliary materials during production. It is obtained by polymerizing the vinyl setting. These are prepared with PVC (Polyvinyl) resin, fillers and additives, dye chemicals, softeners, stabilizers and are produced by holding the necessary processes from the extruders and then transferring the system and turning it into a homogeneous insulation, protective and strengthening material.

**PVC Signal Layer (YS-GS-G-B) Geomembrane** is a specialized geomembrane model designed to simplify damage detection. It features a dual-colored structure, consisting of a thin, light-colored (yellow) layer combined with a darker (black) layer.

When the material is damaged, the light-colored (yellow) layer becomes visible on the surface of the darker (black) layer, making it easier to visually identify damaged areas. This feature enhances damage detection and facilitates quick and efficient repairs.

## Product Features

- Prevents water leakage from concrete joints.
- It is recyclable. Therefore, it does not harm the environment.
- It is resistant to **-40C, +70C** degrees heat.
- The joints are connected with a special welding machine so that the end points meet.
- Prevents corrosion, is resistant to aging.
- It is long-lasting.
- It is within the scope of **Class E** in combustion.
- It has high tensile and elongation strength.



# PVC Mesh Reinforced Geomembrane

**PVC Geomembrane** is a polyester **Mesh-Reinforced PVC Geomembrane** designed for use on exposed roof surfaces. It can be mechanically fixed or applied using the loose-laid method in vacuum roof systems. In a vacuum roof system, it is laid loosely, allowing for ease of installation. It is also used to strengthen the internal structure of sandwich panels.

The products are highly resistant to tearing, which is particularly important for mechanical fastening on roofs exposed to wind. **PVC Mesh Reinforced Geomembrane** is made of softened - flexible **PVC** and has a **polyester mesh - reinforced - yarn reinforcement**.

Geomembrane products have a unique non-slip surface as standard, providing an aesthetically pleasing surface. The non-slip surface is also more aesthetically pleasing. It represents an important safety factor when walking on the roof, especially during installation and regular maintenance in wet weather.



# PVC Waterstop Tape

**PVC Waterstop Tape** are used to ensure water tightness and prevent damage in expansion and contraction joints of reinforced concrete structures, and in construction joints formed in concrete poured at different times because the concrete pouring process is not continuous. Mixtures consisting of **PVC** (Polyvinyl chloride) and various chemical additives that increase the life and durability of the material are produced in different types by shaping the dye in an extruder at a certain temperature and pressure.

They are **PVC** produced in special sections and types. At the same time, it prevents this passage and accelerates structural integrity by acting as a shock absorber in the structure. It is a concrete structural element that aims to prevent fluid passage in the continuously diluted concrete mortar and water flows in the concrete joints. It protects the structure against damaging elements such as water, mud and moisture that can be encountered in an ordinary construction.



# TPO Geomembrane

TPO/FPA is a technological water cover made of thermoplastic polyolefin raw material and applied by hot air welding and sewing method. Compared to other membranes

**TPO Geomembrane** is an environmentally friendly product since it does not contain any toxic or harmful substances and has high energy saving feature thanks to its heat reflective feature. Thanks to its polyolefin structure, it provides both very high durability and high elasticity advantages for a lifetime. Another important advantage is that the products can be exposed to direct sunlight on roofs.

**TPO Geomembranes**, roof insulations, thanks to the reinforcement materials, show high long-term stability and resistance to heavy walking traffic and tear resistance.

## Application

**TPO/FPA Geomembranes** are applied through hot air gun on their overlapping joints, as no adhesives or other materials of any kind are required. Design solutions and application methods are illustrated in the technical manual published by the Rubber fuse Division. Waterproofing systems employing **TPO/FPA Geomembranes** membranes should be laid by installers authorized by Rubber fuse Division Technical Services.



# TPO Mesh Reinforced Geomembrane

**TPO/FPA Mesh Reinforced** is a technological waterproofing membrane produced from thermoplastic polyolefin raw material and applied by hot air welding and stitching method.

Thanks to its polyolefin structure, it provides both very high durability and high elasticity advantages throughout its life. **PE** is very flexible but also combines a very high tensile strength and abrasion resistance, making it the right choice for roof membranes due to its high resistance and flexibility at the same time.

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# EPDM Geomembrane

**EPDM Geomembrane** is a synthetic rubber made from refined substances like propylene and ethylene. It is widely used in various applications, particularly where high durability and water resistance are required. This product is most commonly used in cladding facades, hobby garden ponds, landscaping, water treatment plants, domed roofs, terraces, building insulation, and perimeter insulation as a water sealing material.

The reason for using synthetic rubber in these applications is that natural rubber does not offer the same level of cold resistance, expansion, tensile strength, and elasticity, which are crucial for high-quality waterproofing. **EPDM (Ethylene Propylene Diene Monomer)** rubber, with its synthetic composition, provides better weather resistance, durability, and elastic properties, making it ideal for long-lasting and efficient water protection. **EPDM** rubber stands out from other available rubbers primarily due to its elasticity retention even in high temperature environments. Additionally, it maintains excellent stretch resistance, tensile strength, and remains highly durable under varying weather conditions, ozone exposure, and sunlight. These qualities make **EPDM Geomembrane** an excellent choice for waterproofing applications in many industries.

**EPDM include:** Bacterial and fungal resistance, preventing harmful substances from mixing with water. Very high liquid impermeability, ensuring effective waterproofing. Resistance to environmental stress, such as temperature changes, and continuous wetting and drying cycles. Freeze-thaw resistance, which protects against the damage caused by freezing and thawing cycles. Resistance to stretching and cracking, ensuring longevity and performance. Seam welding compatibility, which allows for the membrane to maintain consistent tensile strength and elasticity even after being joined by welding.

Due to these properties, **EPDM Geomembrane** is a reliable and long-lasting solution for waterproofing in a wide range of applications, providing durability and protection against the elements.

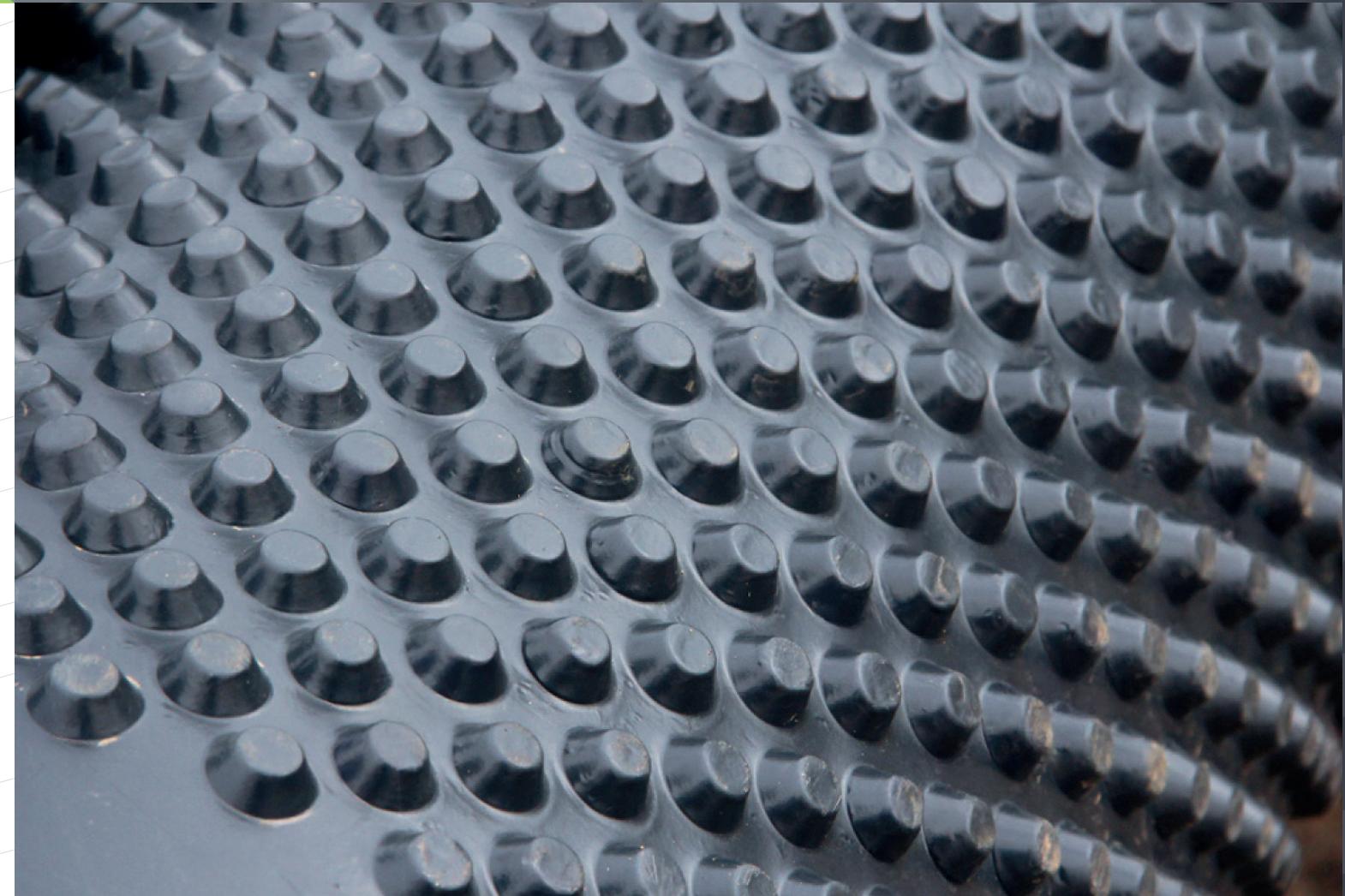


# Dimple Sheet

After the waterproofing of the building elements with bitumen membranes, it is very important to protect the waterproofing layers and drain the water. **DIMPLE Sheet** manufactures drainage membranes to protect the waterproofing layers and drain the water. **DIMPLE Sheets** drainage membranes are produced from **high density polyethylene (HDPE)** and are the protective layer that protects the membranes from chemicals, waterproofing, curtain walls from water and moisture and separates them from the soil. Due to its bubbly structure, it is used as both a protective and insulating tool.

## Areas of Use

- It is used to remove water in foundations, curtains, terrace roofs and floors, and tunnels.



# Geotextile (Polypropylene / Polyester / WhiteMix / Mottled)

**Geotextile** Non-Woven surface products are products with a wide production capacity, combined with **polyester**, **polypropylene** fibers by needle punching method. It undertakes reinforcement function, protection function, separation function, drainage function and filter function. **Geotextile**, which is frequently used in construction projects, is the only textile product that eliminates rock and soil permeability, which is the most important separating part of current project applications.

**Geotextile**; are divided into **Non-Woven** geotextiles and **Woven** geotextiles. It resists the tensile forces within the soil properties and acts as a reinforcement element. It is used for filtering and protection systems due to its filter properties. While preventing the passage of solid deterioration, it maintains a high buffering function against liquid and gas.

It has hydraulic and mechanical level functions. It is a protective and separating layer. The most important feature of geotextile is that it holds the soil with high strength.



# Geocell Cellular Filling Systems

Cellular Filling Systems that work by filling the cells with materials, in a honeycomb structure, offer alternative solutions with geogrid materials. The **Geocell (Cellular Filling System)** operates on the same principle as geogrid systems. The main difference between the **Geocell** filling system and a typical geogrid system is the flexibility of the fill material. In the honeycomb-shaped filling systems, they are used to strengthen the bearing platform in highways and railways, as well as to increase the load-bearing capacity of the ground.

**Geocell** cellular filling systems are control products made from high-strength polyethylene, which are geosynthetic structures. With its hollow structure and design, it allows the use of different types of filling materials. These systems are used in soil stabilization applications, controllable embankments and bedding for greening, green retaining walls, and concrete aggregate-filled channel construction.

These cellular filling systems provide significant advantages in reinforcing the ground, improving its load-bearing capacity, and offering versatility in filling materials. They are widely used in road construction, railways, and various civil engineering projects for ground reinforcement and stability.



# Geogrid (Biaxial / Uniaxial / Triaxial)

**Geogrid** are high-strength and durable geosynthetic products made from polymer materials, used in construction and infrastructure projects. These geogrids are employed in the manufacturing of retaining walls, enhancing slope stability, increasing soil bearing capacity, stabilization, and various reinforcement purposes.

**Geogrids** provide long-lasting, reliable, and sustainable performance in the projects where they are used. They offer solutions tailored to the specific needs of projects, such as **Uniaxial** (single-direction), **Biaxial** (two-direction), and **Triaxial** (three-direction) applications, ensuring that the various project requirements are met in the most efficient way possible.

These geogrids play a crucial role in improving the structural integrity of projects, offering cost-effective and sustainable reinforcement for embankments, slopes, roads, and other civil engineering structures.

**Geogrids** are classified into three main groups according to their production methods: **Woven Geogrids**, **Welded Geogrids**, and **Extruded Geogrids**.

- **Woven Geogrids** are typically produced by weaving high-strength polymer-based fibers, and due to their flexible structure, they easily adapt to the ground and provide long-lasting performance in projects.
- **Welded Geogrids** are formed by joining polymer rods using a thermal welding method.
- **Extruded Geogrids** are produced as a single piece through an extrusion process using polymer materials, and they are typically used in projects that require high load-bearing capacity.



# Bentonite Clay Liner

**Geosynthetic Clay Liner (GCL)** is an impermeable lining material created by needle-punching natural sodium bentonite material between woven and non-woven geotextiles. When the bentonite trapped between the woven geotextiles comes into contact with water, it forms an impermeable gel-like consistency, making it an excellent protective lining material.

In this process, natural sodium bentonite swells and expands up to **x24** times its original size, forming an impermeable layer. After it comes into contact with water and absorbs it, it returns to its original state. This cycle is continuously repeated, and the material's water insulation properties are never compromised.

## Areas of Use

- Solid Waste Disposal Sites.
- Mining Waste Disposal Sites.
- Irrigation Channels.
- Building Foundation Waterproofing Projects.
- Irrigation Areas and Ponds.



# Concrete Carpet

Concrete Carpet is a cement-based layer poured homogeneously between two geotextile fabrics, offering a rollable and easy concrete-laying system. It can be easily laid over the desired surface and, when brought into contact with water, conforms to the surface and hardens into concrete. Thanks to its easy transport and installation, **BETOTEKS Concrete Carpet** makes the concreting process extremely practical and can be applied much faster compared to traditional concrete. After application, it hardens upon watering and forms a solid, highly waterproof concrete layer on the surface.

- **BETOTEKS Concrete Carpet** does not absorb excess water, so you can water it as much as needed. It can be applied during rain or extreme temperatures. It can even harden underwater, including in seawater.
- **BETOTEKS Concrete Carpet** is supplied in portable roll packages that can be carried by individuals in areas without equipment. It is easy to work on and can be nailed, stapled, or cut with basic hand tools.
- After application, **BETOTEKS Concrete Carpet** remains workable and retains flexibility. Once watered, it reaches about 70% of its final hardness within 4 hours and achieves full strength within 1 day. It is chemically resistant.
- Thanks to its excellent resistance to weather conditions and abrasion, **BETOTEKS Concrete Carpet** performs twice as well as traditional concrete and has a UV-blocking structure. Reducing construction costs, duration, and environmental impact, Concrete Carpet replaces cast or sprayed concrete in many applications.



# HDPE T-GRIP Geomembrane

HDPE T-Grip geomembrane is a special type of geomembrane manufactured from **high-density polyethylene (HDPE)**, featuring **T-shaped studs** on its surface. These T-grip studs provide a **mechanical interlock with concrete**, ensuring that the geomembrane becomes integrated with the concrete during casting and cannot detach from the surface.

## Where Is It Used?

HDPE T-Grip geomembrane is primarily used in **concrete-based water and chemical containment structures**, including:

- Tunnels and metro projects
- Wastewater treatment tanks
- Drinking water and wastewater reservoirs
- Chemical storage basins
- Bridges, culverts, and retaining structures
- Dams and irrigation projects

It is one of the most reliable solutions for any structure requiring geomembrane-to-concrete bonding.

## Technical Advantages

- **Excellent concrete adhesion:** The T-grip studs embed into the concrete, providing full structural integration.
- **High chemical resistance:** Resistant to acids, bases, and many chemical solvents.
- **High tensile and tear strength:** Ideal for heavy-duty and long-term applications.
- **UV resistance:** Ensures long service life in exposed environments.
- **Waterproofing performance:** Provides 100% impermeability.
- **Long lifespan:** Can perform effectively for up to 50 years.

## Purpose of Use

Unlike standard geomembranes designed only for surface lining, the HDPE T-Grip geomembrane is engineered to be **mechanically locked into the concrete**, creating a permanent waterproofing layer.

## Available Thickness Options

Typically produced in the following thicknesses:

- 1.5 mm
- 2.0 mm
- 2.5 mm
- 3.0 mm

The selection of thickness depends on project load requirements and the specific application.





[www.geomert.com](http://www.geomert.com)