



MDPE, HDPE, LDPE, LLDPE, EVA GEOMEMBRANE

By channeling the electrical installation expertise accumulated since 2016 into the field of construction insulation, it has become one of the leading suppliers of high-quality geomembrane products in Azerbaijan. Our engineers combine internationally certified raw materials with modern design methods to deliver solutions that minimize water loss and provide long-term protection of soil and the environment against chemical leakage.



STANDARD GEOMEMBRANE

Width: 4–8 m | Thickness: 0.3–3.0 mm

Standard Geomembrane

It is a reliable and cost-effective type of geomembrane used for general applications. With high tensile and puncture resistance, it is well-suited for engineering projects.

Produced in rolls with a smooth surface on both sides and black in color, this geosynthetic waterproofing material is supplied in widths of 4–8 m and thicknesses from 0.3 to 3.0 mm. Depending on project requirements, the membrane can be manufactured from high-density (HDPE), medium-density (MDPE), low-density (LDPE/LLDPE) polyethylene, or EVA copolymer. The selected raw material combination provides both mechanical strength and flexibility, as well as chemical inertness, across a temperature range of -60°C to $+60^{\circ}\text{C}$.

This geomembrane is applied as a sealing barrier in industrial and civil construction, waste landfills, water reservoirs and irrigation canals, aquaculture ponds, and in the oil, gas, and mining sectors. It also performs reliably in soils exposed to constant groundwater influence, contributing to environmental protection.

The membrane is also available in a textured single-sided variant.





HIGH PERFORMANCE

GEOMEMBRANE

Width: 4–8 m | Thickness: 0.3–3.0 mm



High performance Geomembrane

Engineered to perform without losing its shape or impermeability even under the harshest climates and intense mechanical loads. It forms a uniform protective layer without requiring any additional surface coating, retains its elasticity for many years, and delivers a fully effective hydro-barrier immediately after installation.

The defining feature of this product is its enhanced UV protection: a special UV-blocking layer neutralizes solar radiation, preventing material embrittlement and color fading. This eliminates the need for extra surface treatments or coverings in open-air applications. A distinct chemical resistance parameter further ensures the membrane serves as a reliable barrier in environments rich in acids, alkalis, salts, and hydrocarbons.

Thanks to its enriched formulation used during production, this geomembrane is designed from the outset for complex and strategic projects. It provides rapid installation and long-term, reliable hydro- and chemical-barrier performance in high-responsibility facilities such as leachate pads, slurry ponds, petrochemical tank farms, industrial sites operating under high temperature and pressure, as well as open-air water reservoirs of solar and hydro power plants—significantly reducing operational costs.

This membrane is also available in a single-sided textured variant.



TEXTURED GEOMEMBRANE

Width: 4–8 m | Thickness: 0.3–3.0 mm



Textured Geomembrane

One side of the membrane is engineered with micro-relief dimples that strengthen its contact with soil or concrete, reducing the risk of slippage and ensuring stability even on steep slopes. The black rolls are designed for convenient welding, with a dedicated free edge that simplifies installation; since the weld seam falls on the smooth side, the process is faster while maintaining barrier integrity. At the same time, the material retains its high mechanical strength and chemical stability against acids, alkalis, salts, and hydrocarbons, preserving its form and function for many years.

Textured geomembrane is widely used for water and gas insulation of industrial and civil foundations, as an anti-filtration layer in reservoirs and canals, in road and transport infrastructure, and in landscape projects. It also serves as a reliable barrier against leachate leakage in oil & gas, mining, and environmental facilities. Withstanding temperatures from $-60\text{ }^{\circ}\text{C}$ to $+60\text{ }^{\circ}\text{C}$, it maintains flexibility and durability even in soils exposed to constant groundwater impact, delivering long service life in harsh climates without the need for additional protective measures.

Thus, the textured geomembrane is the ideal solution for steep slopes and areas with slippery subgrades: its soil-“locked” surface creates a stabilizing effect.



WHITE - REFLECTIVE GEOMEMBRANE

Width: 4–8 m | Thickness: 0.3–3.0 mm

White - Reflective Geomembrane

Thanks to its bright, reflective surface, this geomembrane reduces water evaporation by up to 20–25% in reservoirs, aquaculture ponds, and irrigation canals—allowing the same water reserves to last longer while lowering energy costs. The reduced surface heating helps maintain stable water temperatures and supports the membrane's long-term durability.

The white surface also provides practical advantages during installation: weld seams, punctures, and scratches do not blend into the background, ensuring easier visual inspection and allowing potential defects to be detected and corrected immediately on site.

Thus, the white geomembrane is both an economical solution that minimizes water consumption and a practical choice that enhances installation safety—making it ideal for water management, agriculture, and environmental projects.

This membrane is also available in a single-sided textured variant.



KEY ADVANTAGES



Mechanical Strength

High tensile and puncture resistance ensures long service life.



Chemical Resistance

Remains stable under prolonged exposure to acids, alkalis, saline water, and other aggressive solutions.



UV & Weather Resistance

Withstands long-term solar radiation, providing excellent durability against UV rays.



Long Lifespan (50+ years)

Maintains performance for over 50 years, even under harsh operating conditions.



Wide Temperature Range (-60 ... +70 °C)

Operates reliably without losing dimensional stability or mechanical properties.



Fast & Easy Installation

Roll format and hot-air welding technology enable quick, seamless field installation.



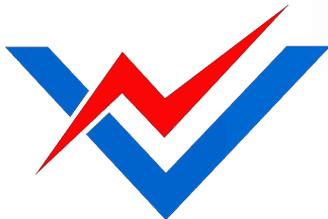
Project-Specific Dimensions

Available in roll widths from 2–8 m and in any length, covering a wide range of applications.

GEOMEMBRANE APPLICATION AREAS

A high-quality waterproofing barrier used in engineering and environmental projects to protect soil, water, and other vital resources. It provides reliable functions such as leakage prevention, containment of liquids and gases, and erosion control. Applications include waste landfills, drinking water reservoirs, sewage ponds, artificial lakes, quarries, and many other fields requiring long-term protection.

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"VOLTAJ Elektrik Qurasdırma və Təmir Tikinti" LLC has successfully concluded and executed numerous private and state-level contracts.

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