

# Geosynthetic Clay Liners

Bentonite waterproof blanket (GCL) is an anti-seepage liner between CCL (on-site thick compacted clay anti-seepage liner) and polymer material---geomembrane. It is mainly used in house basements, waste landfills, underground reservoirs, underground infrastructure construction and other projects in environmental engineering to solve sealing, isolation and anti-leakage problems. It has good effect and strong anti-destructiveness. Bentonite waterproof blanket is a new type of geosynthetics, widely used in underground waterproofing and anti-seepage construction in municipal, highway, railway, subway, water conservancy, environmental protection, and industrial and civil buildings.



Geosynthetic Clay Liners (GCLs) primarily serve the following functions:

**Seepage Prevention:** GCLs are highly impermeable materials used to prevent liquids (such as water or contaminants) from seeping through the underlying soil layer. The main component, bentonite, swells when it comes into contact with water, forming a low-permeability barrier.

**Environmental Protection:** GCLs are widely used in landfills, industrial waste containment sites, mining tailings ponds, and other hazardous waste storage facilities to prevent the leakage of harmful substances and protect groundwater and soil from contamination.

**Water Resources Engineering:** In water reservoirs, dams, canals, and artificial lakes, GCLs are used to prevent water leakage, ensuring the stability and functionality of the structures.

**Simplified Construction:** Compared to traditional compacted clay liners, GCLs are lighter and easier to install, reducing construction time and labor costs. Their prefabricated roll form makes on-site installation more straightforward and efficient.



**Enhanced Project Longevity:** The high durability and long-term performance of GCLs provide longer service life in engineering structures, reducing the frequency and cost of maintenance and repairs.

**Cost-Effectiveness:** Due to their excellent performance and ease of installation, GCLs often serve as an economical alternative to compacted clay liners in many projects, lowering overall project costs.

In summary, GCLs play a crucial role in environmental protection and water resources engineering by ensuring project stability and safety while providing cost-effective solutions.