



GeoSeal

GCL Clay Based Geomembrane

GeoSeal GCL is a mineral waterproofing system manufactured from sodium bentonite wrapped one face non woven geotextile (GeoTeknik Separator) and the other face woven geotextile (**ForTex PP**) envelop.

GeoSeal GCL is environmental friendly and non-toxic mineral substance that reacts water and similar liquids. Once bentonite mineral accompanying with water, it is forming an impermeable gel and expands approximately 16 – 18 times of its dry thickness. When the mineral medium is dehydrated, natural bentonite returns its original state. This cycle is continuously repeated without any leakage or any weakness on waterproofing properties of the material.



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FIELDS OF APPLICATION

GeoSeal GCL irregular expansion is controlled by covering by relatively 10 cm concrete or 30 cm soil /aggregate layer. This compress maintains the waterproofing gel homogeneous and proper position between geotextiles.

GeoSeal GCL has to applied smooth, dry and gap-free earth and soil surfaces. Before placement of the rolls, necessary earth-works has to cm on other GCL edge. **GeoSeal GCL** must be fixed mechanically on slopes sections.

GeoSeal GCL material is used;

- Solid waste storage yards
- Mining waste storage yards
- Irrigation channels
- Fire and water reservoirs
- Landscaping artificial lakes and lagoons
- Building foundations
- Insulation and waterproofing layer protection and support

ADVANTAGES

- **GeoSeal GCL** provides significant cost effectiveness when compared to compressed clay layer application.

- When compared with the clay layer with identical permeability, it fulfills the impermeability function better with a volume 100-150 times less than the clay layer. It also provides a significant saving from costs such as storage and transportation.
- It has superior hydrolic and mechanical properties coming from natural bentonite and geotextile envelop.
- No special equipment is needed for placing the rolls.
- Transportation and application is easier and faster when compared to the compressed clay layer forming larger volume

PACKAGING AND STORAGE

The materials are dispatched in the form of roils with 4 m – 5 m width and 40 m – 50 m length. It must be stored in a well-drained storage yard with smooth and dry surface and the products must be covered with tarpaulin. Contact with humidity and water must be avoided during storage.

TECHNICAL SPECIFICATIONS

Properties	Standart
Upper Side (nonwoven) (g/m ²)	200 300
Bottom Side (woven) (g/m ²)	100 - 200
BENTONT LAYER	
Unit Weight (g/m ²)	4000 - 5000
Expantion Index (ml/2 g)	≥ 24
Liquit Loss	≤ 18
GEOSYNTETIC CLAY LINER	
Unit Weight (g/m ²)	4300 - 5500
Thickness (mm)	5 - 7 mm
Wide of Roll (m) / Length (m)	4-5 m / 40-50 m
Liquit Penetration (m/sn)	5x10 ⁻¹¹
Tensile Strength (kN/m)	≥ 12
Stripping Strength (N/m)	>600

Roll Packing

