



Tektoseal® Clay – High Performance Liner

For Groundwater Protection, Contaminated Site Remediation
and Hydraulic Engineering



HUESKER

Ideen. Ingenieure. Innovationen.



High-performance clay liner

Simple, reliable and economical

Geosynthetic Clay Liners (GCL) have been successfully used for many years as a natural sealing option in a wide range of applications.

Embodying the latest findings from research and development, Tektoseal Clay is the result of the continuous refinement of industrially manufactured sealing systems. With Tektoseal Clay, HUESKER has capitalized on its many years of experience in GCL production to develop a high-performance clay liner with outstanding sealing and installation features that meet current recommendations and guidelines.

Tektoseal Clay is a highly developed, perfectly matched multi-component system that consists of extremely robust geosynthetics containing granulated sodium bentonite. These components are processed with a special precision-needling technique using the latest manufacturing equipment to produce a homogeneous sealing layer across the entire surface of the liner.



Top Layer
Nonwoven surface layer

Middle Layer
Granulated sodium bentonite for sealing

Bottom Layer
Carrier material made of high-tensile woven fabric

Tektoseal Clay	
Permittivity	$\leq 5 \cdot 10^{-9}$ [1/s]
Coefficient of water permeability	$k \leq 3 \cdot 10^{-11}$ [m/s]
Width	5.10 m (subdivisions of this available on request)

Tektoseal Clay has much to offer

The special manufacturing techniques used to produce Tektoseal Clay make it both a highly economical and an eco-friendly solution. The extremely thin sheet (< 10 mm) achieves at least the same sealing effect as a conventional clay liner. Moreover, continual monitoring during the production process ensures a consistently high and fully verifiable level of quality in the structure. The thin, high-performance, homogeneous clay liner combines rapid, structurally continuous installation with supreme waterproofing properties. Upon request, project-specific roll lengths and widths can be manufactured to minimize losses due to overlapping.

The high internal angle of friction achieved by the special precision-needling technique lends the finished product high all-round stability, even under heavy loads. The optimized friction characteristics and low susceptibility to settlement also make Tektoseal Clay ideal for application on steep slopes. A further unique feature is the optional sand-rough coating on one or both surfaces. Particularly with critical slope gradients, this offers significant advantages over standard models. The ease of product handling and the use of granulated sodium bentonite combine to ensure straightforward installation with low dust emissions.

Tektoseal Clay applications involve lower excavation volumes and a lower sealing material requirement than is the case for conventional mineral liners. Not only does this conserve natural resources, it often increases the capacity of the finished structure. The high chemical resistance of the composite product and longevity of the bentonite ensure durable performance. Even minor mechanical damage is automatically remedied by the encapsulated, highly swellable clay material. The extra security offered by this self-healing effect constitutes a further advantage over traditional HDPE membranes.

BENEFITS

- Reduced volume of earthworks/spoil transportation
- Better sealing performance than with standard mineral solutions
- High shear strength through precision needling
- Straightforward, low-dust installation to speed up progress on site
- Self-healing effect to remedy unnoticed minor damage



Applications



- Groundwater protection**
- Roads in water protection areas
 - Stormwater holding basins
 - Landscape construction
 - Airfield construction
 - Railways in water protection areas



- Contaminated sites**
- Cover lining systems
 - Bottom lining systems



- Hydraulic engineering**
- Dams and dikes
 - Drainage ditches

Tektoseal® is a registered trademark of HUESKER Synthetic GmbH.
HUESKER Synthetic is certified to ISO 9001 and ISO 50001.



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