

SOLSHEET Geosynthetic Clay Liner



SOLSHEET Geosynthetic Clay Liner (GCL) is a mechanically bonded composite of pulverised bentonite embedded between two layers of geotextile.



- **Fast and easy to install**
- **Superior choice for both designers & contractors**
- **Self-sealing if punctured**
- **Unrivalled hydraulic performance**
- **Highly cost effective**

Roll Dimension	
Roll Width x Length	5.1m x 40m
Roll Area	204m ²

SOLSHEET - Waterproofing Systems

Last Issue Date 14.02.20

Product Description

SOLSHEET is a reinforced needle-punched Geosynthetic Clay Liner (GCL) specifically designed for landfill, surface water impoundments and secondary containment.

SOLSHEET GCL is a mechanically bonded composite of pulverised bentonite embedded between two layers of geotextile. Additional bentonite is added to the overlap edges for ease of sealing.

SOLSHEET GCL's provide hydraulic performance equivalent to one metre of compacted clay, with a total GCL thickness of less than 10mm. SOLSHEET GCL's are self-sealing if punctured, and are manufactured in large rolls that require just a simple overlapped seam. Fast and easy to install, as well as being highly cost effective, SOLSHEET GCL's provide a superior choice for both designers and contractors.

Benefits & Advantages

- Natural granular sodium bentonite
- Unique composite of natural and synthetic materials
- Unrivalled hydraulic performance
- Highly competitive installed cost
- Self-sealing if punctured
- Excellent chemical resistance
- Highly competitive installed cost
- Fast and easy to install
- Excellent slope stability characteristics
- Excellent climatic resistance

Applications

- Landfill Caps
- Landfill Liners
- Contaminated Land Caps
- Secondary Containment
- Civil Engineering / Transportation
- Surface Water Impoundments (Lakes, Ponds, Lagoons etc)
- Mining

SOLSHEET GCL's comply with the latest codes of practice as published in LFE 3 - Using Geosynthetic Clay Liners in Landfill Engineering.

Product Handling

Roll weights can be between in excess of 1000kg and hence appropriate care and equipment is required for unloading and handling.

Product Storage

Rolls of SOLSHEET should be stored on stable/level ground and stacked not more than five rolls high, with no other material stacked on top. The rolls can be stored outdoors when packaged, but should be protected from exposure to UV.

Installation

SOLSHEET should be installed in accordance with the product installation guidelines.



SOLSHEET Geosynthetic Clay Liner



SOLSHEET TECHNICAL DATA					
Characteristic	Test Method	Unit	Value	Tolerance	MQC Frequency
GEOTEXTILE LAYERS					
Carrier Layer (PP woven) MPUA	EN ISO 9864	g/m ²	115	-10%	1/20,000m ²
Cover Layer (PP non-woven) MPUA	EN ISO 9864	g/m ²	200	-10%	1/20,000m ²
BENTONITE (Sodium Bentonite) LAYER					
Montmorillonite Content	CUR 33 (VDG 69)	%	>75	n/a	1/batch
Swell Index	ASTM D 5890	ml/2g	≥24	n/a	1/batch
Fluid Loss	ASTM D 5891	ml	<18	n/a	1/batch
Moisture Content	DIN 18121-1	%	<20	n/a	1/5,000m ²
Water Absorbtion	DIN 18132	%	>500	n/a	1/batch
GEOSYNTHETIC CLAY LINER					
Mass per unit area of Bentonite	EN14196	g/m ²	4700	±10%	1/20,000m ²
Mass per unit area of GCL	EN14196	g/m ²	5015	±10%	1/2,500m ²
Tensile Strength (MD/CMD)	EN ISO 10319	kN/m	12	-10%	1/10,000m ²
Permeability	ASTM D 5887	m/s	≤5.0 x 10 ⁻¹¹	n/a	1/25,000m ²
Index Flux	ASTM D 5887	m ³ /m ² /s	≤5.0 x 10 ⁻⁹	n/a	1/25,000m ²
Grab Tensile Strength	ASTM 4632	N	>400	n/a	1/10,000m ²
CBE Puncture Resistance	EN ISO 12236	kN	2.0	-10%	1/50,000m ²
Peel Strength	ASTM D 6496	N/10cm	>60	n/a	1/5,000m ²

* Data provided are average values derived from standard tests and are subject to usual product variation. The right is reserved to make changes without notice at any time.