

SOLSHIELD Geomembrane Liner (LLDPE)



Solshield Geomembrane Liner is made of a linear low density polyethylene (LLDPE), suitable for use as a lining membrane in both horizontal & vertical applications.

SOLSHIELD - Gas Protection System

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Product Description

Solshield Geomembrane Liner is made of a linear low density polyethylene (LLDPE), suitable for use as a lining membrane in both horizontal & vertical applications. Solshield Geomembrane Liner is manufactured in two basic roll widths - 5.1m and 8.0m. Available in thicknesses ranging from 0.75mm -2.0mm. The main purpose of the product is to serve as a barrier in protecting engineering structures against moisture, water, liquids and chemical substances, gases (radon, methane and carbon dioxide).

BS EN 13361: Characteristics required for use in the construction reservoirs & dams

BS EN 13362: Characteristics required for use in the construction of canals

BS EN 13491: Characteristics required for use in the construction of tunnels & underground structures

BS EN 13492: Characteristics required for use in the construction of liquid waste disposal, sites or transfer stations. BS EN 13493: Characteristics required for use in the construction of solid waste storage and disposal sites

BS EN 15382: Characteristics required for use in the construction of transportation infrastructure.

Application

- Civil engineering projects (municipal/urban structures, industrial and agricultural estates)
- Insulation of various hydraulic structures, water resources engineering (ponds, lakes, dams, canals and reservoirs)
- Liquid and solid waste deposits/reservoirs, landfills (capping), wastewater collectors, dewatering pits

Installation

We recommend Joint welding for certain applications however the membrane can be taped.

Ensure surfaces are clean and dry before applying tapes. Roll out Solco 100mm x 15mt Butyl tape 50mm in from the membrane edge. Overlap adjoining membrane a minimum of 150mm and seal edge with Solco 150mm x 20mt XL Reinforcement Tape.

In complex junctions, penetrations and terminations to existing structures you should also apply Solco 150mm x 20mt XL Reinforcement Tape ensuring a minimum of 150mm lap onto the membrane is achieved.

Technical Data

Properties	Test method	Unit	Thickness		
			0.75	1.00	1.50
Surface			smooth (G/G)		
Thickness (min. ave.) • lowest individual of 10 values	ASTM D 5199	mm	0,75 - 10 %	1,0 - 10 %	1,5 - 10 %
Density (max.)	ASTM D 1505	g/cm3	939	939	939
Tensile Properties (min. ave.) • break strength • break elongation	ASTM D 6693 type IV	kN/m %	20 800	32 800	40 800
2 % Modulus (max.)	ASTM D 5323	kN/m	370	420	500
Tear Resistance (min. ave.)	ASTM D 1004	N	70	100	150
Puncture Resistance (min. ave.)	ASTM D 4833	N	190	350	400
Axi-Symmetric Break Resistance Strain (min.)	ASTM D 5617	%	30	30	30
Carbon Black Content	ASTM D 1603	%	2 - 3	2 - 3	2 - 3
Carbon Black Dispersion	ASTM D 5596	Category	1 or 2, max. 1 view in category 3		
Oxidative Induction Time (OIT) (min. ave.) • Standard OIT	ASTM D 3895	min.	100	100	100
Oven Aging at 85 °C • Standard OIT (min. ave.) % retained after 90 days	ASTM D 5721 ASTM D 3895	%	35	35	35
STANDARD ROLL DIMENSIONS					
Roll Length		m	100	100	150
Roll Width		m	5.10	5.10 or 8.00	5.1 or 8.00
Roll Area		m ²	510	800 - 1600	1200