

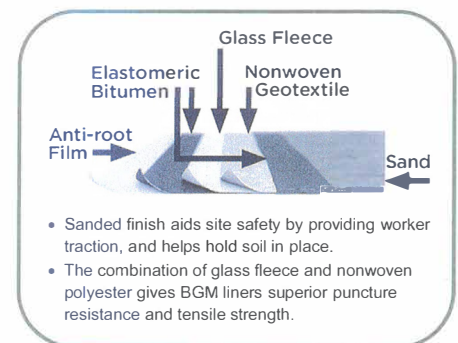


## Coletanche Bituminous Geomembrane (BGM) Liners

Bituminous Geomembrane (BGM) liners are an extremely versatile flame-resistant containment solution. The U.S. Nuclear Safety Agency qualifies them for a 1,000 year life span, based on UV resistance and physical durability. Highly resistant to punctures and tearing, they're also highly flexible and can hold a friction angle of 34 degrees. They are compatible with most materials, which makes them safe for direct installation on most soil types.

Some other BGM features include:

- Meets ULC-S668-12 flammability requirements
- Capable of direct cover by vegetation, poured concrete and hot mix asphalt -- temperature is not a concern
- Flexibility and dimensional stability provide permanent contact with substrate and makes it ideal for differential settlement
- Resistance to chemicals (including VOCs), biological agents and oxidation
- UV resistance means it can be left exposed indefinitely
- Self-sealing bituminous internal mass can flow and seal penetrations
- Installation on 2" compacted subgrade significantly reduces site preparation costs
- High surface mass allows installation in strong wind or underwater and saves on ballasting costs and effort
- Easy to weld and bond and can be welded to other membranes (HOPE, LLDPE, Polypropylene or PVC), other types of BGM, concrete or steel
- Can be installed at conditions as low as -40°C



**For Pricing And Availability Contact Our  
Sales Team at 780-962-6559**



# Product Specifications

	ES1	ES2	ES3	ES4
<b>Properties for the five product layers</b> Glass Mat Reinforcement: Nonwoven Geotextile Reinforcement: Binder: Surface Finish: Under Surface Finish:	50 g/m <sup>2</sup>  200 g/m <sup>2</sup> 3,800 g/m <sup>2</sup> Sand, 200 g/m <sup>2</sup> Polyester, 15 g/m <sup>2</sup>	50 g/m <sup>2</sup>  250 g/m <sup>2</sup> 4,300 g/m <sup>2</sup> Sand, 200 g/m <sup>2</sup> Polyester anti-root, 15 g/m <sup>2</sup>	50 g/m <sup>2</sup>  300 g/m <sup>2</sup> 4,800 g/m <sup>2</sup> Sand, 200 g/m <sup>2</sup> Polyester anti-root, g/m <sup>2</sup>	50 g/m <sup>2</sup>  400 g/m <sup>2</sup> 5,400 g/m <sup>2</sup> Sand, 200 g/m <sup>2</sup> Polyester anti-root, 1_5 g/m <sup>2</sup>
Size	5.1m x 90m	5.1m x 80m	5.1m x 65m	5.1m x 55m
Uses	Ditches Landfill covers Waste tip covers of moderate height	Landfill covers Hydraulic ponds Industrial liquid waste containment Canals Contaminated Land	Railways, directly under ballast Dams	Railways, directly under ballast Dams
Thickness ASTM 05199 (mm, incl. Min/Max)	4.00 3.80 / 4.40	4.00 3.80 / 4.40	4.80 4.56 / 5.28	5.60 5.32 / 6.16
Surface Mass ASTM 03776 (kg/m <sup>2</sup> incl. Min/Max)	4.20 3.89 / 4.50	4.85 4.50 / 5.20	5.80 5.37 / 6.20	6.40 5.32 / 6.16
Max. Tensile Strength ASTM 07275 (kN/m)	Longitudinal: 22 Cross-Direction: 18	Longitudinal: 27 Cross-Direction: 24	Longitudinal: 33 Cross-Direction: 29	Longitudinal: 39 Cross-Direction: 31
Tensile Elongation ASTM 07275 (%)	Longitudinal: 60 Cross-Direction: 60	Longitudinal: 60 Cross-Direction: 60	Longitudinal: 60 Cross-Direction: 60	Longitudinal: 60 Cross-Direction: 60
Water Permeability ASTM E96 (m/s)	6.10 <sup>-14</sup>	4.10 <sup>-14</sup>	6.10 <sup>-14</sup>	6.10 <sup>-14</sup>
Gas Permeability ASTM 01434-82 (m <sup>3</sup> /(m <sup>2</sup> .j.atm))	< 2, 3.10 <sup>-14</sup>	< 2, 3.10 <sup>-14</sup>	< 2, 3.10 <sup>-14</sup>	< 2, 3.10 <sup>-14</sup>
Oxidation EN 14575 (Max. Tensile Strength/ Elongation,%)	100 / 100	100 / 100	100 / 100	100 / 100

Rolls must not be stored directly on the ground. They must be supported on concrete blocks, trestles or timber beams of a minimum 35 cm height, placed under the mandrel ends. Rolls are 5.1 Om (16.4 ft) long with a 168mm (6.6") centre.