

# ProLiner® LLDPE Liner Range Smooth

## LLDPE Smooth Geomembrane

Used for fundamental waterproofing of channels, dams & liquid containment structures



### Product Information

LLDPE smooth geomembranes have a generalised use as a capping geomembrane or lining material for leachate pads, channels, dams & containment structures. LLDPE is a polymer with very short & uniform branches which make its melt temperature, tensile strength & cracking resistance superior to LDPE. ProLiner® LLDPE is a non polar, semicrystalline thermoplastic with good mechanical properties, high chemical stability & electrical insulation. ProLiner LLDPE does not absorb humidity, is odourless & is physically inert. ProLiner LLDPE geomembranes are manufactured with resins which are specially formulated & certified.

LLDPE smooth geomembranes have a density of 0.939 g/cm<sup>3</sup>. ProLiner® LLDPE smooth geomembranes have low permeability, high stress resistance & flexibility, high break elongation & good chemical & UV resistance (2-3%).

All ProLiner® LLDPE geomembranes are manufactured to exceed the requirements of GRI GM17 standards.

### Applications

The use of membranes in civil and environmental applications is becoming more widespread as there develops a greater understanding of the effects of contaminated ground conditions on structures and the environment.

Global Synthetics are able to offer a wide range of membranes that are compatible with the diverse range of applications and contaminants likely to be encountered.

# ProLiner® LLDPE Liner Range Smooth

## Product Data Sheet

## Product Grade

| Properties                                                                        | Unit              | Test Method          | Standard 1.00mm | Standard 1.50mm | Standard 2.00mm | Standard 2.50mm |
|-----------------------------------------------------------------------------------|-------------------|----------------------|-----------------|-----------------|-----------------|-----------------|
| Thickness Average nom.                                                            | mm                | ASTM D 5199          | 1.00            | 1.50            | 2.00            | 2.50            |
| Thickness Minimum                                                                 | mm                | ASTM D 5199          | 0.90            | 1.35            | 1.80            | 2.125           |
| Density (max)                                                                     | g/cm <sup>3</sup> | ASTM D 792           | 0.939           | 0.939           | 0.939           | 0.939           |
| Tensile Properties                                                                |                   |                      |                 |                 |                 |                 |
| Break Strength                                                                    | kN/m              | ASTM D 6693          | 27              | 40              | 53              | 66              |
| Break Elongation                                                                  | %                 | (Type IV)            | 800             | 800             | 800             | 800             |
| 2% Modulus (max)                                                                  | N/mm              | ASTM D 5323          | 420             | 630             | 840             | 1050            |
| Tear Resistance                                                                   | N                 | ASTM D 1004          | 100             | 153             | 204             | 255             |
| Puncture Resistance                                                               | N                 | ASTM D 4833          | 290             | 416             | 550             | 682             |
| Axi-Symmetric Break Resistance Strain (min)                                       | %                 | ASTM D 8721          | 30              | 30              | 30              | 30              |
| Carbon Black Content                                                              | %                 | ASTM D 1603          | 2.0-3.0         | 2.0-3.0         | 2.0-3.0         | 2.0-3.0         |
| Carbon Black Dispersion                                                           | Cat               | ASTM D 5596          | 1-2             | 1-2             | 1-2             | 1-2             |
| Oxidative Induction Time (OIT)                                                    | min               | ASTM D 3895          | 100             | 100             | 100             | 100             |
| Oven Ageing at 85°C<br>Standard OIT (90days)<br>or<br>High Pressure OIT (90 days) | %                 | ASTM D 8721          | 35              | 35              | 35              | 35              |
|                                                                                   |                   | ASTM D 3895          | 60              | 60              | 60              | 60              |
| UV Resistance<br>High Pressure OIT (1600 hours)                                   | %                 | GM 11<br>ASTM D 5885 | 35              | 35              | 35              | 35              |
| Roll Size                                                                         | m                 |                      | 8x170           | 8x110           | 8x80            | 8x70            |

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LLDPE geomembranes have a density from 0.928 - 0.939 g/cm<sup>3</sup>. ProLiner LLDPE geomembranes have low permeability, high stress resistance & flexibility, high break elongation & good chemical & UV resistance (2-3% carbon black). All ProLiner LLDPE geomembranes are manufactured to exceed the requirements of GRI GM17 standards. Available in rolls of up to 170m long for 1mm thick product. All product is available in 8m width and roll length decreases with thickness increase.

# About Us

## Leaders in Geosynthetics

Global Synthetics is a 100% Australian-owned company, proud to offer a complete range of high-quality geosynthetic products backed by over 200 years of combined staff experience in the industry.

We have supplied products to some of the largest recent infrastructure works in Australia. Global Synthetics provides major benefits to any geotechnical engineering project with the right products and our technical expertise.

Global Synthetics products are used in the following applications:

- Pavement Stabilisation
- Ground Improvement
- Soil Reinforcement and Retaining Structures
- Water Management
- Drainage Systems & Hydraulic Works
- Landfills
- Coastal Erosion Structures

## Get in Touch

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