

### PRODUCT DESCRIPTION

GML™ GeoMembrane Liner is a fortified polyolefin alloy technology. The process of fortifying a geomembrane requires that a geomembrane be manufactured with special prime grade resins blended with a highly stabilized and advanced UV antioxidant formulation. This provides the geomembrane with superior physical, mechanical, and endurance properties. Polyolefin is classified as a type of thermoplastic. Polyolefin is made only of hydrogen and carbon. There are two main types of polyolefin: polypropylene and polyethylene.

### PRODUCT FEATURES

- Prevent corrosion
- Prevent water penetration
- Protection against chemical agents
- UV protection
- High speed installation and execution
- Much higher durability than other insulation methods
- Prevent the growth of moss and algae
- High flexibility
- Repairable
- Economical compared to traditional insulation methods

### PRODUCT USES

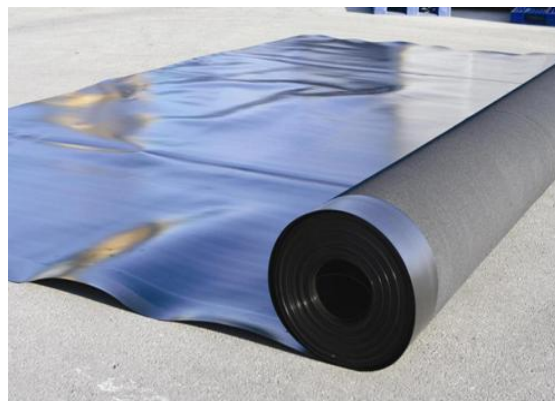
ATL™ is used in many cases where the purpose is to protect the surface against destructive effects:

- Oil and Gas
  - Frac/Flowback water
  - Brine/Produced water
  - Oilfield Pit liners
  - Tank liners
  - Remediation liners
  - Secondary containment of hydrocarbons and chemicals.
  - Evaporation floating covers
- Mining
  - Heap leach pads and ponds
  - Tailing ponds
  - Raincoat cover
  - Dam face waterproofing
  - Remediation liners and covers
- Water and Wastewater
  - Potable water
  - Municipal utilities
  - Waste water treatment ponds
  - Sewage and Manure lagoons
  - Industrial waste water
  - Storm water management ponds
  - Irrigation wastewater

### HOW TO USE

#### Subgrade Preparation

Ensure subgrade is compacted and surface finished to not impair installed geomembrane. Subgrade to provide firm, unyielding surface with no sharp changes or abrupt breaks in grade. A smooth drum rolled surface is preferable. Ensure surfaces to be lined are smooth, free of foreign and organic material, sharp objects, or debris of any kind. Prepare mechanical attachments according to ASTM D6497



GML™ GeoMembrane Liner

Standard Guide for Mechanical Attachment of Geomembrane to Penetrations or Structures. All concrete surfaces to which the liner will attach shall have "smooth trowel" finish. All the corners should have radius to a minimum 25mm as per the drawing. Compaction at pipe penetrations and areas of mechanical attachment will be inspected carefully as these are areas where differential settlement can occur. A certificate of subgrade acceptance will be prepared by the liner installation contractor prior to liner installation.

### Geomembrane Installation

Installation of the geomembrane shall be performed in a logical sequence. Place panels according to the drawings, the panel layout, and the label on each panel. Sufficient thermal slack shall be incorporated during placement to ensure that harmful stresses do not occur in service. Ensure personnel working on geomembrane do not use damaging footwear. Protect completed panels from damage; handle carefully to avoid damaging the liner. Equipment and methods used to unroll liner panels should not damage the prepared subgrade. Ballast used to prevent uplift by wind must not damage the geomembrane. A continuous load is recommended along the edges of panels to eliminate the risk of wind uplift.

### Weather Conditions at Time of Installation

Site welding may proceed at any temperature providing a suitable qualification weld can be prepared at site conditions using the operator, equipment, and materials intended for the project.

Installation of geomembrane in winds above 20 km/h can proceed only if the installer can demonstrate that the liner will not be at risk of damage.

Do not install the geomembrane during precipitation or in the presence of excessive moisture.

Do not install in weather conditions that may be detrimental to the function of the geomembrane.

### STORAGE AND HANDLING

Store GML™ sheets, accessories and prefabricated items in a safe place under cover. When placing GML™, temperatures must be above freezing. During final welding, finishing and inspection, all areas must be kept clean, dry and protected from drafts and direct sunlight.

**TECHNICAL GeoMembrane Liner (HDPE)**

| Property            | Test Method | Unit | GML™10 | GML™15 | GML™20 | GML™25 |
|---------------------|-------------|------|--------|--------|--------|--------|
| Density             | ASTM D-1505 | g/cc | 0.940  | 0.940  | 0.940  | 0.940  |
| Carbon content      | ASTM D-1603 | %    | 2-3%   | 2-3%   | 2-3%   | 2-3%   |
| Tensile Strength    | ASTM D-6693 | KN/m | 27     | 40     | 53     | 67     |
| Elongation at break | ASTM D-6693 | %    | 700    | 700    | 700    | 700    |
| Tear resistance     | ASTM D-1004 | N    | 125    | 187    | 249    | 311    |
| Puncture resistance | ASTM D-4833 | N    | 320    | 480    | 640    | 800    |

**MAINTENANCE**

Floating Covers, including pumps and auxiliary equipment, should be inspected at least once per year for damage, stress, or any other detrimental condition.

**SHEET SIZES**

| Product | Thickness | Width | Length |
|---------|-----------|-------|--------|
| GML™10  | 10mm      | 6.9m  | 265m   |
| GML™15  | 15mm      | 6.9m  | 171m   |
| GML™20  | 20mm      | 6.9m  | 131m   |
| GML™25  | 25mm      | 6.9m  | 104m   |

**SAFETY**

Chemical goggles and gloves are recommended when transferring or handling this material.

**DISCLAIMER OF LIABILITY**

AFZIR, LLC warrants its products to be free from manufacturing defects. Buyer determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to replacement of product. Any claim for breach of this warranty must be brought within six months of the date of purchase.

AFZIR shall not be liable for any consequential or special damages of any kind, resulting from any claim or breach of warranty, breach of contract, negligence or any legal theory.

The Buyer, by accepting the products described herein, agrees to be responsible for thoroughly testing any application to determine its suitability before committing to production.