## **ENVIRO<sup>™</sup> GEOLINER<sup>™</sup>** LLDPE GEOMEMBRANE



## **PRODUCT SPECIFICATION\***

| Туре   | GML | GMLD-SS Both sides Smooth |     |      |     |       |       |           |           |  |
|--|-----|---------------------------|-----|------|-----|-------|-------|-----------|-----------|--|
| LLDPE Geo-membrane conforming to GRI-G         |     | M 17, ASTM Testing standa |     |      |     | rds   |       |           | 2.0-7.0m  |  |
|  |     |                           |     |      |     |       |       |           | Test Std. |  |
| Thickness Nominal (mil)                        | 0.5 | 0.75                      | 1.0 | 1.25 | 1.5 | 2.0   | 2.5   | 3.0       | D5199     |  |
| Tolerance (%)                                  | -10 | -10                       | -10 | -10  | -10 | -10   | -10   | -10       |           |  |
| Density ( g/cc) ≥                              |     | 0.939                     |     |      |     |       | D1505 |           |           |  |
| Break Strength, kN/m ≥                         | 13  | 20                        | 27  | 33   | 40  | 53    | 66    | 66 80     |           |  |
| Break Elongation%                              |     | 800%                      |     |      |     |       |       |           |           |  |
| 2% modulus (N/mm)≥                             | 210 | 370                       | 420 | 520  | 630 | 840   | 1050  | 1260      | D 5323    |  |
| Tear resistance (N) ≥                          | 50  | 70                        | 100 | 120  | 150 | 200   | 250   | 300       | D1004     |  |
| Puncture resistance (N) ≥                      | 120 | 190                       | 250 | 310  | 370 | 500   | 620   | 750 D4833 |           |  |
| Axy symmetric Break Resistance Strain %        |     | 30                        |     |      |     | D5617 |       |           |           |  |
| Carbon Black Content (%)                       |     | 2.0 - 3.0                 |     |      |     |       | D1603 |           |           |  |
| Oxidative Induction time (OIT) - Std OIT (min) |     | 100                       |     |      |     |       | D3895 |           |           |  |
| - High pressure OIT (min)                      |     | 400                       |     |      |     |       | D5885 |           |           |  |
| UV resistance-% retained after 90 days         |     | 35                        |     |      |     |       |       | D3895     |           |  |
| UV resistance-% retained after 1600 hours      |     | 60                        |     |      |     |       | D5885 |           |           |  |

| Туре   | GMLI                     | D-ST                      |     |      | One side Smooth- one side Textured |       |       |      |           |  |
|--|--------------------------|---------------------------|-----|------|------------------------------------|-------|-------|------|-----------|--|
| LLDPE Geo-membrane conforming to GRI-G         |                          | M 17, ASTM Testing standa |     |      |                                    | rds   |       |      | 2.0-7.0m  |  |
|  |                          |                           |     |      |                                    |       |       |      | Test Std. |  |
| Thickness Nominal (mil)                        | 0.50                     | 0.75                      | 1.0 | 1.25 | 1.5                                | 2.0   | 2.5   | 3.0  | D5199     |  |
| Tolerance (%)                                  | -10/-15                  |                           |     |      |                                    |       |       |      |           |  |
| Density ( g/cc) ≥                              | 0.939                    |                           |     |      |                                    |       | D1505 |      |           |  |
| Break Strength, kN/m ≥                         | eak Strength, kN/m ≥ 5 9 |                           | 11  | 13   | 16                                 | 21    | 26    | 31   |           |  |
| Break Elongation%                              | 250%                     |                           |     |      |                                    |       |       |      |           |  |
| 2% modulus (N/mm)≥                             | 210                      | 370                       | 420 | 520  | 630                                | 840   | 1050  | 1260 | D 5323    |  |
| Tear resistance (N) ≥                          | 50                       | 70                        | 100 | 120  | 150                                | 200   | 250   | 300  | D1004     |  |
| Puncture resistance (N) ≥                      | 100                      | 150                       | 200 | 250  | 300                                | 400   | 500   | 600  | 600 D4833 |  |
| Stress Crack resistance                        | 30 D5                    |                           |     |      | D5617                              |       |       |      |           |  |
| Carbon Black Content (%)                       | 2.0 – 3.0 D1             |                           |     |      |                                    | D1603 |       |      |           |  |
| Oxidative Induction time (OIT) - Std OIT (min) | 100 [                    |                           |     |      |                                    | D3895 |       |      |           |  |
| - High pressure OIT (min)                      | 400                      |                           |     |      |                                    | D5885 |       |      |           |  |
| UV resistance-% retained after 90 days         | 35                       |                           |     |      |                                    | D3895 |       |      |           |  |
| UV resistance-% retained after 1600 hours      | 60 D5885                 |                           |     |      |                                    | D5885 |       |      |           |  |

\* Types available : Both sides smooth ( SS), Smooth-Textured (ST), Both sides Textured (TT)

|                  |  | 0712          |
|------------------|--|---------------|
| CHARACTERISTICS* | Enviro GMLD-SS both sides Smooth Geomembrane products are produced using select Linear Low Density Polyethylene (LLDPE) resin using advanced multilayer extrusion technology, stabilized against UV degradation. These LLDPE geomembrane products are flexible and ductile, and are inert against normally occurring acids, alkalis and mineral salt present in soil, unaffected when used within Pulverised Fuel Ash (Fly Ash), and is stable in normally occurring environment of waste and landfills, sewage treatment plants etc. Being non-food supplement, it is non-nutrient to micro-organism and rodents. | GL -LLDPE - ( |
| PRODUCT LIFE     | Enviro GMLD-SS both side Smooth Geomembranes products have characteristic properties to allow it to be used in lining applications with appropriate design considerations, for sustained design life in the medium terms   | CE            |
| APPLICATIONS     | Enviro GMLD-SS both side Smooth Geomembranes are used extensively as lining and waterproofing, such as canal and reservoir lining, slope lining with varied contours, lining of liquid waste landfills, Tunnel lining, water proofing applications etc.  | REST-         |

ENVIRO<sup>™</sup> & GEOLINER<sup>™</sup> are registered Trade Marks

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Assuring Sustainable Environment