

# TechGeo DURABILITY HDPE SMOOTH 0.80 mm

**TechGeo DURABILITY HDPE SMOOTH** Geomembrane series was developed to overcome international standards and recommendations and aims to offer greater durability and enable a longer service life for the projects when specified.

Manufactured by a Blown Film process using latest generation high molecular weight virgin resins and additives, **TechGeo DURABILITY HDPE SMOOTH** has greater durability compared to standard market geomembranes.

In addition, it has high mechanical resistance and excellent chemical resistance.

| Available sizes |            |
|-----------------|------------|
| Width (m)       | Length (m) |
| 7.00            | 100        |

| PROPERTIES  | TEST METHOD                            | UNITY             | 0.80 mm<br>31,5 mils | TESTING FREQUENCY |
|---|--|-------------------|----------------------|-------------------|
| Thickness (min.ave.)  | ASTM D5199                             | mm                | Nominal              | Per roll          |
| Formulated density (min.)   | ASTM D1505/D792                        | g/cm <sup>3</sup> | 0.94                 | 90,000 kg         |
| Tensile Properties – Yield Strength (min.ave.)                                      | ASTM D6693 Type IV                     | kN/m              | 12                   | 9,000 kg          |
| Tensile Properties – Yield elongation (min.ave.)                                    | ASTM D6693 Type IV                     | %                 | 12                   |                   |
| Tensile Properties – Break strength (min.ave.)                                      | ASTM D6693 Type IV                     | kN/m              | 22                   |                   |
| Tensile Properties – Break elongation (min.ave.)                                    | ASTM D6693 Type IV                     | %                 | 700                  |                   |
| Tear resistance (min.ave.)  | ASTM D1004                             | N                 | 100                  | 20,000 kg         |
| Puncture resistance (min.ave.)  | ASTM D4833                             | N                 | 256                  | 20,000 kg         |
| Stress Crack Resistance (min.)  | ASTM D5397                             | h                 | 750                  | GM 10 (GRI)       |
| Carbon Black Content  | ASTM D1603                             | %                 | 2 – 3                | 9,000 kg          |
| Carbon Black Dispersion   | ASTM D5596                             | -                 | Note (1)             | 20,000 kg         |
| Oxidative Induction Time<br>Standard OIT (min.ave.)<br>High Pressure OIT (min.ave.) | ASTM D3895<br>ASTM D5885               | min               | 125<br>800           | 90,000kg          |
| Oven Aging*<br>Standard OIT (min.ave.)<br>High Pressure OIT (min.ave.)              | ASTM D5721<br>ASTM D3895<br>ASTM D5885 | %                 | 55<br>80             | Per Formulation   |
| UV Resistance**<br>Standard OIT (min.ave.)<br>High Pressure OIT (min.ave.)          | ASTM D7238<br>ASTM D3895<br>ASTM D5885 | %                 | Note (2)<br>65       | Per Formulation   |

(1) Carbon black dispersion for 10 different views: 9 in categories 1 and 2; 1 in category 3

(2) Not recommended since the high temperature of the Standard OIT test produces an unrealistic result for some of the antioxidants in the UV exposed samples

Obs: roll tolerable variation in width and length: ±2%

\* (Retained after 90 days)

\*\* (Retained after 1.600hrs)