

LEAKDRAIN S5U Super leakage detection layer comprises a single cusped HDPE (High Density Polyethylene) high strength high performance core. The core has the necessary compressive strength and in-plane flow capacity required to conduct leachate and other particle laden liquids without clogging. The core design has flat surfaces to provide protection and minimal stresses on the surrounding surfaces. Its main application is as a leak detection layer between two geomembranes at the base of containment systems.

## Leakdrain Properties and Performance

|                                      |  |            |                       |
|--------------------------------------|--|------------|-----------------------|
| Colour                               | Black  |            |                       |
| Type and material                    | Single cusped (dimpled) HDPE (high density polyethylene) |            |                       |
| Carbon black content                 | (%)  | 0.8 to 2.5 | ASTM D1603            |
| Dimple centres                       | (mm)   | 8          | nominal               |
| Surface contact – top                | (%)  | 6.5        | nominal               |
| Surface contact - bottom             | (%)  | 70         | nominal               |
| Drainage void volume                 | (l/m <sup>2</sup> )                                      | 3.3        | nominal               |
| Mass per unit area                   | (g/m <sup>2</sup> )                                      | 700        | ±10% EN ISO 9864      |
| Overall thickness at 2kPa            | (mm)   | 5.2        | ±10% EN ISO 9863-1    |
| Uncompressed cusped height           | (mm)   | 4.5        | nominal EN ISO 9863-1 |
| Thickness at 200kPa for 10 000 hours | (mm)   | 4.5        | nominal ASTM D7361    |
| Compressive yield strength           | (kPa)  | > 1000     | nominal ASTM D1621    |
| Tensile strength MD / CMD            | (kN/m)   | 7.5 / 6    | -10% EN ISO 10319     |
| Elongation at peak MD / CMD          | (%)  | 60 / 40    | nominal EN ISO 10319  |
| CBR puncture resistance              | (N)  | 950        | -20% EN ISO 12236     |
| High Pressure OIT                    | (minutes)  | > 600      | ASTM D5885            |

| In-plane water flow MD and CMD              |         | HG = 1.0 |       | HG = 0.1 |       | Hydraulic gradient |
|---|---------|----------|-------|----------|-------|--------------------|
| at 20kPa confining pressure                 | (l/m·s) | 1.90     | ±0.50 | 0.54     | ±0.15 | EN ISO 12958       |
| at 100kPa confining pressure                | (l/m·s) | 1.75     | ±0.50 | 0.50     | ±0.15 | EN ISO 12958       |
| at 200kPa confining pressure                | (l/m·s) | 1.63     | ±0.50 | 0.46     | ±0.15 | EN ISO 12958       |
| at 500kPa confining pressure <sup>(6)</sup> | (l/m·s) | 1.35     | ±0.50 | 0.38     | ±0.15 |                    |

with **hard platen** boundary conditions to simulate installation between geomembranes

|                               |  |          |
|-------------------------------|--|----------|
| Resistance to weathering (UV) | Excellent                              | EN 12224 |
| Resistance to chemicals       | Excellent                              | EN 14030 |
| Design life                   | 120 years (manufacturer's declaration) |          |

## Product Dimensions

|                          |                                    |
|--------------------------|------------------------------------|
| Standard roll dimensions | 2.2 x 130 m. Overlap allowance 2%. |
|--------------------------|------------------------------------|

### Notes

- The values given are indicative and correspond to results obtained in our laboratories and testing institutes. In line with our policy of continuous improvement the right is reserved to make changes without notice at any time.
- The tolerance on roll length is ±1.5% and on roll width is ±1.0%.
- Guidance on interface shear strength, creep and certain other parameters is available. Site specific tests are strongly recommended.
- Final determination of the suitability of any information is the sole responsibility of the user. ABG will be pleased to discuss the use of this or any other product but responsibility for selection of a material and its application in any specific project remains with the user.
- Flow values at pressures in excess of 200kPa are outside the normal scope of EN ISO 12958.