

**Ultra High Molecular Weight PE Ditch Lining System**

SmartDitch® is manufactured, by Penda Corporation, with ultra high molecular weight HDPE resin that provides excellent mechanical properties. These properties are instrumental in providing a durable, flexible, thermoformed plastic ditch-lining system. The following table lists critical testing results on some of the more important design properties. Please contact your SmartDitch sales representative if additional design data is required.

| Property  | Test Method                | *Nominal Values (SI)    | *Nominal Values (English)         |
|---|----------------------------|-------------------------|-----------------------------------|
| Density   | ASTM D1505                 | 0.949 g/cm <sup>3</sup> | 0.949 g/cm <sup>3</sup>           |
| Melt Mass Flow Rate   | ASTM D1238                 | 10 g/10 min             | 10 g/10 min                       |
| Environmental Stress Crack Resistance (ESCR)<br><i>Condition A (100% Igepal), F50</i><br><i>Condition B (10% Igepal), F50</i> | ASTM D1693A<br>ASTM D1693B | 600 hr<br>600 hr        | 600 hr<br>600 hr                  |
| Tensile Yield Strength<br><i>2"/min, 51 mm/min</i>  | ASTM D638,<br>Type IV      | 24.8 MPa                | 3600 psi                          |
| Tensile Elongation<br><i>2"/min.</i>  | ASTM D638,<br>Type IV      | 600%                    | 600%                              |
| Flexural Modulus (compression molded)   | ASTM D790                  | 1170MPa                 | 170,000                           |
| Brittleness Temperature   | ASTM D746                  | -90 °C                  | <-130 °F                          |
| Tensile Impact Strength   | ASTM D1822                 | 84.1 KJ/m <sup>2</sup>  | 40.2 ft-lb/in <sup>2</sup>        |
| Coefficient of Linear Thermal Expansion   | ASTM D696                  | n/a                     | 7 x 10 <sup>-5</sup><br>in/in/ °F |
| Cell Classification   | ASTM D3350                 | 445540                  | N/A                               |

\* Nominal values are intended to serve as a guide only, and not assumed as the specification limit. Some of the results are based on test specimens and may not reflect the ultimate performance of a full ditch lining system.