

**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) <i>Condition A (100% Igepal), F50</i> <i>Condition B (10% Igepal), F50</i>	ASTM D1693A ASTM D1693B	600 hr 600 hr	600 hr 600 hr
Tensile Yield Strength <i>2"/min, 51 mm/min</i>	ASTM D638, Type IV	24.8 MPa	3600 psi
Tensile Elongation <i>2"/min.</i>	ASTM D638, 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> 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.*