

SMARTfence® PL36

HIGH-TENSILE/HIGH-MODULUS WOVEN GEOTEXTILE SEDIMENT FENCE

SMARTfence® PL 36 is a heavy-duty High-Tensile/High-Modulus woven geotextile sediment fence designed to replace silt fencing with wire or 12.5-gauge chain-link backed supports and replace proprietary silt fences with attached reinforcing elements. The woven geotextile is specifically designed and fabricated to withstand high-tensile stresses and prevent excessive material elongation and strain. The fence system will resist fence deflection and ultimate failure due to ripping, sagging, or overturning as hydrostatic forces associated with excessive backwater depths and debris flows move against the fence.

The **SMARTfence® PL36** is a value engineering approach, providing a strong siltation fence equivalent in strength and stiffness to that of wire and 12.5-gauge chain-link backed sediment fencing for less cost, significantly lower carbon emissions during materials manufacturing, and less material waste produced at the end of the service life of the fence. **SMARTfence® PL36** is also a 100% American-Made product.

Table 1 is a comparison of 14-gauge wire-backing and 12.5-gauge chain-link fence structural characteristics versus the same structural properties for the **Smartfence® PL36**. The Modulus of Elasticity is a measure of material stiffness. Table 2 gives the MARV test values for **Smartfence® PL36**.

Table 1. Structural comparisons between wire and chain-link backing versus SMARTfence® PL36

PROPERTY	14-GAUGE WIRE FENCE (2" x 4" mesh)	12.5-GAUGE CHAIN-LINK FENCE (2-3/8" mesh)	SMARTfence® PL36
Breaking Tensile Strength (lb./ft.)	710 (Average)	1,930 (Average)	3,900 (MARV)
Modulus of Elasticity (lb./ft.)	2,600 lengthwise	9,422 lengthwise	>27,000 MARV lengthwise

Table 2. MARV Table (Updated November 2023)

SMARTfence® PL 36	
<u>Test Method</u>	<u>Minimum Average Roll Values (MARV)</u>
Wide Width Tensile Strength (ASTM D 4595)	3,900 lbs./ft.-MD x 1,700 lbs./ft. -TD
Wide Width Test Elongation (ASTM D 4595)	14% - MD x 10% - TD
Grab Tensile Strength (ASTM D 4632)	450 lbs. MD x 200 TD
Trapezoidal Tear (ASTM D4533)	175 lbs. -MD x 70 lbs. -TD
CBR Puncture (ASTM D6241)	1400 lbs.
Apparent Opening Size (ASTM D 4751)	Sieve No. 70 (MaxARV)
Water Flux (ASTM D 4491)	25 gpm/ft. ²
UV Stability (ASTM D 4355)	>90% Strength Retained

MD = Machine Direction; TD=Transverse Direction; SMARTfence is a Woven Geotextile and is 100% American Made