

GRIDPRO™ UXP11S is a punched and drawn geogrid containing high density polyethylene that is integrally formed into a uniaxial geogrid. GRIDPRO UXP11S will meet the following Minimum Average Roll Values (MARV) when tested in accordance with the methods listed below. These characteristics make GRIDPRO UXP11S ideal for the construction of reinforced slopes, embankments, and temporary walls. The geogrid is resistant to ultraviolet degradation and to biological and chemical environments normally found in soils.

PROPERTY	MARV ²	
	ENGLISH	METRIC
ORIGIN OF MATERIALS		
% U.S. Manufactured Inputs	100%	100%
% U.S. Manufactured	100%	100%
INDEX PROPERTIES		
Tensile Strength @ 5% Strain ³	1850 lb/ft	27 kN/m
Ultimate Tensile Strength ³	3970 lbs/ft	58 kN/m
Junction Strength ⁴	3690 lbs/ft	54 kN/m
Flexural Stiffness ⁵	500000 mg-cm	500000 mg-cm
DURABILITY		
Resistance to Long Term Degradation ⁶	100%	100%
Resistance to UV Degradation ⁷	95%	95%
LOAD CAPACITY		
Max Allowable (Design) Strength for 120-year Design Life ⁸	1450 lbs/ft	21.2 kN/m
RECOMMENDED ALLOWABLE STRENGTH REDUCTION FACTORS⁸		
Minimum Reduction Factor for Installation Damage (RF _{ID}) ⁹	1.00	1.00
Minimum Reduction Factor for Durability (RF _D)	1.05	1.05
ROLL SIZES	4.36 ft x 250 ft	1.33 m x 76.2 m

NOTES:

- The property values listed above are effective 05/04/2020 and are subject to change without notice. Values represent testing at time of manufacture.
- Nominal dimensions.
- True resistance to elongation when initially subjected to a load determined in accordance with ASTM D6637-15 without deforming test materials under load before measuring such resistance or employing "secant" or "offset" tangent methods of measurement so as to overstate tensile properties.
- Load transfer capability determined in accordance with ASTM D7737-15 and expressed as a percentage of ultimate tensile strength.
- Resistance to bending force determined in accordance with ASTM D7748-14, using specimens of width two ribs wide, with transverse ribs cut flush with exterior edges of longitudinal ribs (as a "ladder"), and of length sufficiently long to enable measurement of the overhang dimension.
- Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EPA 9090 immersion testing.
- Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering in accordance with ASTM D4355-14.
- Reduction factors are used to calculate the geogrid strength available for resisting force in long-term load bearing applications. Allowable Strength (Tallow) is determined by reducing the ultimate tensile strength (Tult) by reduction factors for installation damage (RF_{ID}), creep (RF_{CR}) and chemical/biological durability (RF_D=RF_{CD}*RF_{BD}) per GRI-GG4-05 [Tallow=Tult/(RF_{ID}*RF_{CR}*RF_D)]. Recommended minimum reduction factors are based on product-specific testing. Project specifications, standard public agency specifications and/or design code requirements may require higher reduction factors. Design of the structure in which the geogrid is used, including the selection of appropriate reduction factors and design life, is the responsibility of the outside licensed professional engineer providing the sealed drawings for the project.
- Minimum value is based on Installation Damage Testing in Sand, Silt and Clay soils. Coarser soils require increased RFID values.
- Reduction Factor for Creep determined for 120-year design life and in-soil temperature of 20°C using standard extrapolation techniques to creep rupture data obtained following the test procedure in ASTM D5262-04. Actual design life of the completed structure may differ.



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