



ADS GEOSYNTHETICS ADS UX18SGG STRUCTURAL GRID PRODUCT SPECIFICATION:

Product Type: Integrally Formed Structural Geogrid
Polymer: High Density Polyethylene
Load Transfer Mechanism: Positive Mechanical Interlock
Primary Applications: Reinforced Slopes, Embankments, Temporary Walls

Product Properties:

INDEX PROPERTIES	UNIT	MD VALUES ¹
Tensile Strength @ 5% Strain ²	kN/m (lb/ft)	95 (6,510)
Ultimate Tensile Strength ²	kN/m (lb/ft)	210 (14,390)
Junction Strength ³	kN/m (lb/ft)	180 (12,340)
Flexural Stiffness ⁴	mg-cm	9,500,000
DURABILITY		
Resistance to Long Term Degradation ⁵	%	100
Resistance to UV Degradation ⁶	%	95
LOAD CAPACITY		
Maximum Allowable (Design) Strength for 120-year Design Life ⁷	kN/m (lb/ft)	74.1 (5,080)
RECOMMENDED ALLOWABLE STRENGTH REDUCTION FACTORS		
Minimum Reduction Factor for Installation Damage (RF _{ID}) ⁸		1.05
Reduction Factor for Creep for 120-year Design Life (RF _{CR}) ⁹		2.60
Minimum Reduction Factor for Durability (RF _D)		1.00
DIMENSIONS AND DELIVERY		
The structural geogrid shall be delivered to the jobsite in roll form with each roll individually identified and nominally measuring 1.33 meters (4.36 feet) in width and 61.0 meters (200 feet) length. A typical truckload quantity is 144 rolls.		

Notes:

1. Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D4759-02. Brief descriptions of test procedures are given in the following notes.
2. True resistance to elongation when initially subjected to a load measured via ASTM D6637-01 without deforming test materials under load before measuring such resistance or employing "secant" or "offset" tangent methods of measurements so as to overstate tensile properties.
3. Load transfer capability determined in accordance with GRI-GG2-05.
4. Resistance to bending force determined in accordance with ASTM D5732-01, using specimen dimensions of 864 millimeters in length by one aperture in width.
5. Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EPA 9090 immersion testing.
6. Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering in accordance with ASTM D4355-05.
7. 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 (RFID), creep (RFCR) and chemical/biological durability (RFD = RFCR RFD) per GRI-GG4-05 [Tallow = Tult/(RFID RFCR RFD)]. 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.
8. Minimum value is based on installation Damage Testing in Sand, Silt, and Clay soils. Coarser soils require increased RFID values.
9. Reduction Factors 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 procedure in ASTM D5262-04. Actual design life of the completed structure may differ.