# Tensar

## Tensar<sup>®</sup> Uniaxial Geogrids for Soil Reinforcement

#### THE ENGINEERED ADVANTAGE®

Tensar<sup>®</sup> Uniaxial (UX) Geogrids are manufactured using select grades of high-density polyethylene (HDPE) resins that are highly oriented and resist elongation (creep) when subjected to high tensile loads for long periods of time. Geogrids manufactured from HDPE provide high resistance to installation damage and chemical or biological long-term degradation. In fact, Tensar UX Geogrids have shown no degradation after long term exposure to pH levels as high as 12 and can be used in both dry and wet-cast environments.



A high-density polyethylene, homogeneous product that does not require weaving, coating or welding to maintain the product's integrity.

### **TENSILE STRENGTH**

Tensar UX Geogrids can carry high tensile loads applied in one direction (along the roll length). Their open aperture structure interlocks with fill material to provide superior load transfer from the soil to the geogrid. Tensar UX Geogrids achieve their strength by punching and drawing a homogenous polymer sheet to provide a uniform, consistent product that does not require weaving, coating or welding to maintain the product's integrity. This unique process provides superior junction strength allowing high strength connections to other rolls of geogrid or facing components.

Tensar Geogrids are used for high strength soil reinforcement in wall and slope applications. Over 100-million square feet of retaining structures in service today are reinforced with Tensar UX Geogrids.

#### **EXPERIENCE YOU CAN RELY ON**

Tensar International Corporation (Tensar), the leader in geosynthetic soil reinforcement, offers a variety of solutions for foundation, retaining wall and roadway projects. Our products and technologies, backed by the most thorough quality assurance practices, are at the forefront of the industry. Highly adaptable, cost-effective and installation friendly, they provide exceptional, long-term performance under the most demanding conditions. Our support services include site evaluation, design consulting and site construction assistance. For innovative solutions to your engineering challenges, rely on the experience, resources and expertise that have set the industry standard for more than two decades.

For more information on Uniaxial Geogrids or other Tensar Systems, visit **www.tensarcorp.com**, call **800-TENSAR-1**, or e-mail **info@tensarcorp.com**.



Tensar UX Geogrids install easily in stand alone applications as well as in conjunction with one of our proprietary soil stabilization systems.

PROPERTY SPECIFICATIONS FOR TENSAR <sup>®</sup> UNIAXIAL GEOGRIDS*						
	Index Properties					
GEOGRID PROPERTIES	UX1100	UX1400	UX1500	UX1600	UX1700	UX1800**
Tensile Strength @ 5% Strain (kN/m (lb/ft))	27 (1,850)	31 (2,130)	52 (3,560)	58 (3,980)	75 (5,140)	95 (6,510)
Ultimate Tensile Strength (kN/m (lb/ft))	58 (3,970)	70 (4,800)	114 (7,810)	144 (9,870)	175 (11,990)	210 (14,390)
Junction Strength (kN/m (lb/ft))	54 (3,690)	66 (4,520)	105 (7,200)	135 (9,250)	160 (10,970)	180 (12,340)
Flexural Stiffness (mg-cm)	500,000	730,000	5,100,000	6,000,000	9,075,000	9,500,000
	Load Capacity					
GEOGRID PROPERTIES	UX1100	UX1400	UX1500	UX1600	UX1700	UX1800
Maximum Allowable (Design) Strength (kN/m (lb/ft))	21.2 (1,450)	25.6 (1,760)	41.8 (2,860)	52.7 (3,620)	64.1 (4,390)	74.1 (5,080)
	Recommended Allowable Strength Reduction Factors					
GEOGRID PROPERTIES	UX1100	UX1400	UX1500	UX1600	UX1700	UX1800
Minimum Reduction Factor for Installation Damage (RF <sub>ID</sub> )	1.05	1.05	1.05	1.05	1.05	1.05
Reduction Factor for Creep	2.60	2.60	2.60	2.60	2.60	2.70
for 120 yr design life (RF <sub>cR</sub> )	2.60	2.00	2.00	2.00	2100	2.7.0

\*Tensar reserves the right to change its product specifications at any time. It is the responsibility of the specifier and purchaser to ensure that product specifications used for design and procurement purposes are current and consistent with the products used in each instance. Tensar warrants that at the time of delivery the geogrid furnished hereunder shall meet its published specifications as of the date of manufacture of the product. NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, IF PROVIDED AND ANY AND ALL SUCH OTHER WARRANTIES ARE SPECIFICALLY EXCLUDED. The sole remedy to the purchaser or user of our products for breech of the above-mentioned warranty is the replacement of the geogrid material. Notifications for show there can be under the specifications are product. Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D4759. Brief descriptions of test procedures are given in the notes found online at www.tensarcorp.com. Call 800-TENSAR-1 for a complete list of property specifications and notes associated with these Tensar® UX Geogrid properties.

\*\*UX1800 is only available for non-connected systems.





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