



**Tensar**  
The Tensar Corporation (Georgia)

**William S. Shelton**  
Vice President  
Process & Product Development

August 10, 2009

Geofabrics Australasia  
140 Bernard St.  
Cheltenham 3191  
Victoria, Australia

**Reference: UX Mining Grid Certification Letter**

Dear Sir:

The Tensar Corporation certifies that Tensar Uniaxial Mining Grid UX3326 manufactured at the Morrow, Georgia facility, will meet or exceed the properties and characteristics as outlined in the attached material property data sheet.

Sincerely,

A handwritten signature in dark ink, appearing to read 'W.S. Shelton', written over the printed name.

W.S. Shelton

Vice President Process & Product Development

**The Tensar Corporation (Georgia)**

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## Product Specification – Structural Geogrid UX3326

*Tensar International Corporation 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.*

**Product Type:** Integrally Formed Structural Geogrid  
**Polymer:** Flame-retardant Polypropylene  
**Load Transfer Mechanism:** Positive Mechanical Interlock  
**Primary Applications:** Underground Mine and Tunnel Applications (Roof and Rib Control)

### Product Properties

Index Properties	Units	MD Values <sup>1</sup>
▪ Polypropylene Polymer	Group 1/ Class 1/ Grade 2 per ASTM D4101	
▪ Aperture Dimensions <sup>2</sup>	mm (in)	152 (6.0)
▪ Minimum Rib Thickness <sup>2</sup>	mm (in)	2.0 (0.08)
▪ Ultimate Tensile Strength <sup>3</sup>	kN/m (lb/ft)	80.0 (5,480)
▪ Tensile Modulus <sup>3</sup>	kN/m (lb/ft)	1,400.0 (95,950)
▪ Colorant and UV Inhibitor Content	%	2.0

### Structural Integrity

▪ Junction Efficiency <sup>4</sup>	%	90
▪ Flexural Stiffness <sup>5</sup>	mg-cm	4,500,000

### Flammability Resistance<sup>6</sup>

▪ Maximum Flame Propagation <sup>6</sup>	m (ft)	1.2 (4.0)
▪ Average Duration of Burning for Test Set <sup>6</sup>	minute	1.0 (max)
▪ Maximum Duration of Burning for Single Test <sup>6</sup>	minute	2.0

### Dimensions and Delivery

The structural geogrid shall be delivered to the jobsite in roll form with each roll individually identified and nominally measuring 1.4 meters (4.5 feet) in width and 91.5 meters (300 feet) in length. The typical container load quantity is 150 rolls.

### Notes

1. Unless indicated otherwise, values shown are minimum values or minimum average roll values determined in accordance with ASTM D4759-02. Brief descriptions of test procedures are given in the following notes.
2. Nominal dimensions.
3. True resistance to elongation when initially subjected to a load determined in accordance with ASTM D6637-01 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.
4. Load transfer capability determined in accordance with GRI-GG2-05 and expressed as a percentage of ultimate tensile strength.
5. Resistance to bending force determined in accordance with ASTM D5732-01, using specimen dimensions of 864 millimeters in length by one aperture in width.
6. Flammability resistance determined from vertical and horizontal flame tests in accordance with 30 CFR, Part 7, Subpart A & B and ASTP5011 – Standardized Small Scale Flame Test Procedure for the Acceptance of Roof-Rib Grid.

Tensar International Corporation warrants that at the time of delivery the geogrid furnished hereunder shall conform to the specification stated herein. Any other warranty including merchantability and fitness for a particular purpose, are hereby excluded. If the geogrid does not meet the specifications on this page and Tensar is notified prior to installation, Tensar will replace the geogrid at no cost to the customer.

This product specification supersedes all prior specifications for the product described above and is not applicable to any products shipped prior to July 1, 2007.