

# AGRUTex® 321

## ULTRA HEAVY WEIGHT

AGRUTEX is designed for heavy-duty applications in mind, especially for large-scale mining operations. Modern mining builds operational efficiency by molding the environment to streamline the extraction of valuable ore from rock and sediment. When preparing the site for these operations, many factors must be considered for the leach pad and the later closure. System designers must consider what kind of impermeability rating the geomembrane must deliver as well as how that geomembrane will be installed and protected from obstructions on an imperfect subgrade. To facilitate the process, AGRUTEX is used to help solve a host of problems when it comes to outdoor heavy-duty environmental applications. Available in a weight class of 16 oz/yd<sup>2</sup>, AGRUTEX works as a cushion to buttress the lining of the leach pad against imperfect subgrades as well as against mining operations vehicles.

**AGRUTex 321** is a polypropylene, staple fiber, needle punched nonwoven geotextile. The fibers are needled to form a stable network that retains dimensional stability relative to each other. The geotextile is resistant to ultraviolet degradation and to biological and chemical environments normally found in soils.

**AGRUTex 321** standard products conform to the property values listed below.<sup>1</sup> AGRU America's Laboratories are accredited by the Geosynthetic Accreditation Institute's Laboratory Accreditation Program (GAI-LAP).

Property	Test Method	Frequency	Minimum Average Roll Values	
			Imperial	Metric
<b>Physical</b>				
Mass/Unit Area	ASTM D-5261	100,000 SF	32.0 oz/yd <sup>2</sup>	1080 g/m <sup>2</sup>
<b>Mechanical</b>				
Tensile Strength (Grab)	ASTM D-4632	100,000 SF	600 lbs	2669 N
Elongation	ASTM D-4632	100,000 SF	50%	50%
Trapezoidal Tear	ASTM D-4533	100,000 SF	270 lbs	1201 N
CBR Puncture	ASTM D-6241	500,000 SF	1700 lbs	7560 N
<b>Endurance</b>				
UV Resistance % Retained at 500 hrs	ASTM D-4355	Formulation	70%	70%
<b>Hydraulic<sup>2</sup></b>				
Apparent Opening Size <sup>3</sup> (AOS)	ASTM D-4751	500,000 SF	100 US Std. Sieve	0.150 mm
<b>Roll Sizes</b>			15ft x 150ft	4.57m x 45.72m

**NOTES:**

1. Effective February 2018 and subject to change without notice.
2. Values established at the time of manufacturing. Handling, storage, and shipping may change these properties.
3. Apparent Opening Size, (AOS), reported as maximum average roll value.

All information, recommendations and suggestions appearing in this literature concerning the use of our products are based upon tests and data believed to be reliable; however, it is the users responsibility to determine the suitability for their own use of the products described herein. Since the actual use by others is beyond our control, no guarantee or warranty of any kind, expressed or implied, is made by AGRU America as to the effects of such use or the results to be obtained, nor does AGRU America assume any liability in connection herewith. Any statement made herein may not be absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations. Nothing herein is to be construed as permission or as a recommendation to infringe any patent.



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**AGRUTex 281** is a polypropylene, staple fiber, needle punched nonwoven geotextile. The fibers are needled to form a stable network that retains dimensional stability relative to each other. The geotextile is resistant to ultraviolet degradation and to biological and chemical environments normally found in soils.

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Property	Test Method	Frequency	Minimum Average Roll Values	
			Imperial	Metric
<b>Physical</b>				
Mass/Unit Area	ASTM D-5261	100,000 SF	28.0 oz/yd <sup>2</sup>	950 g/m <sup>2</sup>
<b>Mechanical</b>				
Tensile Strength (Grab)	ASTM D-4632	100,000 SF	475 lbs	2113 N
Elongation	ASTM D-4632	100,000 SF	50%	50%
Trapezoidal Tear	ASTM D-4533	100,000 SF	205 lbs	912 N
CBR Puncture	ASTM D-6241	500,000 SF	1400 lbs	6230 N
<b>Endurance</b>				
UV Resistance % Retained at 500 hrs	ASTM D-4355	Formulation	70%	70%
<b>Hydraulic<sup>2</sup></b>				
Apparent Opening Size <sup>3</sup> (AOS)	ASTM D-4751	500,000 SF	100 US Std. Sieve	0.150 mm
<b>Roll Sizes</b>			15ft x 150ft	4.57m x 45.72m

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Property	Test Method	Frequency	Minimum Average Roll Values	
			Imperial	Metric
<b>Physical</b>				
Mass/Unit Area	ASTM D-5261	100,000 SF	24.0 oz/yd <sup>2</sup>	814 g/m <sup>2</sup>
<b>Mechanical</b>				
Tensile Strength (Grab)	ASTM D-4632	100,000 SF	450 lbs	2002 N
Elongation	ASTM D-4632	100,000 SF	50%	50%
Trapezoidal Tear	ASTM D-4533	100,000 SF	200 lbs	890 N
CBR Puncture	ASTM D-6241	500,000 SF	1300 lbs	5790 N
<b>Endurance</b>				
UV Resistance % Retained at 500 hrs	ASTM D-4355	Formulation	70%	70%
<b>Hydraulic<sup>2</sup></b>				
Apparent Opening Size <sup>3</sup> (AOS)	ASTM D-4751	500,000 SF	100 US Std. Sieve	0.150 mm
<b>Roll Sizes</b>			15ft x 150ft	4.57m x 45.72m

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