

## NONWOVEN GEOTEXTILE

At AGRU, our core competency is servicing the waste containment industry, and that is why our nonwoven geotextile product line is centric to this industries applications. Our geotextiles are superior in performance for the following applications: geomembrane liner protection, subsurface drainage systems, leachate collection systems, and gas/collection venting systems.

Our capabilities are not limited to our standard product line, and we specialize in made to order products with customized properties designed to meet project specific requirements. Please contact us for solutions available from AGRU. **AGRUTex 041** 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.

**ARGUTex 041** standard products conform to the property values listed below.¹ AGRU America's Laboratories are accredited by the Geosynthetic Accreditation Institute's Laboratory Accreditation Program (GAI-LAP).

Property			Minimum Average Roll Values	
	Test Method	Frequency	Imperial	Metric
Physical				
Mass/Unit Area	ASTM D-5261	100,000 SF	4 oz/yd²	136 g/m <sup>2</sup>
Mechanical				
Tensile Strength (Grab)	ASTM D-4632	100,000 SF	120 lbs	534 N
Elongation	ASTM D-4632	100,000 SF	50%	50%
CBR Puncture	ASTM D-6241	500,000 SF	335 lbs	1.5 kN
Trapezoidal Tear	ASTM D-4533	100,000 SF	50 lbs	223 N
Endurance				
UV Resistance % Retained at 500 hrs	ASTM D-4355	Per Formulation	70%	70%
Hydraulic <sup>2</sup>				
Apparent Opening Size <sup>3</sup> (AOS)	ASTM D-4751	500,000 SF	70 US Std. Sieve	0.212 mm
Permittivity, sec <sup>-1</sup>	ASTM D-4491	500,000 SF	1.8	1.8
Permeability	ASTM D-4491	500,000 SF	0.21 cm/sec	0.21 cm/sec
Water Flow Rate	ASTM D-4491	500,000 SF	135 g/min/ft²	5500 l/min/m <sup>2</sup>
Roll Sizes			15ft x 1,200ft	4.6m x 110m

### 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 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.

AGRU America, Inc.

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Our capabilities are not limited to our standard product line, and we specialize in made to order products with customized properties designed to meet project specific requirements. Please contact us for solutions available from AGRU. **AGRUTex 061** 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.

**ARGUTex 061** standard products conform to the property values listed below.¹ AGRU America's Laboratories are accredited by the Geosynthetic Accreditation Institute's Laboratory Accreditation Program (GAI-LAP).

Property		Frequency	Minimum Average Roll Values	
	Test Method		Imperial	Metric
Physical				
Mass/Unit Area	ASTM D-5261	100,000 SF	6 oz/yd²	203 g/m <sup>2</sup>
Mechanical				
Tensile Strength (Grab)	ASTM D-4632	100,000 SF	170 lbs	757 N
Elongation	ASTM D-4632	100,000 SF	50%	50%
CBR Puncture	ASTM D-6241	500,000 SF	435 lbs	1.9 kN
Trapezoidal Tear	ASTM D-4533	100,000 SF	65 lbs	289 N
Endurance				
UV Resistance % Retained at 500 hrs	ASTM D-4355	Per Formulation	70%	70%
Hydraulic <sup>2</sup>				
Apparent Opening Size <sup>3</sup> (AOS)	ASTM D-4751	500,000 SF	70 US Std. Sieve	0.212 mm
Permittivity, sec <sup>-1</sup>	ASTM D-4491	500,000 SF	1.5	1.5
Permeability	ASTM D-4491	500,000 SF	0.25 cm/sec	0.25 cm/sec
Water Flow Rate	ASTM D-4491	500,000 SF	110 g/min/ft <sup>2</sup>	4479 l/min/m <sup>2</sup>
Roll Sizes			15ft x 825ft	4.6m x 252m

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Our capabilities are not limited to our standard product line, and we specialize in made to order products with customized properties designed to meet project specific requirements. Please contact us for solutions available from AGRU. **AGRUTex 081** 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.

**ARGUTex 081** standard products conform to the property values listed below.¹ AGRU America's Laboratories are accredited by the Geosynthetic Accreditation Institute's Laboratory Accreditation Program (GAI-LAP).

Property		Frequency	Minimum Average Roll Values	
	Test Method		Imperial	Metric
Physical				
Mass/Unit Area	ASTM D-5261	100,000 SF	8 oz/yd <sup>2</sup>	271 g/m²
Mechanical				
Tensile Strength (Grab)	ASTM D-4632	100,000 SF	220 lbs	979 N
Elongation	ASTM D-4632	100,000 SF	50%	50%
CBR Puncture	ASTM D-6241	500,000 SF	600 lbs	2.7 kN
Trapezoidal Tear	ASTM D-4533	100,000 SF	95 lbs	423 N
Endurance				
UV Resistance % Retained at 500 hrs	ASTM D-4355	Per Formulation	70%	70%
Hydraulic <sup>2</sup>				
Apparent Opening Size <sup>3</sup> (AOS)	ASTM D-4751	500,000 SF	80 US Std. Sieve	0.180 mm
Permittivity, sec <sup>-1</sup>	ASTM D-4491	500,000 SF	1.3	1.3
Permeability	ASTM D-4491	500,000 SF	0.30 cm/sec	0.30 cm/sec
Water Flow Rate	ASTM D-4491	500,000 SF	95 g/min/ft <sup>2</sup>	3895 l/min/m <sup>2</sup>
Roll Sizes			15ft x 600ft	4.6m x 183m

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Our capabilities are not limited to our standard product line, and we specialize in made to order products with customized properties designed to meet project specific requirements. Please contact us for solutions available from AGRU. **AGRUTex 101** 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.

**ARGUTex 101** standard products conform to the property values listed below.¹ AGRU America's Laboratories are accredited by the Geosynthetic Accreditation Institute's Laboratory Accreditation Program (GAI-LAP).

Property		Frequency	Minimum Average Roll Values	
	Test Method		Imperial	Metric
Physical				
Mass/Unit Area	ASTM D-5261	100,000 SF	10 oz/yd <sup>2</sup>	339 g/m <sup>2</sup>
Mechanical				
Tensile Strength (Grab)	ASTM D-4632	100,000 SF	270 lbs	1200 N
Elongation	ASTM D-4632	100,000 SF	50%	50%
CBR Puncture	ASTM D-6241	500,000 SF	725 lbs	3.2 kN
Trapezoidal Tear	ASTM D-4533	100,000 SF	105 lbs	467 N
Endurance				
UV Resistance % Retained at 500 hrs	ASTM D-4355	Per Formulation	70%	70%
Hydraulic <sup>2</sup>				
Apparent Opening Size <sup>3</sup> (AOS)	ASTM D-4751	500,000 SF	100 US Std. Sieve	0.150 mm
Permittivity, sec-1	ASTM D-4491	500,000 SF	1.1	1.1
Permeability	ASTM D-4491	500,000 SF	0.29 cm/sec	0.29 cm/sec
Water Flow Rate	ASTM D-4491	500,000 SF	80 g/min/ft <sup>2</sup>	3280 l/min/m <sup>2</sup>
Roll Sizes			15ft x 525ft	4.6m x 160m

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**ARGUTex 121** standard products conform to the property values listed below.¹ AGRU America's Laboratories are accredited by the Geosynthetic Accreditation Institute's Laboratory Accreditation Program (GAI-LAP).

Property			Minimum Average Roll Values	
	Test Method	Frequency	Imperial	Metric
Physical				
Mass/Unit Area	ASTM D-5261	100,000 SF	12 oz/yd²	407 g/m <sup>2</sup>
Mechanical				
Tensile Strength (Grab)	ASTM D-4632	100,000 SF	320 lbs	1424 N
Elongation	ASTM D-4632	100,000 SF	50%	50%
CBR Puncture	ASTM D-6241	500,000 SF	925 lbs	4.1 kN
Trapezoidal Tear	ASTM D-4533	100,000 SF	125 lbs	556 N
Endurance				
UV Resistance % Retained at 500 hrs	ASTM D-4355	Per Formulation	70%	70%
Hydraulic <sup>2</sup>				
Apparent Opening Size (AOS)	ASTM D-4751	500,000 SF	100 US Std. Sieve	0.150 mm
Permittivity, sec <sup>-1</sup>	ASTM D-4491	500,000 SF	1.0	1.0
Permeability	ASTM D-4491	500,000 SF	0.29 cm/sec	0.29 cm/sec
Water Flow Rate	ASTM D-4491	500,000 SF	60 g/min/ft <sup>2</sup>	2445 l/min/m <sup>2</sup>
Roll Sizes			15ft x 405ft	4.6m x 123m

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**ARGUTex 161** standard products conform to the property values listed below.¹ AGRU America's Laboratories are accredited by the Geosynthetic Accreditation Institute's Laboratory Accreditation Program (GAI-LAP).

Property		Frequency	Minimum Average Roll Values	
	Test Method		Imperial	Metric
Physical				
Mass/Unit Area	ASTM D-5261	100,000 SF	16 oz/yd²	544 g/m <sup>2</sup>
Mechanical				
Tensile Strength (Grab)	ASTM D-4632	100,000 SF	390 lbs	1736 N
Elongation	ASTM D-4632	100,000 SF	50%	50%
CBR Puncture	ASTM D-6241	500,000 SF	1125 lbs	5.0 kN
Trapezoidal Tear	ASTM D-4533	100,000 SF	150 lbs	668 N
Endurance				
UV Resistance % Retained at 500 hrs	ASTM D-4355	Per Formulation	70%	70%
Hydraulic <sup>2</sup>				
Apparent Opening Size <sup>3</sup> (AOS)	ASTM D-4751	500,000 SF	100 US Std. Sieve	0.150 mm
Permittivity, sec-1	ASTM D-4491	500,000 SF	0.7	0.7
Permeability	ASTM D-4491	500,000 SF	0.26 cm/sec	0.26 cm/sec
Water Flow Rate	ASTM D-4491	500,000 SF	50 g/min/ft <sup>2</sup>	2050 l/min/m <sup>2</sup>
Roll Sizes			15ft x 300ft	4.6m x 92m

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