

## Drain Liner®

## LOW DENSITY POLYETHYLENE

AGRU America's structured geomembranes are manufactured on state-of-the-art manufacturing equipment using the flat die calender manufacturing process, a method that produces a more consistent core thickness than other processes, such as the blown film extrusion process. AGRU uses only the highest-grade HDPE and LLDPE resins manufactured in North America.

PRODUCT DATA											
Property	Test Method	Frequency	Minimum Average Values								
Thickness (nominal), mil (mm)	ASTM D5994	Per Roll	50 (1.25)	60 (1.5)	80 (2.0)	100 (2.5)					
Thickness (min avg), mil (mm)			47.5 (1.19)	57 (1.43)	76 (1.9)	95 (2.38)					
Thickness (min 8 of 10), mil (mm)			45 (1.12)	54 (1.35)	72 (1.8)	90 (2.25)					
Thickness (lowest individual), mil (mm)			42.5 (1.06)	51 (1.28)	68 (1.7)	85 (2.13)					
Drainage Stud Height, mil (mm)	ASTM D7466	2nd Roll	130 (3.3)	130 (3.3)	130 (3.3)	130 (3.3)					
Density, g/cc, maximum	ASTM D792, Method B	200,000 lb	0.939	0.939	0.939	0.939					
Tensile Properties (both directions)	ASTM D6693, Type IV										
Strength @ Break, lb/in width (N/mm)	2 in/minute	20,000 lb	105 (18.4)	126 (22.1)	168 (29.4)	210 (36.8)					
Elongation @ Break, % (GL=2.0in)			300	300	300	300					
Tear Resistance, lb,s. (N)	ASTM D1004	45,000 lb	30 (133)	40 (178)	53 (236)	67 (298)					
Puncture Resistance, lbs. (N)	ASTM D4833	45,000 lb	55 (245)	70 (311)	90 (400)	110 (489)					
Carbon Black Content, % (range)	ASTM D4218	20,000 lb	2-3	2-3	2-3	2-3					
Carbon Black Dispersion (Category)	ASTM D5596	45,000 lb	Only near spherical agglomerates: 10 views Cat. 1 or 2								
Oxidative Induction Time, minutes	ASTM D3895, 200°C, 1 atm O <sub>2</sub>	200,000 lb	≥140	≥140	≥140	≥140					

AGRU America's geomembranes are certified to pass Low Temp. Brittleness via ASTM D746 (-80°C), Dimensional Stability via ASTM D1204 (±2% @ 100°C). Oven Aging and UV Resistance are tested per GRI GM 17. These product specifications meet or exceed GRI's GM17.

SUPPLY INFORMATION (STANDARD ROLL DIMENSIONS)											
THICK mil	(NESS mm	WII ft	OTH m	LEN ft	GTH m	AREA (A ft²	PPROX.) m <sup>2</sup>				
50	1.25	23	7	500	152	11,500	1,068				
60	1.5	23	7	500	152	11,500	1,068				
80	2.0	23	7	300	91.4	6,900	640				
100	2.5	23	7	300	91.4	6,900	640				

Note:

Average roll weight is 5,000 lbs (2,268 kg) for 50 and 60 mil and 4,000 lbs (1,814 kg) for other thicknesses. All rolls are supplied with two slings. Rolls are wound on a 6" core. Special length available upon request. Roll length and width have a tolerance of  $\pm 1$ %. The weight values may change due to project specifications (i.e. absolute minimum thickness or special length) or shipping requirments (i.e. international contanerized shipments).

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 patient.

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