



### Flat Die Extruded Smooth Geomembrane

### Technical Data

Smooth Geoliner is produced from HDPE resin conforming to the requirements of the GRI-GM13 specification.

Properties	Units	Test Method	Test Frequency	Min Average Values				
Thickness. Minimum Avg.(a)	mm	ASTM D 5199	Per roll	1	1.5	2	2.5	3
Formulated Density	g/cc	ASTM D 792 ASTM D 1505	90 000kg/ approx. every 60 rolls	≥0.94	≥0.94	≥0.94	≥0.94	≥0.94
Tensile Properties - Minimum Avg. (b)								
• Yield Strength	kN/m	ASTM D 6693	9 000kg/ approx. every 6 rolls	15	22	29	37	44
• Yield Elongation	%	Type IV		12	12	12	12	12
• Break Strength	kN/m	Dogbone		27	40	53	67	80
• Break Elongation	%			700	700	700	700	700
Tear Resistance. Minimum Avg.	N	ASTM D 1004	20 000kg/ approx. every 12 rolls	125	187	249	311	374
Puncture Resistance. Minimum Avg.	N	ASTM D 4833	20 000kg/ approx. every 12 rolls	320	480	640	800	960
Dimensional Stability	%	ASTM D 1204	every 40 rolls	±2	±2	±2	±2	±2
Rapid tensile test (300mm/min)	visual	ASTM D 6693	90 000kg/ approx. every 60 rolls	No Separation Visible				
Carbon Black Content	%	ASTM D 4218	9 000kg/ approx. every 6 rolls	2 - 3	2 - 3	2 - 3	2 - 3	2 - 3
Carbon Black Dispersion	Category	ASTM D 5596	20 000kg/ approx. every 12 rolls	cat.1 / cat.2	cat.1 / cat.2	cat.1 / cat.2	cat.1 / cat.2	cat.1 / cat.2
Oxidative Induction Time (OIT)								
Standard OIT — and —	minutes	ASTM D 3895	90 000kg/ approx. every 60 rolls	>100	>100	>100	>100	100
High Pressure OIT	minutes	ASTM D 5885		>400	>400	>400	>400	400
Stress Crack Resistance (SP - NCTL)	Hours	ASTM D 5397 Appendix	180 000kg/ approx. every 120 rolls	500	500	500	500	500
Oven Aging at 85°C (c)								
Standard OIT (min. avg.) retained after 90 days — or —	%	ASTM D 5721 ASTM D 3895	Per Formulation	55	55	55	55	55
High Pressure OIT (min. avg.) retained after 90 days	%	ASTM D 5885		80	80	80	80	80
UV Resistance - % retained after 1600 hrs. High Pressure OIT (min. avg.)	%	ASTM D 7238 ASTM D 5885	Per Formulation	50	50	50	50	50

- a) Lowest individual of 10 values = -10%
- b) Tensile results based on Avg values between MD and TD.
- c) AKS Lining Systems has the right to select either test method to evaluate OIT.



All values are nominal, except when specified as maximum or minimum.

The information provided for reference purposes only and is not intended as a warranty or guarantee. Final decision on suitability of product remains the sole responsibility of user. AKS Lining Systems assumes no liability in connection with the use of this information.

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Technical data refers to average values, measured across the manufactured width of the sheet. This information is expressed as a guide and based on values measured in our laboratory as well as independent laboratories. The quoted values are based on specific resin properties and are subject to change without prior notice.