

DATA SHEET

HDPE Double Side Smooth Geomembrane

Properties	Test Method	Frequency	Units	Test Value					
				HDS	HDS	HDS	HDS	HDS	HDS
				0.75 mm	1.00 mm	1.50 mm	2.00 mm	2.50 mm	3.00 mm
Thickness	ASTM D 5199	Every Roll							
➤ Minimum Avg. Value			mm	0.75	1.00	1.50	2.00	2.50	3.00
➤ Lowest Individual Value			mm	0.68	0.90	1.35	1.80	2.25	2.70
Density (min. ave.)	ASTM D 1505	90,000 Kg	g/cc	0.940	0.940	0.940	0.940	0.940	0.940
Tensile Properties¹ (min. ave.)	ASTM D 6693 Type IV (@50 mm/min.)	9,000 Kg							
➤ Strength at yield			kN/m	11	15	22	29	37	44
➤ Strength at break			kN/m	20	27	40	53	67	80
➤ Elongation at yield (gauge length 33mm)			%	12	12	12	12	12	12
➤ Elongation at break (gauge length 50mm)			%	700	700	700	700	700	700
Tear Resistance (min. ave.)	ASTM D 1004	20,000 Kg	N	93	125	187	249	311	374
Puncture Resistance (min. ave.)	ASTM D 4833	20,000 Kg	N	240	320	480	640	800	960
Stress Crack Resistance (NCTL)²	ASTM D 5397 GRI GM 10	Per Formulation	hrs.	≥500	≥500	≥500	≥500	≥500	≥500
Carbon Black Content	ASTM D 1603	9,000 Kg	%	2.0 – 3.0	2.0 – 3.0	2.0 – 3.0	2.0 – 3.0	2.0 – 3.0	2.0 – 3.0
Carbon Black Dispersion	ASTM D 5596	20,000 Kg	Category	Note 3*	Note 3*	Note 3*	Note 3*	Note 3*	Note 3*
Oxidative Induction Time (OIT)	ASTM D 3895 or ASTM D 5885	90,000 Kg							
➤ Standard OIT			min.	≥120	≥120	≥120	≥120	≥120	≥120
➤ High Pressure OIT			min.	≥400	≥400	≥400	≥400	≥400	≥400
Oven Aging at 85°C	ASTM D 5721	Per							
➤ Standard OIT. % Retained after 90 days	ASTM D 3895	Formulation	%	55	55	55	55	55	55
or									
➤ High pressure OIT (min. avg.)-%retained after 90 days	ASTM D 5885			80	80	80	80	80	80
UV Resistance Note⁴*	GRI GM 11	Per							
➤ High pressure OIT Note ⁵ *. % Retained after 1600 hrs (min. ave.)	ASTM D 5885	Formulation	%	50	50	50	50	50	50
Seam Properties	ASTM D 6392 (@50mm/min.)	Per Formulation							
➤ Shear Strength			kN/m	10	14	21	28	35	42
➤ Peel Strength – Hot Wedge			kN/m	7.8	10.5	15.9	21.2	26.4	31.7
- Extrusion Fillet			kN/m	6.8	9	13.6	18.2	22.8	27.2
Roll Dimensions									
➤ Width			Meters	7	7	7	7	7	7
➤ Length			Meters	280	210	140	105	84	70
➤ Area			Sq. metr.	1960	1470	980	735	588	490

Note:

- Machine Direction (MD) and Transverse Direction (TD) average values are on the basis of 5 specimens each direction.
- The yield stress used to calculate the applied load for the SP-NCTL test should be the mean value via MQC testing.
- Carbon Black Dispersion for 10 different views: 9 in Categories 1 and 2 with 1 allowed in Category 3.
- The condition of the test should be 20 hr. UV cycle at 75°C followed by 4 hr. condensation at 60°C.
- UV resistance is based on percent retained value regardless of the original HP-OIT value.

This data is provided for informational purpose only. The specifications on this sheet are subject to change without notice.