

## PRODUCT TECHNICAL DATA SHEET

### ROWAD LLDPE DOUBLE SMOOTH WHITE/BLACK (LDSWB)(C-FLEX):

ROWAD LLDPE Geomembranes are produced from prime quality, high molecular weight resins and are specially designed to apply for all containment of fluids in hydraulic structure. It has exceptional mechanical properties and outstanding chemical resistance, dimensional stability with high thermal aging characteristics. White upper surface that reflect light, improve damage detection and reduce wrinkles. It also has an excellent resistance to UV radiation, environmental stress crack and is highly suitable for exposed applications. ROWAD Geomembranes specification shown below is meets or exceeds GRI GM 17 Standards.

Tested Properties	Test Method	Frequency	LDS075	LDS100	LDS150	LDS200	LDS250	LDS300
Thickness, (min. ave) mm	ASTM D5199	Per Roll	0.75	1.00	1.50	2.00	2.50	3.00
Lowest individual reading (-10%)			0.68	0.90	1.35	1.80	2.25	2.70
Density(Max), g/cm <sup>3</sup>	ASTM D792	90,000 Kgs	0.939	0.939	0.939	0.939	0.939	0.939
Tensile Properties (min. ave)	ASTM D6693,	9,000 Kgs						
Strength at Break, N/mm	50mm /min							
Elongation at Break, %	G.L. = 50 mm							
2%Modulus (max) N/mm	ASTM D5323	Per formulation	370	420	630	840	1050	1260
Tear Resistance,(min ave) N	ASTM D1004	20,000 Kgs	70	100	150	200	250	300
Puncture Resistance,(min ave) N	ASTM D4833	20,000 Kgs	230	290	410	540	660	750
Carbon Black Content,(range) %	ASTM D1603/421	9,000 Kgs	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 D5596	20,000 Kgs	+Note 1	+Note 1	+Note 1	+Note 1	+Note 1	+Note 1
Oxidative Induction Time, mins	ASTM D3895	90,000 Kgs	100	100	100	100	100	100
Axi-Symmetric Break Resistance	ASTM D5617	Per formulation	30	30	30	30	30	30
Dimensional Stability, %	ASTM D1204	Resin batch	±1	±1	±1	±1	±1	±1
Oven Aging at 85°C HP OIT % retained after 90	ASTM D 5721 ASTM D5885	Per formulation	>60	>60	>60	>60	>60	>60
UV Resistance HP OIT % retained after 1600 hrs	GM 11 ASTM D5885	Per formulation	>35	>35	>35	>35	>35	>35
<b>Standard Roll Dimensions</b>								
Width(m) BF/FD	RTM	Per Roll	7.5/8	7.5/8	7.5/8	NA/8	NA/8	NA/8
Length(m) BF/FD	RTM	Per Roll	225/225	170/170	110/110	NA/80	NA/70	NA/70
Area (m <sup>2</sup> ) BF/FD	RTM	Per Roll	1687.5/1800	1275/1360	825/880	NA/640	NA/560	NA/560

#### NOTES:

- 1: Carbon black Dispersion only applies to near spherical agglomerates. 10 of 10 views in Category 1 or 2.
- 2: Testing frequencies are rounded the nearest full roll.
- 3: Roll lengths & widths have a tolerance of ±1%.
- 4: NCTL/OIT Results For Smooth and Textured materials are taken from SMOOTH Section/Selvage of the Role & All 3<sup>rd</sup> Party Tests must be taken from this section only.
- 5: Where offered- Conductive layers will be complete across the bottom of each role. (Standard Conductive will be BF or FD while Premium conductive will be BF only).
- 6: For reference; BF= Blown Film, FD= Flat Die.
- 7: Where offered single Textured rolls will be located on the upper face Unless otherwise agreed.

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