

TECHNICAL DATASHEET

LLDPE (5.1)

PRODUCT DESCRIPTION

LDPE (smooth) is a linear low-density polyethylene membrane, for use in accordance with harmonised standards:

- BS EN 13361: Characteristics required for use in the construction of reservoirs and dams.
- BS EN 13362: Characteristics required for use in the construction of canals.
- BS EN 13491: Characteristics required for use in the construction of tunnels underground structures.
- BS EN 13492: Characteristics required for use in the construction of liquid waste disposal sites, transfer stations, or secondary containment.
- BS EN 13493: Characteristics required for use in the construction of solid waste storage and disposal sites
- BS EN 13493: Characteristics required for use in the construction of transportation infrastructure.



The material is smooth both sides and meets GRI GM17

CHARACTERISTICS	TEST METHOD	UNITS	0.75mm	1.0mm	1.5mm	2.0mm
MATERIAL PROPERTIES						
MATERIAL	DSC ANALYSIS		LINEAR LOW DENSITY POLYETHYLENE (LLDPE)			
WIDTH		m	5.1	5.1 or 8.0		
LENGTH		m	100	100	100	100
GRI-GM17 PROPERTIES						
THICKNESS (min. ave.) lowest individual of 10 values	ASTM D 5199	mm	0.75 (-10%)	1.0 (-10%)	1.5 (-10%)	2.0 (-10%)
DENSITY (MAX)	ASTM D 1505	g/cm ³	0.939			
TENSILE PROPERTIES (min. ave.)						
BREAK STRENGTH	ASTM D 6693 TYPE IV	kN/m	20.00	30.00	40.00	56.00
BREAK ELONGATION		%	800	800	800	800
2% MODULUS (max)	ASTM D 5323	kN/m	370	420	500	600
TEAR RESISTANCE (min. ave.)	ASTM D 1004	N	70	100	150	200
PUNCTURE RESISTANCE (min.ave.)	ASTM D 4833	N	190	350	400	550
AXI-SYMMETRIC BREAK RESISTANCE STRAIN (min)	ASTM D 5617	%	30	30	30	30
CARBON BLACK CONTENT	ASTM D 4218/6370	%	2-3	2-3	2-3	2-3
CARBON BLACK DISPERSION	ASTM D 5596	CATEGORY	min. 9 in categories 1 or 2 and max. 1 in category 3			
OXIDATIVE INDUCTION TIME (OIT) (min. ave.)						
STANDARD OIT	ASTM D 3895	min	100	100	100	100
HIGH PRESSURE OIT	ASTM D 5885		400	400	400	400
OVEN AGING AT 85°C	ASTM D 5721	%	35	35	35	35
STANDARD OIT (min. ave.) % retained after 90 days	ASTM D 3895					
UV RESISTANCE						
HIGH PRESSURE OIT (min.ave.) % RETAINED AFTER 1600 HOURS	ASTM D 5885	%	35	35	35	35

1. TCS Geotechnics is a trading name of Technical Civils Solutions Ltd.
2. TCS Geotechnics Ltd reserves the right to alter product specifications without prior notice.
3. It is the responsibility of all users to satisfy themselves that the above data is current.
4. The above figures are average values obtained from testing to current EN ISO standards.
5. TCS Ltd cannot accept responsibility for the performance of these products as the conditions of use are beyond our control.
6. Installation details are available on request.

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