

Product Description

LLDPE 2000B, 3000B and 4000B are membranes consisting of a very flexible, linear low-density polyethylene (LLDPE). LLDPE provides high elongation, tremendous tear resistance and bursting strength. A minimum carbon black content of 2.0% provides excellent protection from UV rays and harsh weather conditions. Manufactured from virgin resins, LLDPE 2000B, 3000B and 4000B do not contain plasticizers which can migrate to the surface, causing premature aging.

Product Use

LLDPE 2000B, 3000B and 4000B are used in applications that require excellent outdoor longevity and chemical resistance. These are very flexible materials that will conform to uneven surfaces. Rufco® 2000B, 3000B and 4000B meet the GRI-GM17 Standard Specification.

Size & Packaging

LLDPE 2000B is available in 50,000 square foot panels and LLDPE 3000B in up to 35,000 square foot panels. LLDPE 4000B is available in up to 25,000 square foot panels. All panels are accordion folded and tightly rolled onto a heavy duty core for ease of handling and time saving installation.



Holding Pond



Large Factory Welded Panel

Product	Part #
LLDPE	2000B
LLDPE	3000B
LLDPE	4000B

APPLICATIONS

- | | |
|--------------------|---------------------------|
| Decorative Ponds | Oil Field Pit Liners |
| Pond/Canal Liners | Mine Tailing Ponds |
| Outdoor Covers | Interim Landfill Caps |
| Fire Ponds | Waste Water Ponds |
| Remediation Liners | Golf Course Pond Liners |
| Vapor Retarders | Farm Ponds |
| Brine Ponds | Leachate Collection Ponds |



Meets GRI-GM17 Standard Specification

PROPERTIES	TEST METHOD	LLDPE 2000B		LLDPE 3000B		LLDPE 4000B	
		Min. Roll Averages	Typical Roll Averages	Min. Roll Averages	Typical Roll Averages	Min. Roll Averages	Typical Roll Averages
THICKNESS mils, (mm)	ASTM D5199	20.0 (0.50)	21.0 (0.53)	30.0 (0.75)	31.2 (0.78)	40.0 (1.00)	41.5 (1.04)
DENSITY g/cm ³	ASTM D792 or ASTM D1505	0.939 Max.					
*TENSILE STRENGTH lbf/in. width, (N/mm width)	ASTM D6693 1. Tensile Strength at Break 2. % Elongation at Break	76 (13) 800	120 (21) 950	125 (22) 800	165 (29) 1000	180 (32) 800	220 (39) 1000
*TEAR RESISTANCE lbf, (N)	ASTM D1004	11 (49)	14 (62)	16 (71)	20 (89)	22 (98)	27 (120)
PUNCTURE RESISTANCE lbf, (N)	ASTM D4833	30 (133)	45 (200)	45 (200)	60 (267)	60 (267)	80 (356)
CARBON BLACK %	ASTM D1603 D4218	2-3					
CARBON BLACK DISPERSION	ASTM D5596	Pass					
OXIDATIVE INDUCTION TIME (OIT) or HIGH PRESSURE OIT	ASTM D3895 ASTM D5885	>100 min. >400 min.					
OVEN AGING AT 85⁰ C (90 Days)	ASTM D5721/D5885	Pass		Pass		Pass	
UV RESISTANCE (1600 Hours)	GRI GM11	Pass		Pass		Pass	
MAXIMUM USE TEMPERATURE		180 °F 82 °C		180 °F 82 °C		180 °F 82 °C	
LOW TEMP, IMPACT FAILURE TEMP F, (C)	ASTM D746	< -70 (< -57)		-70 (< -57)		-70 (< -57)	
DIMENSIONAL STABILITY % CHANGE	ASTM D1204	< 2					
MULTIAXIAL TENSION % ELONGATION	ASTM D5617	>90	>120	>90	>120	>90	>120
ENVIRONMENTAL STRESS CRACK RESISTANCE HOURS TO FAILURE	ASTM D5397 Appendix A	> 400					
PERMS grains/ft ² /hr/in. Hg (grams/m ² /day/mm Hg)	ASTM E96 Method 73 °F, 50% RH		0.045 (0.030)		0.029 (0.019)		0.022 (0.014)
FACTORY SEAM REQUIREMENTS							
BONDED SEAM STRENGTH lbf/in width, (N/cm width)	ASTM D4545 Mod.**	40 (70)	45 (79)	60 (105)	70 (119)	75 (131)	80 (140)
SEAM PEEL ADHESION lbf/in width, (N/cm width)	ASTM D4545 Mod.**	30 (53)	40 (63)	45 (63)	60 (93)	70 (105)	85 (121)

Nominal Weight /Thousand Square Feet: LLDPE 2000B - 100 lbs., LLDPE 3000B - 150 lbs., LLDPE 4000B - 200 lbs.

* Tests are an average of MD and TD directions.

** Seam testing performed at 12" per minute.

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Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. Chemical resistance, odor transmission, longevity as well as other performance criteria is not implied or given and actual testing must be performed for applicability in specific applications and/or conditions. GEOCHEM, INC. MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage.

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