

Product Description

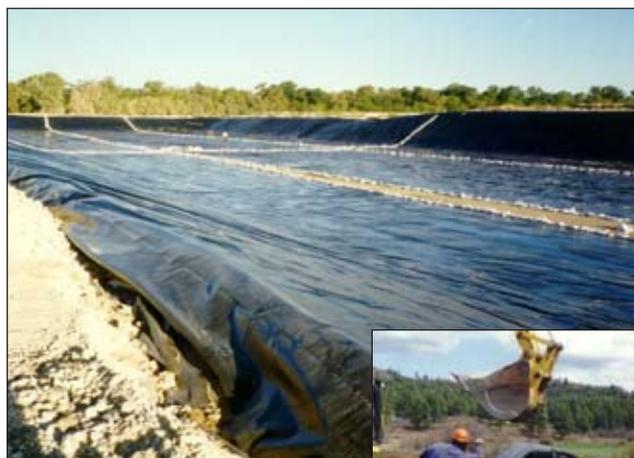
RUFACO[®] 2000B, 3000B and 4000B are membranes consisting of a very flexible, linear low-density polyethylene (LLDPE). LLDPE provides high elongation, tremendous tear resistance and bursting strength. A minimum carbon black content of 2.0% provides excellent protection from UV rays and harsh weather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

Product Use

RUFACO[®] 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. RUFACO[®] 2000B, 3000B and 4000B meet the GRI-GM17 Standard Specification .

Size & Packaging

RUFACO[®] 2000B is available in 50,000 square foot panels and RUFACO[®] 3000B in up to 35,000 square foot panels. RUFACO[®] 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 # |
|--------------|--------|
| RUFACO | 2000B |
| RUFACO | 3000B |
| RUFACO | 4000B |

APPLICATIONS

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

| PROPERTIES | TEST METHOD | RUFECO 2000B | | RUFECO 3000B | | RUFECO 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. | | 0.939 Max. | | 0.939 Max. | |
| *TENSILE STRENGTH lbf/in. width (N/mm width) | ASTM D638/D6693 1. Tensile Strength at Break 2. % Elongation at Break | 76 (13) 800 | 104 (18) 875 | 114 (20) 800 | 144 (24) 875 | 152 (27) 800 | 185 (32) 875 |
| OXIDATIVE INDUCTION Time (OIT) | ASTM D3895 Method A | 166 min. | | 175 min. | | 179 min. | |
| PUNCTURE RESISTANCE lbf (N) | ASTM D4833 | 30 (130) | 44 (195) | 45 (200) | 60 (270) | 60 (270) | 75 (334) |
| *TEAR RESISTANCE lbf (N) | ASTM D1004 | 11 (49) | 14 (62) | 16 (71) | 20 (89) | 22 (98) | 27 (120) |
| UV RESISTANCE (HPOIT) | ASTM D5885 | 59% retained | | 45% retained | | 57% retained | |
| OVEN AGING AT 85°C (HPOIT) | ASTM D5721/D5885 | 82% retained | | 87% retained | | 92% retained | |
| LOW TEMP, IMPACT Failure Temp F (C) | ASTM D746 | < -94 (< -70) | | < -94 (< -70) | | < -94 (< -70) | |
| DIMENSIONAL STABILITY % CHANGE | ASTM D1204 | < 2 | | < 2 | | < 2 | |
| ENVIRONMENTAL STRESS CRACK RESISTANCE Hours to failure | ASTM D5397 Appendix A | > 400 | | > 400 | | > 400 | |
| CARBON BLACK % | ASTM D1603 or D4218 | 2.0 | 2.5 | 2.0 | 2.5 | 2.0 | 2.5 |
| PERMS grains/ft ² /hr/in. Hg (grams/m ² /day/mm Hg) | ASTM E96 Method A 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 (79) | 60 (93) | 70 (105) | 85 (121) |

Nominal Weight /Thousand Square Feet: RUFECO 2000B - 105 lbs., RUFECO 3000B - 157 lbs., RUFECO 4000B - 210 lbs.

* Tests are an average of MD and TD directions.

** Raven Industries performs seam testing 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 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. RAVEN INDUSTRIES 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.