

GEOMEMBRANE LINER
ENGINEERING SPECIFICATION GUIDE



XR-5[®] 8138

High Performance Reinforced Geomembrane

| PROPERTY | TEST METHOD | SPECIFIED VALUES | |
|---|--------------------------------------|---|---|
| | | Standard | Metric |
| Base Fabric Type | ASTM D3776 | Polyester | |
| Basic Fabric Weight (nominal) | ASTM D3776 | 6.5 oz/yd ² | 220/g/m ² |
| Thickness | ASTM D751 | 40.0 mils min | 1.0 mm min. |
| Weight | ASTM D751 | 38.0 ± 2 oz/yd ² | 1288 ± 70 g/m ² |
| Tear Strength | ASTM D4533 Trap Tear | 40/55 lbs min | 175 / 245 N min. |
| Breaking Yield Strength | ASTM D751 Grab Tensile | 550/550 lbs min | 2447/2447 N min. |
| Low Temperature | ASTM D2136 4 hr – 1/8” mandrel | Pass @ -30° F | Pass @ -35° C |
| Dimensional Stability | ASTM D1204 212° F – 1 hr | 0.5% max each direction | |
| Adhesion Heat Sealed Seam | ASTM D751 Dielectric Weld | 40 lb / 2 in min | 175 daN/5 cm min |
| Dead Load - Seam Shear Strength | ASTM D 751 4-hour test | Pass 210 lb/in @ 70°F Pass 120 lb/in @ 160°F | Pass 980 N/2.54cm @ 21° C Pass 534 N/2.54cm @ 70 ° C |
| Bursting Strength | ASTM D751 Ball Tip | 750 lb min | 3330 N min. |
| Hydrostatic Resistance | ASTM D751 Method A | 800 psi min | 5.51 MPa min |
| Blocking Resistance | ASTM D751 (180°F/82°C) | #2 Rating max. | |
| Adhesion – Ply | ASTM D413 Type A | 15 lbs/in min or Film Tearing Bond | 13 daN/5 cm min. or Film Tearing Bond |
| Bonded Seam Strength | ASTM D751, Grab Test Method | 550 lb min | 2450 N min. |
| Abrasion Resistance | ASTM D3389 (H-18 Wheel 1 kg Load) | 2000 cycles (min) before fabric exposure 50 mg/100 cycles max weight loss | |
| Weathering Resistance | Carbon-Arc ASTM G 153 | 8000 hrs (min)-No appreciable changes Or stiffening or cracking of coating | |
| Water Absorption | ASTM D471 Section 12, 7 Days | 0.025 kg/m ² @ 70°F/21°C 0.14 kg/m ² max @ 212°F/100°C | |
| Wicking | ASTM D 751 | 1/8 in max. | 0.3 cm max. |
| Puncture Resistance | ASTM D4833 | 275 lb min | 1200 N min. |
| Coefficient of Thermal Expansion/Contraction | ASTM D696 | 8 x 10 ⁻⁶ in/in/°F max | 1.4 X 10 ⁻⁵ cm/cm/°C max. |
| Puncture Resistance | FED-STD-101C Method 2031 | 350 lb (approx) | |
| Cold Crack | ASTM D2136 4 hrs, 1/8” Mandrel | Pass @ -30°F | Pass @ -34°C |

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PO Box 16465 Denver, CO 80216 303-289-1818 FAX 303-287-3136
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