



TITAN HPR 40-5 SERIES

REINFORCED GEOMEMBRANE LINER

(High Performance Reinforced Geomembrane)

Base Fabric Type: Polyester

PROPERTY	TEST PROCEDURE	VALUE
Basic Fabric Weight (nominal)	ASTM D-3776	6.5 oz/yd ² (220g/m ²)
Thickness	ASTM D-751	40 mil (1.0mm)
Weight	ASTM D-751	38.0± 2oz/yd ² (1288± 70g/m ²)
Tear Strength (Trapezoid Tear)	ASTM D-4533	35/35 lbs _f (155/155 N) min.
Breaking Yield Strength (Grab Tensile)	ASTM D-751	550/550 lbs _f (2450/2450 N) min.
Low Temperature (4hr-1/8" mandrel)	ASTM D-2136	Pass @ -30°F (-35°C)
Dimensional Stability (212°F - 1hr)	ASTM D-1204	1.5% max each direction
Adhesion Heat Sealed Seam (Dielectric Weld)	ASTM D-751	35lb _f / 2 inches (150 N/5 cm) min.
Dead Load - Seam Shear Strength	ASTM D-751	2" (5 cm) seam, 4 hr , 1" (2.5 cm) strip 210 lb _f (934 N) @ 70°F (21°C) 105 lb _f (467 N) @ 160°F (70°C)
Bursting Strength (Ball Tip)	ASTM D-751	650 lb _f (2890 N) min. 800 lb _f (3560 N) typical
Hydrostatic Resistance (Method A)	ASTM D-751	800 psi (540 N/cm ²) min.
Blocking Resistance (180°F/82°C)	ASTM D-751	#2 Rating max.
Abrasion - Ply	ASTM D-413	15 lbs/in (65 N/2.5 cm) min or Film Tearing Bond
Bonded Seam Strength (as modified by NSF 54)	ASTM D-751	550 lb _f (2450 N) min.
Abrasion Resistance (H-18 Wheel 1000g Load)	ASTM D-3389	2000 cycles(min) before fabric exposure 50mg/100 cycles max weight loss
Weathering Resistance (Carbon-Arc)	ASTM G-23	8000 hrs(min)-No appreciable changes or stiffening or cracking of coating.
Water Absorption (Section 12, 7 days)	ASTM D-471	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" (0.3 cm) max.
Puncture Resistance	ASTM D-4833	250 lb _f (1112 N) min
Coefficient of Thermal Expansion/Contraction	ASTM D-696	8 x 10 ⁻⁶ in/in °F (1.4 x 10 ⁻⁵ cm/cm/°C) max

This data is provided for informational purposes only. *Titan Environmental Containment Ltd.* makes no warranties as to the suitability or the fitness for a specific use or merchantability of the products referred to, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability from resulting loss or damage. This information is subject to change without notice, please check with *Titan Environmental Containment Ltd.* for current updates.

Titan Environmental Containment Ltd.

777 Quest Blvd • Ile des Chenes, Manitoba • R0A0T0 • CANADA

Phone: +1.204.878.3955 Fax: +1.204.878.3980 Toll Free: +1.866.327.1957