Seaman Corporation Material Specification

9146 XR®-PW

Flexible Reinforced Geomembrane Material for Potable Water

Physical Property	Test Method	Imperial	Metric
Base Fabric	type	Polyester	
Base Fabric Weight	ASTM D751 Nominal	11.0 oz/ yd^2	373 g/ m^2
Thickness	ASTM D751	50 mil (minimum)	1.27 mm (minimum)
Weight	ASTM D751	46.0 oz/ yd^2 ±2 oz/ yd^2	1560 g/ m^2 ±70 g/ m^2
Tear Strength	ASTM D751 Trap Tear - Warp/Fill	70/70 lbf (minimum)	310/310 N (minimum)
Breaking Yield Strength	ASTM D751 Grab Tensile - Warp/Fill	850/900 lbf	3780/4000 N
Low Temperature Resistance	ASTM D 2136 Low Temperature Bend	Pass @ -10˚ F	Pass @ -23˚ C
Adhesion	ASTM D751 Dielectric Weld	40 lbf/ 2 in	17.5 daN/ 5 cm
Adhesion Ply	ASTM D413	15 lbf/ in (minimum) or film tearing bond	13 daN/ 5 cm (minimum) or film tearing bond
Bursting Strength	ASTM D751 Ball Tip	1100 lbf	4890 N
Hydrostatic Resistance	ASTM D751 Method A	800 psi (minimum)	5.52 Mpa (minimum)

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Physical Property	Test Method	Imperial	Metric
Dead Load Seam Strength	ASTM D751 4 hour test @ 160° F (71° C) 4 hour test @ 70° F (21° C)	120 lbf/ in 240 lbf/ in	534 N/ 2.54 cm 1068 N/ 2.54 cm
Blocking Resistance	ASTM D751 180˚F (82˚C)	#2 Rating (max.)	
Bonded Seam Strength	ASTM D751 Procedure A - Grab	850 lbf (minimum)	3780 N (minimum)
Weathering Resistance	ASTM G155 Xenon	8000 hours minimum - no appreciable changes or stiffening or cracking of coating	
Water Absorption	ASTM D751 One-side exposure -7 Days	0.025 kg/m^2 (max.) @ 70˚ F/ 21˚ C	
Puncture Resistance	ASTM D4833	275 lbf (minimum)	1225 N (minimum)
Coefficient of Thermal Expansion/Contraction	ASTM D696	2.1 10^{-5} in/ in/ ˚F (max.)	3.8 10^{-5} cm/ cm/ ˚C (max.)
Dimensional Stability	ASTM D1204 100˚C/1 hour	1.0% max. each direction	

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