

High Performance XR-5[®] 8138 Reinforced Geomembrane

XR-5 [®] 8138 Reinforced	Test Method	Standard	Metric
Base Fabric Type Base Fabric Weight (nominal)	ASTM D751	Polyester 6.5 oz/yd ²	Polyester 220 g/m ²
Thickness	ASTM D751	40.0 mils nominal	1.0 mm nominal
Weight	ASTM D751	38.0 ± 2 oz/yd ²	1288 ± 70 g/m ²
Tear Strength	ASTM D4533 Trapezoid Tear	40/55 lb min	175/245 N min
Breaking Yield Strength	ASTM D751 Grab Tensile	550/550 lb min	2448/2448 N min
Low Temperature Resistance	ASTM D2136 4 hrs. - 1/8" mandrel	Pass @ -30° F	Pass @ -34° C
Dimensional Stability	ASTM D1204 212° F / 100° C - 1 hr.	0.5% max each direction	0.5% max each direction
Adhesion Heat Sealed Seam	ASTM D751 Dielectric Weld	40 lb/2 in min	17.5 daN/5 cm min
Dead Load Seam Strength	ASTM D751 4-hour test	2 in seam, 4 hrs, 1 in strip Pass 240 lb @ 70° F Pass 120 lb @ 160° F	5 cm seam, 4 hrs, 2.5 cm strip Pass 1068 N/2.54cm @21° C Pass 534 N/2.54cm @ 70° C
Bursting Strength	ASTM D751 Ball Tip	750 lb min	3330 N min

GEOMEMBRANE SPECIFICATIONS

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Hydrostatic Resistance	ASTM D751 Procedure	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 lb/in min or Film Tearing Bond	13 daN/5 cm min or Film Tearing Bond
Bonded Seam Strength	ASTM D751 Grab Test Method Procedure A	550 lb min	2450 N min
Abrasion Resistance	ASTM D3389 H-18 Wheel 1kg Load	2000 cycles (min) before fabric exposure 50 mg/100 cycles max weight loss	
Weathering Resistance	ASTM G153 (Carbon-Arc)	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 max @ 70° F/21° C 0.14 kg/m ² max @ 212° F/100° C	
Wicking	ASTM D751	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
Environmental/Chemical Resistant Properties	See Chemical Resistance Table		
Puncture Resistance	FED-STD 101C Method 2031	350 lbs (approximate)	1550 N (approximate)

Seaming: Thermal welding methods are recommended. No glues or solvents are suggested.

We believe this information is the best currently available on the subject. We offer it as a suggestion in any appropriate experimentation you may care to undertake. It is subject to revision as additional knowledge and experience are gained. We make no guarantee of the results and assume no obligation or liability whatsoever in connection with this information. In case of conflict between standard and metric specifications, standard shall apply.

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