



Minimum Standards for PVC Swimming Pool Membranes

Natarec Flexible Reinforced PVC Membrane: The membrane shall consist of two (2) layers of PVC fuse,-bonded to a 9 x 9 1,000 Denier polyester mesh substrate. The membrane shall not be less than 60.0 mil (1.54-mm) thick, and shall conform strictly with the following chemical and physical properties as listed herein. Membrane shall include a proprietary polymeric MicroShield coating to resist abrasion, staining, UV deterioration and microbial action.

*Chemical and Physical Properties:

Thickness:	60 mil	ASTM D374C
Specific gravity:	1.22 g/cc	ASTM D792/method A
Yield tension:	MD166 lb/in – XD160 lb/in	ASTM D638
Yield elongation:	MD 60% - XD 60%	ASTM D638
Break tension:	MD 95 lb/in - XD 90 lb/in	ASTM D638
Break elongation:	MD 110% - XD 104%	ASTM D638
Secant modulus	MD 1352 psi - XD 1125	ASTM D5323 (100%):
Tear resistance:	MD 25 lb. - XD 24.7 lb.	ASTM D1004- Die C
Low temp. brittleness	-50°C - Pass	ASTM D1790
Water absorption:	<0.78%	ASTM D570
Puncture Resistance:	125 lbs	ASTM D4833
Ply Adhesion	24 lb/2 in.	ASTM D413
UV Resistance:	% change	ASTM D4355
Tensile Strength @ Yield	MD -12% - XD -16%	
Fungal and Bacteria Resistance	No growth, staining or discoloration	ASTM G21-96
Resistance to Chemicals	Excellent resistance	ASTM D543 Procedure I (73.4 F) for 7 days

(Cyanuric Acid, Sodium Dichloroisocyanurate, Trichloroisocyanuric acid, Calcium Hypochlorite, Sodium Hypochlorite with 12 PPM solution)

MD = machine direction; XD = cross machine direction. *Average values plus or minus 10%

Natarec Slip Resistant Flexible Reinforced PVC Membrane: A slip resistant reinforced PVC membrane, .067 inch (1.7-mm) thick, and identical in chemical and physical properties to the flexible reinforced PVC membrane described above, which includes a specifically designed embossed surface suitable for high traffic areas. The slip-resistant surface shall be certified by independent ASTM Laboratory testing to comply with the requirements of ASTM C1028.

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