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# Test Results

## Flex Membrane International

### Fleece Back 45, Fleece Back 60, Fleece Back 80

#### Physical Requirements per ASTM D4434-04

<u>Procedure</u>	<u>Method</u>	<u>FB 45</u>	<u>FB 60</u>	<u>FB 80</u>
Overall Thickness of PVC sheet, min, in.	D751	0.045	0.06	0.08
Breaking Strength, min, lbf/in.	D751			
Machine Direction		473	537	632
Cross Mach. Direction		436	457	511
Elongation at Break, min, %:	D751			
Machine Direction		42	35	45
Cross Mach. Direction		40	33	42
Seam Strength, min, % of Tensile or Breaking Strength	D751	100	90	93
Retention of Properties after Heat Aging:	D751 / D3045			
Breaking Strength (Machine Direction), min, % of original		97	94	92
Breaking Strength (Cross Machine Direction), min, % of original		93	90	92
Elongation (Machine Direction), min, % of original		95	92	94
Elongation (Cross Machine Direction), min, % of original		98	100	100
Tearing Strength, min, lbf	D751			
Machine Direction		175	119.2	85.9
Cross Mach. Direction		183	86.3	84.6
Low Temperature Bend	D2136	Pass @ -40°C	Pass @ -40°C	Pass @ -40°C
Accelerated Weathering test;	G53			
Cracking (7X magnification)		No Cracking	No Cracking	No Cracking
Crazing (7X magnification)		No Crazing	No Crazing	No Crazing
Linear Dimensional Change, max, %	D1204			
Machine Direction		0.3	0.1	0.2
Cross Mach. Direction		0.3	0	0.1
Change in Weight after Immersion in Water, max, %	D570 - modified	0.41	0.41	0.41
Static Puncture Resistance	D5602	Pass @ 33 lbs.	Pass @ 33 lbs.	Pass @ 33 lbs.
Dynamic Puncture Resistance	D5635	Pass @ 20 J	Pass @ 20 J	Pass @ 20 J
Fungi Resistance	G-21	no growth	no growth	no growth