



## CCW-MIRAPLY-V MATERIAL CERTIFICATION

This is to certify that CCW MiraPLY-V is a vertical grade, self-adhering membrane that is comprised of a tough, durable and flexible TPO backing with a butyl alloy adhesive designed for blindside waterproofing in below-grade construction. CCW MiraPLY is manufactured in the USA.

CCW manufactures CCW MiraPLY-V membrane to comply with the following ASTM typical property values and meets the specification requirements:

CCW-MiraPLY-V-Property	Test Method	Unit	Typical Value*
TPO	-	mils (mm)	45 (1.14)
Butyl Alloy	-	mils (mm)	25 (.64)
Thickness	ASTM D 1970	mils (mm)	70 (1.78)
Water Vapor Transmission (Water Method) – With Seams	ASTM E 96	perms	0.090
Tensile Strength <sup>1</sup>	ASTM D 882	psi	1,500
300% Modulus <sup>1</sup>	ASTM D 412	psi	+/- 10%
Lap Seam 90° T-Peel	ASTM D 1876	pli.	>5.0
Elongation @ Break @ 23°C (Die C)	ASTM D 412	%	500
Flexibility Temperature @ -29°C (-20°F)	ASTM D 1970	Pass/Fail	No Cracking @ -29°C (-20°F) - Pass
Hydrostatic Pressure Resistance	ASTM D 5385	ft.	>231ft. (100 psi)
Peel Strength Over Poured Concrete	ASTM D 903	pli.	>5.0
Puncture Resistance Load at Puncture	ASTM E 154	lb.	300
Tear Strength of Vulcanized rubber and Thermoplastics Die C2	ASTM D 624	psi	250
Soil Decay Testing – E 96 Permeance	ASTM E 154	-	Pass
Soil Decay Testing – Weight Loss	ASTM D 154	-	Pass
Lateral Water Migration Resistance <sup>1</sup>	ASTM D 5385 modified	-	Pass at 100 psi (231 ft.) of hydrostatic pressure

<sup>1</sup>Data Listed according to Machine Direction criteria where applicable

<sup>2</sup>Lateral water migration resistance test is performed by casting concrete against butyl side of membrane with a hole and applying a hydrostatic head pressure with water. This test measures the resistance of lateral water migration between membrane and concrete.

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