

### CCW MiraWELD™-H Blindside Waterproofing Material Certification

This is to certify that MiraWELD-H is a weldable, self-adhering, blindside 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's MiraWELD Inside Corner, MiraWELD Outside Corner, MiraWELD Detail Strip, MiraPLY™ Detail Tape, MiraPLY Seam Tape, CCW TPO Flashing Strip, Tieback Covers, CCW-703V LiquiSeal™, Sure-Seal® Lap Sealant, MiraDRAIN™ Drainage Composite, and MiraSTOP™ Waterstops are part of the CCW MiraWELD System and are recommended by Carlisle Coatings & Waterproofing Incorporated.

CCW MiraWELD is manufactured in the USA to comply with the published physical properties listed in the MiraWELD-H and MiraWELD-V Technical Data Sheets.

Property	Method	Unit	Typical Value
TPO Thickness	—	mils (mm)	45 (1.14)
Butyl Alloy Thickness	—	mils (mm)	25 (0.64)
Total Membrane Thickness	ASTM D5147	mils (mm)	70 (1.78)
Water Vapor Transmission (Water Method)	ASTM E96	perms	0.020
Tensile Strength <sup>1</sup>	ASTM D882	psi	1,500
Tensile Strength <sup>1</sup>	ASTM D412	psi	2,100
300% Modulus <sup>1</sup>	ASTM D412	psi	1,000 ± 10%
Elongation @ Break @ 23°C (Die C) <sup>1</sup>	ASTM D412	%	500
Factory Seam Strength (Grab Method)	ASTM D751	pli	66.0
Field Seam Strength	ASTM D1876	pli	25.0
Flexibility Temperature @ -29°C (-20°F)	ASTM D1970	pass/fail	No Cracking
Hydrostatic Pressure Resistance	ASTM D5385	ft.	>231
		psi	100
Peel Strength to Concrete	ASTM D903	lb.	>5.0
Resistance to Puncture	ASTM E154	lb.	300
Tear Strength <sup>1</sup>	ASTM D624	psi	250
Soil Decay E 96 Testing Water Vapor Transmission	ASTM E154		Pass
Soil Decay Testing (Weight Loss)	ASTM E154		Pass
Lateral Water Migration Resistance <sup>2</sup>	ASTM D5385 modified	ft.	>231
		psi	100

1. Data Listed according to Machine Direction criteria where applicable.
2. 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.