SCIENCE. SERVICE. SOLUTIONS.

CARLISLE COATINGS & WATERPROOFING

WATERPROOFING

MiraPLY™-H with SeamLOCK℠ Technology

Description

MiraPLY-H with **SeamLOCK** Technology is a nominal, 70-mil horizontal grade, self-adhering, blindside waterproofing membrane. The dual laminate membrane fuses a 45-mil thick, reinforced TPO sheet to a 25-mil butyl adhesive coating, combining two of the most time-tested waterproofing technologies used worldwide. With the addition of new **SeamLOCK** pre-primed strips, MiraPLY-H is not only tough, durable and flexible, it is easy to install.

Features and Benefits

- **Durable** - Pliable TPO layer has superior puncture resistance compared to HDPE, making MiraPLY the best system to meet the active demands of heavily trafficked construction sites and uneven rocky substrates.
- **Tenacious Bond** - Butyl Alloy adhesive creates a permanent, chemical bond with placed concrete to eliminate water migration between membrane and concrete, while ensuring protection against ground settlement beneath slabs.
- **Efficient Application**
  - Light-weight, kick-out roll for fast installation less labor
  - Factory installed **SeamLOCK** pre-primed, peel-and go-strips eliminates primer for enhanced adhesion and easier side lap construction. Retains strong bond in both wet and dry, dusty site conditions.
  - Elastic properties make cutting membrane easy with fewer hand injuries

Plus!

- Fully bonds to concrete
- Excellent resistance to most chemicals (i.e., acids and bases)
- Effective Radon barrier
- Bridges cracks in concrete

Typical Uses

- Below elevator pits
- Under slabs and footings
- Below-grade structural slabs

Packaging

4' x 50' (1.22 m x 15.24 m) rolls. Weight: 80 lbs (36 kg)

Typical Properties

Property	Method	Unit	Typical Value
TPO Thickness	—	mils (mm)	45 (1.14)
Butyl Alloy Thickness	—	mils (mm)	25 (0.64)
Thickness per ASTM D 5147 across sheet	ASTM D1970	mils (mm)	70 (1.78)
Water Vapor Transmission (Water Method)	ASTM E96	perms	0.090
Tensile Strength[1]	ASTM D882	psi	1,500
300% Modulus[1]	ASTM D412	psi	±10%
Lap Seam T-Peel (90°)	ASTM D1876	pli.	>5.0
Elongation @ Break @ 23°C (Die C)[1]	ASTM D412	%	500
Flexibility Temperature @ -29°C (-20°F)[1]	ASTM D1970	pass/fail	No Cracking @-29°C (-20°F)
Hydrostatic Pressure Resistance	ASTM D5385	ft.	>231 ft. (100 psi)
Peel Strength Over Poured Concrete	ASTM D903	pli.	>5.0
Puncture Resistance Load at Puncture	ASTM E154	lb.	300
Tear Strength of Vulcanized Rubber and Thermoplastics Die C[1]	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[2]	ASTM D5385 modified		Pass at 100 psi (231 ft) of hydrostatic pressure

[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.

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Accessories

Carlisle Coatings & Waterproofing offers a wide range of accessories to accommodate all application requests.

Substrate Preparation

The substrate must be relatively even without noticeable high spots or depressions, relatively smooth, free of protrusions, debris, sharp edges or foreign materials and must be free of accumulated water, ice and snow. Earth, crushed stone, or soil shall be compacted such that the soil is not displaced from traffic or concrete placement. Typically, #57 stone compacted to 85% Proctor density provides a suitable substrate. MiraPLY can span voids and gaps up to 1". MiraDRAIN can span voids and gaps up to 2" and shall be installed over subbase prior to MiraPLY-H. Install MiraDRAIN over sub-base before installing MiraPLY-H with **SeamLOCK** Technology.

MiraPLY-H Installation

Start the installation at one corner of the building. Unroll the first sheet of MiraPLY-H square/parallel to building wall starting at one corner with the TPO side down and the adhesive facing up with the Factory-Applied Tape (FAT™) on the side for the succeeding sheet to lap onto. Unroll the next sheet of MiraPLY-H lapping the **SeamLOCK** pre-primed strip onto the previously installed sheet a minimum of 3". Stagger end laps and extend onto adjoining sheets a minimum of 3". Ensure that the membrane lays flat and no openings are visible. At side laps, simultaneously remove the release liner on the factory applied tape and pre-primed strip then mate the two sheets together. At end laps ensure the TPO and Butyl surfaces are clean and free of debris and surface contaminants. Position 6" MiraPLY Seam Tape in the lap area. Roll MiraPLY Seam Tape using a hard rubber roller and firm hand pressure. Remove the release liner and join the two sheets together. After seam is fully constructed, roll the entire seam area with a hard rubber roller using firm hand pressure.

MiraPLY Repair

Inspect the MiraPLY-H membrane for damaged areas before placement of rebar or concrete. Clean with a cloth dampened with Weathered Membrane Cleaner and allow to dry. Repair slices, cuts and small punctures (½" or less) with MiraPLY Detail Tape.

Repair larger areas with a piece of MiraPLY extending beyond damaged areas by approximately 6" in all directions. Apply MiraPLY Seam Tape to the cleaned TPO side of patch. Remove release liner of MiraPLY Seam Tape, then position patch on damaged area and roll patch with a hard rubber roller using firm hand pressure or position patch and apply MiraPLY Detail Tape around all edges of patch and then roll with hard rubber roller using firm hand pressure.

Concrete Placement

Rebar chairs/supports shall be non-spiked and must lay flat to prevent damage during rebar placement.

Technical Note

Refer to CCW Technical Bulletin *"MiraPLY Waterproofing – Best Practices and Jobsite Requirements"* for more information.

Warnings and Hazards

- Protect membrane from torch welding or cutting slag
- Do not use spiked rebar chairs
- Do not leave exposed for more than 60 days
- Installation below 25°F require special tools and techniques. Consult Technical Services for details.
- Concrete forms must remain in place a minimum of 3 days after concrete is poured

Storage

Store in the original packaging until use. Protect from UV exposure and weather. Store between 40°F and 100°F.

Limited Warranty

Carlisle Coatings & Waterproofing Incorporated (Carlisle) warrants this product to be free of defects in workmanship and materials only at the time of shipment from our factory. If any Carlisle materials prove to contain manufacturing defects that substantially affect their performance, Carlisle will, at its option, replace the materials or refund its purchase price. This limited warranty is the only warranty extended by Carlisle with respect to its materials. There are no other warranties, including the implied warranties of merchantability and fitness for a particular purpose. Carlisle specifically disclaims liability for any incidental, consequential, or other damages, including but not limited to, loss of profits or damages to a structure or its contents, arising under any theory of law whatsoever. The dollar value of Carlisle's liability and buyer's remedy under this limited warranty shall not exceed the purchase price of the Carlisle material in question.

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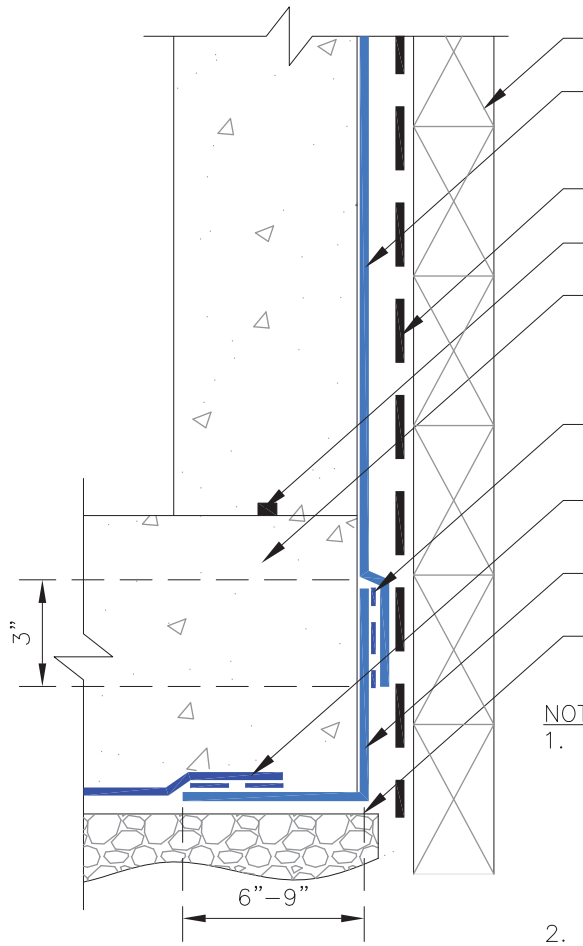
Foundation Tie-In with FAT Installation (MP-109)



RETENTION WALL SYSTEM

MIRAPLY–V WITH BUTYL ADHESIVE SIDE FACING CONCRETE

MIRADRAIN WITH FABRIC SIDE TO SOIL

MIRASTOP

FOUNDATION SLAB

MIRAPLY SEAM TAPE (IF FAT ENDS AREN'T AVAILABLE)

MIRAPLY–H WITH BUTYL ADHESIVE SIDE FACING CONCRETE

MIRAPLY V WITH BUTYL ADHESIVE SIDE FACING CONCRETE

COMPACTED #57 STONE BASE OR CONCRETE WORKING SLAB

NOTES:

1. Install sheets of MiraPLY–V with a minimum 3" side overlap with ¼" of exposed adhesive. Ensure the membrane lays flat and no openings are visible. Stagger end laps. Remove the release liners on the Miraply Seam Tape, for end lap, and Factory Applied Tape (FAT) mating the two sheets together. After the seam is fully constructed, roll the seam with a hard rubber roller.
2. Refer to most current details on www.carlisleccw.com.

DETAIL IS INTENDED TO BE A GUIDE FOR WATERPROOFING INSTALLATION ONLY.	**MiraPLY™ BLINDSIDE WATERPROOFING**	
01/02/2018 N.T.S.	MIRAPLY–H TO MIRAPLY–V FOUNDATION TIE–IN	
MP–109		

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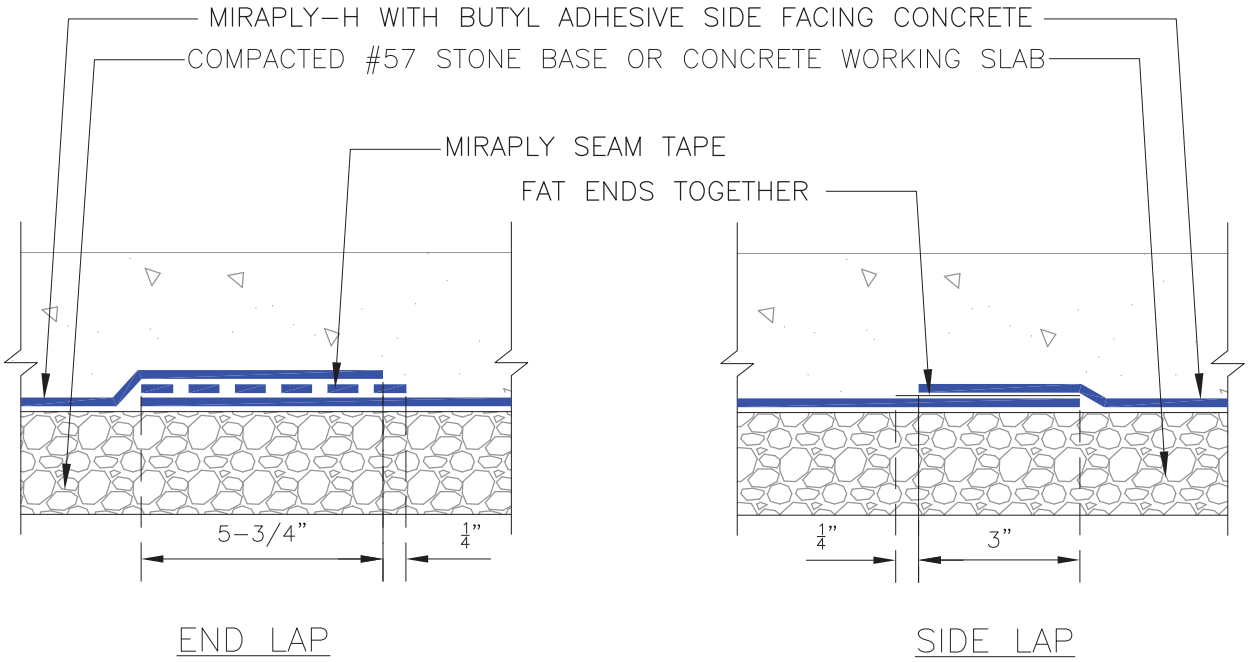
End Laps and Side Laps (MP-90)



NOTES:

1. For Side Laps, install sheets of MiraPLY–H with a minimum 3" side overlap with ¼" of exposed adhesive. Ensure the membrane lays flat and no openings are visible. Stagger end laps. Remove the release liners on the Miraply Seam Tape, for end lap, and Factory Applied Tape (FAT) mating the two sheets together. After the seam is fully constructed, roll the seam with a hard rubber roller.
2. Refer to Detail Drawing MP–91 to seal "T" Joints.
3. Refer to most current details on www.carlisleccw.com.

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01/02/2018 N.T.S.	MIRAPLY–H END AND SIDE LAP	
MP–90		

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