WATERPROOF PVC DECK MEMBRANES

INSTALLATION MANUAL

ADS Weatherdek Canada Ltd.
600 Adams Rd. Kelowna, BC, Canada V1X 7S1
Toll Free 1-800-667-2596 – www.weatherdek.com
Revised: March - 2010

Table of Contents

Introduction

Weatherdek PVC Membranes are specifically designed for use as waterproof walking surfaces on decks, patios, walkways, roof decks or where ever an attractive durable waterproof surface is required. The fact that these products serve as waterproofing materials makes the installation extremely important. Weatherdek membranes must be installed with waterproofing and roofing procedures in mind and only by fully Qualified and Approved Weatherdek Applicators.

Required Installation Tools

- Measuring Tape
- Chalk Line
- Retractable Blade Razor Knife
- Metal Straight Edge
- 4-6" Putty Knife
- Filler Bucket
- Notched Trowel (Richards #25 Adhesive Spreader or Equivalent)
- Floor Sander
- 16 grit Sanding Discs
- Extension Cords
- Push Broom and Corn Broom
- 9" Roller Cage with Extension Handle
- 9" Roller Sleeves (3/8" Pile)
- 2" – 4" Paint Brush
- Plastic Scraper / Spreader
- Electric Hot-Air Welder
- Seam Welding Roller
- Caulking Gun
- Hammer Stapler or Staple Gun
- Hammer; Chisel, Wood Saw, Tin Snips etc.

Surface Preparation

Weatherdek membranes can be applied to either plywood or concrete provided the surface is relatively smooth and consistent. To achieve the proper surface some preparation may be required.

Plywood Substrates:

- Minimum 3/4" Tongue & Groove, CD grade or better plywood.
- 5/8" plywood acceptable with proper joist spacing.
- ***Pressure treated plywood must NOT be used.***
- Maximum 20% moisture content.
- Install plywood with the face grain perpendicular to joist direction.
- Screw plywood to supports with corrosion resistant screws.
- Countersink all screw heads.
- Use appropriate adhesive between plywood and supports.
- Sand all plywood sheet joints to ensure no height differences.
- Fill all sheet joints or imperfections with a recommended cement based patching compound.

Concrete Substrates:

- Concrete slabs must be sound and clean.
- Maximum 75% relative humidity when measured with hygrometer.
- Grind all imperfections to ensure smooth finished surface.
- Fill all cracks or imperfections with a recommended cement based patching compound.

During surface preparation special attention should be paid to detail areas such as inside and outside edges, or corners. Ensure these areas prepared in order to create a consistent 90° turn for membrane at walls, upstands and down turns over outside edges.

Ensure all required flashings, under flashings, drain bodies or scuppers are properly fitted prior to laying the membrane.

Inspect and clean the entire surface of all dust and debris. In addition to sweeping a dust blower or vacuum may also be used to remove dust and debris.

Note:

All surfaces must have a minimum slope to drain of 1:48, and should not be subject to standing water at any point.

Ensure proper slope is maintained after settling and shrinkage of building structure.

Membrane Layout

Plan the membrane layout to minimize the amount of seems required, and when feasible orient joints perpendicular to the slope of the surface, with seam overlaps parallel to the direction of slope.

Begin the layout at the outside edge of the surface, furthest from the building, and snap a chalk line to align the first sheet. Roll out the first pass and rough cut the material to length, leaving approx 4" overhang for outside edges, and a minimum of 6" to turn up and walls or upstands, and ¾" for seam overlaps.

Check all materials and be sure there is enough product to complete the required installation. Verify all materials on site to be the same LOT or PON number.

Membrane Installation

Align the first pass with the chalk line, and be sure it is lying smooth and flat with no tension in the sheet. Fold the material in half, back from the chalk line over the remainder of the sheet. With half the back of the membrane exposed begin applying adhesive.

Use a paint roller on an extension handle to apply an even coat of Contact Adhesive to both the back side of the membrane and the exposed deck surface. Leave all seam overlap areas free of adhesive, a ¾" wide strip of masking tape can be used to 'mask' these areas while gluing. Contact cement may be used in temperatures as low as 0° C.

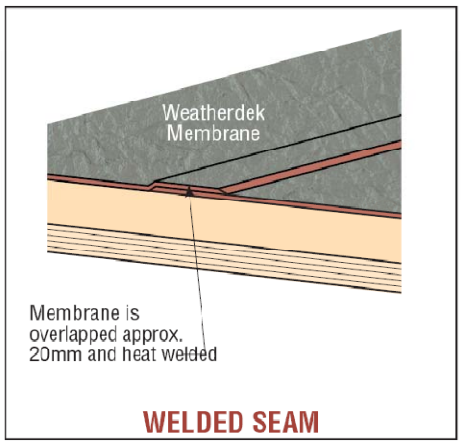
Allow the adhesive to dry until it is 'tacky' to the touch, and then carefully roll the glued membrane back onto the glued substrate working from the center of the sheet in a 'V' shape out to each end. Take care not to stretch the material, and avoid wrinkles or air pockets. Use a plastic spreader or roller to smooth the membrane onto the surface.

Repeat these steps for the remaining half of the pass, and subsequent passes to completely adhere all required membrane.

Once all horizontal surfaces have been adhered, use a paint brush to apply adhesive to wall, upstand and outside edge areas and adhere membrane in these locations taking care not to stretch the material into corners or over edges.

With all membrane fully adhered, begin the seam welding and detail areas.

Heat Welding / Seaming



When all passes are adhered begin to heat weld the seams. Seam overlaps should be 20mm wide. It is important for aesthetics to have a straight seam line, trim the material to a straight edge if necessary. The overlap area should be completely free of any adhesives or other contaminants that may contaminate the weld.

Using an electric heat welder with a ¾" slotted tip, position the tip between the two layers of vinyl applying heat to both layers. Make the first pass by slowly moving the tip along the seam while applying pressure to the heated layers with a neoprene rubber roller. Weld approx 18" to 24" with this pass and then make a second pass over the weld to bevel the edge of the join.

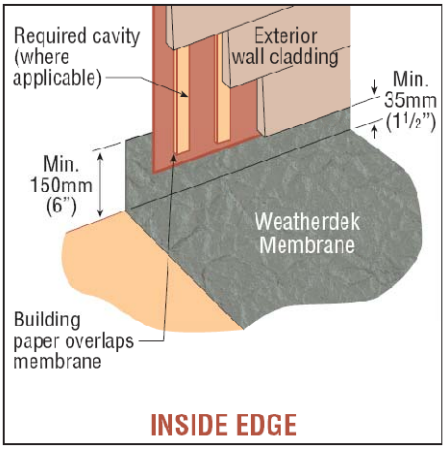
For the second pass hold the tip of the welder parallel to the seam, directing the heat onto both the lower surface and the edge of the upper layer. Once the upper layer shows signs of melting roll over it with the roller at an angle to bevel the edge and melt it to the lower layer of vinyl.

It is important to check the weld every so often by pulling on it once it's cooled.

Weld all overlapped seams, and use the same process for welding detail areas such as folded corners, over flashings and tabs.

Detail Areas

Inside Walls & Edges

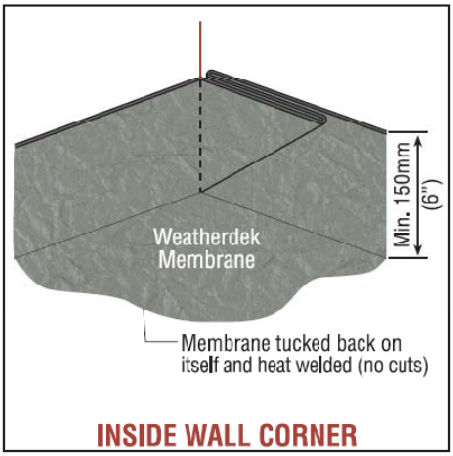


Turn membrane up the inside wall a minimum of 6". The building wrap and siding should overlap the membrane.

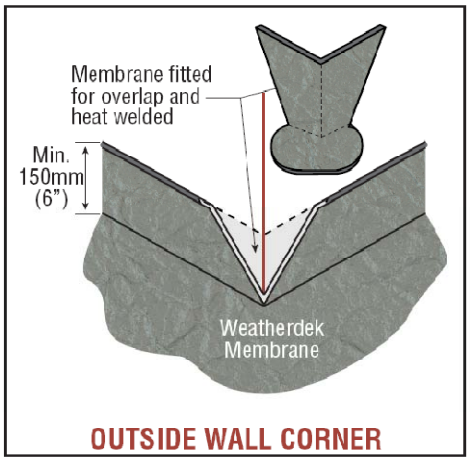
Note: Weatherdek does not recommend the use of a 'fillet' or 'cant strip' at inside edges.

Inside Wall Corner

When there is a 90° inside corner created by two walls, there is no need to cut the membrane. Simply fold the material (dog ear), to the inside and weld it closed. With no cuts this detail eliminates the possibility of leaks through improperly sealed corners.



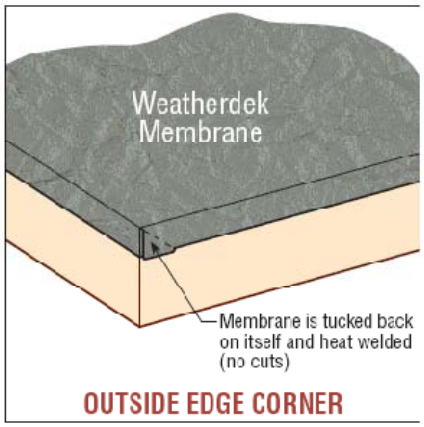
Outside Wall Corner



When gluing the membrane in place, adhere it tight to the deck surface and locate the point where the membrane will meet the corner of the wall. Make a 45° cut from this point back towards the wall and fit the membrane around the corner. Cut an over flashing made of Weatherdek membrane that will overlap the existing membrane by 1". Glue this piece in place and heat weld the overlaps.

Outside Edge Corner

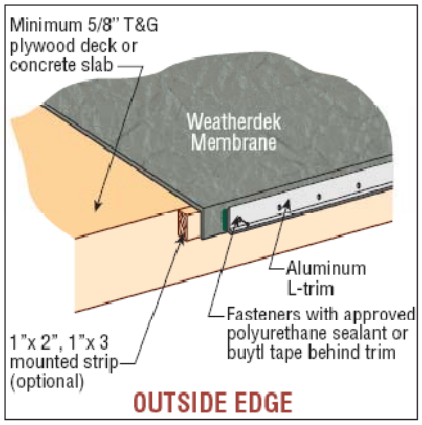
For an outside edge corner, turn the membrane over the edge of the deck surface on either side of the corner and fold the excess membrane back to one side and heat weld in place. No cutting of the membrane ensures a watertight detail.



Outside Edge Finish

Adhere the membrane over the edge of deck surface a minimum of 2", and mechanically fasten using the Weatherdek Aluminum L-Trim.

Use Butyl tape or an approved polyurethane sealant behind the L-Trim to seal all fastener penetrations.



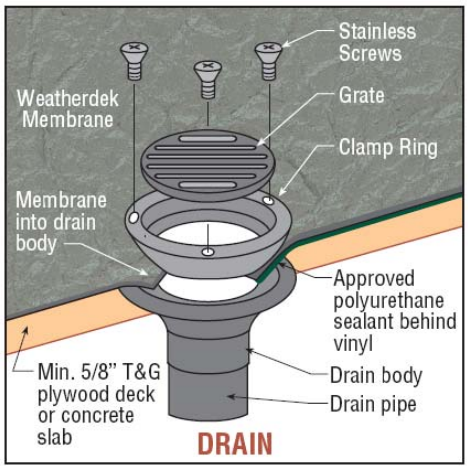
Additional Detailing

In addition to the standard details shown above please refer to the following details as required by site and design conditions:

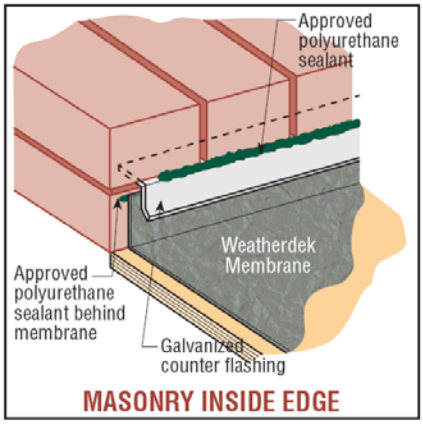
Roof Drains

Use approved Roof Deck drains designed for use with membrane materials when a drain outlet is required through the Weatherdek membrane.

Position the drain at the lowest point of the surface. Install the body of the drain with proper substrate rebate prior to membrane installation. Membrane is sealed into drain body using an approved polyurethane sealant and fastened by the drains clamp ring.



Masonry Inside Edge



For masonry or brick veneer inside edges run the membrane up the required number of blocks to achieve the proper upstand. Make a saw cut into the mortar joint and insert a galvanized counter flashing. Both the membrane and flashing should be sealed in place with an approved polyurethane sealant. The flashing should extend down over the membrane a minimum of 50mm.

Posts or Penetrations

For penetrations through a Weatherdek Surface, cut and fit a boot around the penetration that will fit tight to the penetration, and extend over the membrane on the horizontal surface. The boot should extend up the penetration enough to be flashed over with another piece of Weatherdek membrane a minimum of 100mm high that is adhered to the penetration and heat welded to the boot at the base. The top of this over-flashing should be protected with a cap flashing.