INSTALLATION GUIDELINES
AIR-SHIELD™ SMP

This document has been created as an addendum to our AIR-SHIELD SMP technical data sheet to provide information regarding the recommended installation instructions recommended by W. R. MEADOWS. However, it is important to review each application as there may be situations that may require this procedure to be modified based on the project requirements. If this situation arises, please contact W. R. MEADOWS technical service.

PRODUCTS REQUIRED

- AIR-SHIELD SMP: self-adhesive, vapor permeable, air/liquid moisture barrier consisting of a triple layer polypropylene micro-porous film laminate, with a proprietary acrylic moisture vapor permeable adhesive and silicone-coated PET release liner.
- AIR-SHIELD LIQUID FLASHING: single component, gun grade, low-odor, elastomeric, polyether, liquid-applied flashing and detailing membrane. To be used for detailing of rough openings, fasteners and penetrations.
- AIR-SHIELD THRU-WALL FLASHING: 40 mil rubberized asphalt self-adhesive membrane to be used for base of wall flashing.
- MEL-PRIME™ or MEL-PRIME W/B: solvent-based or water-based adhesive to be used for conditioning of surfaces to receive AIR-SHIELD THRU-WALL FLASHING.
- POINTING MASTIC: pre-mixed, cold-applied, polymeric, single-component sealing compound for detailing of AIR-SHIELD THRU-WALL FLASHING.
- Hand roller and stiff brush
- Utility knife
- Chalk line
- Measuring tape

APPLICATION TEMPERATURE

AIR-SHIELD SMP can be applied at minimum air and surface temperatures of 14° F (-10° C) and rising.

SUBSTRATE PREPARATION

All surfaces to be protected must be clean, dry, frost-free, and smooth. Remove any sharp protrusions and repair all defects. All surfaces to receive AIR-SHIELD SMP must be clean of oil, dust, and excess mortar or any material that may hinder the adhesion of the installation. Clean any loose dust or dirt from the wall membrane by wiping with a dry cloth or brush.

Pre-fill any joints, gaps and cracks >1/4" (6 mm) with a generous bead of AIR-SHIELD LIQUID FLASHING and allow to cure fully.

INSTALLATION ON EXTERIOR SHEATHING PANELS

Install and fasten exterior sheathing panels according to the sheathing manufacturer's instructions.

When installing the fasteners, ensure that they are driven flush with the surface (not countersunk) and into the framing. Any fasteners that are countersunk, or any holes from the removal of a fastener, must be pretreated with AIR-SHIELD LIQUID FLASHING prior to application of AIR- SHIELD SMP.

Inspect all joints to ensure that all areas are clean, dry, smooth, and free from all bond-breaking contaminants. Remove and replace any damaged structural wall components.

INSTALLATION ON CONCRETE MASONRY

Strike masonry joints flush.

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Concrete surfaces must be smooth and without large voids, spalled areas, or sharp protrusions.

Concrete must be cured a minimum of 14 days and must be dry before AIR-SHIELD SMP is applied.

Where curing compounds are used, they must be clear resin-based, without oil, wax or pigments. Prepare substrate per manufacturer's instruction prior to application of membrane.

INSTALLATION ON ORIENTED STRAND BOARD (OSB)

When installing the fasteners, ensure that they are driven flush with the surface (not countersunk) and into the framing. Any fasteners that are countersunk, or any holes from the removal of a fastener, must be pretreated with AIR-SHIELD LIQUID FLASHING prior to application of AIR-SHIELD SMP.

Inspect all joints to ensure that all areas are clean, dry, smooth, and free from all bond-breaking contaminants. Remove and replace any damaged structural wall components.

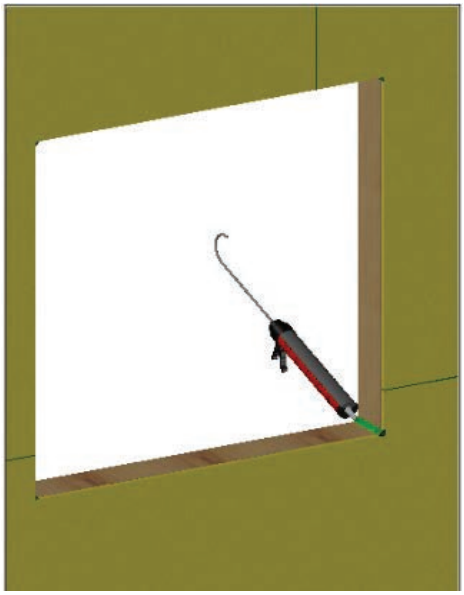
*Membrane adhesion of self-adhesive membranes on oriented strand board (OSB) can sometimes be affected by the level of surface texture or the presence of wax that is part of the binder used to bond together the wood strands. In situations where the membrane adhesion is compromised, in-situ adhesion tests should be performed to determine suitability of substrate prior to full installation. If there are variations in the OSB surface, multiple tests may be required.

Certain conditions may require the use of a primer. Contact W. R. MEADOWS for assistance.

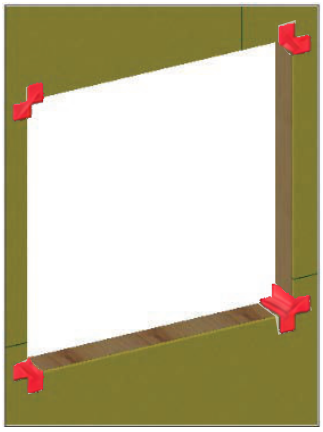
ROUGH OPENING DETAILING

Method 1: AIR-SHIELD SMP Sheet Membrane

STEP 1: Apply AIR-SHIELD LIQUID FLASHING in corners of window frame.



STEP 2: Then apply AIR-SHIELD SMP strips to the corners of window frame.



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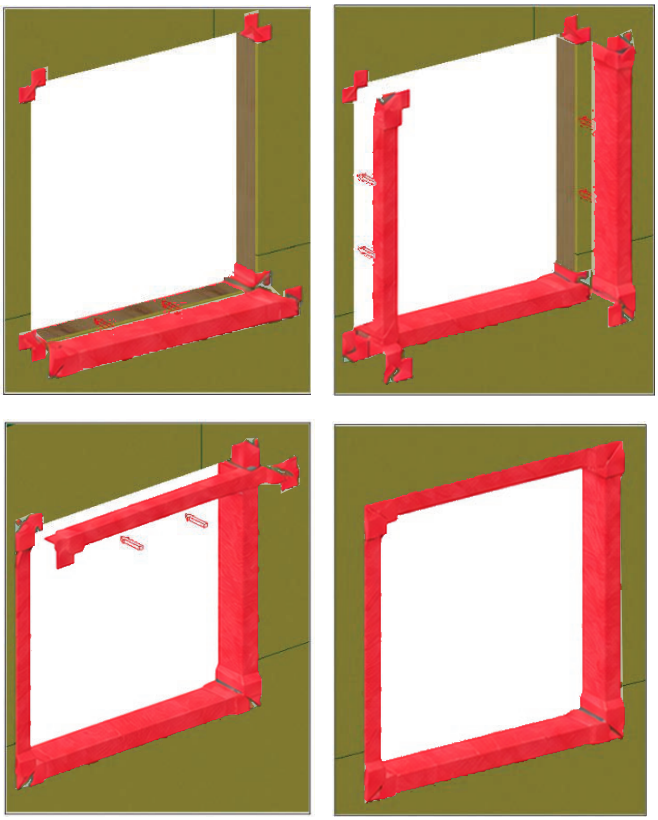
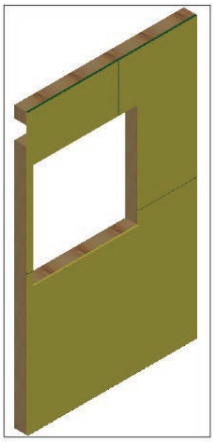
STEP 3: Apply strips of AIR-SHIELD SMP to window frame. Starting at the sill (bottom) followed by the sides, finishing with the window head to complete the barrier.



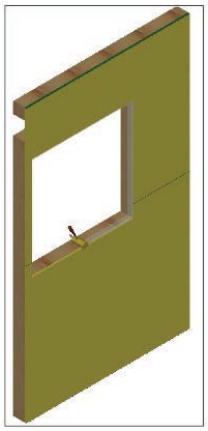
Method 2: AIR-SHIELD LIQUID FLASHING

STEP 1: Inspect rough opening and ensure that all areas to receive AIR-SHIELD LIQUID FLASHING are clean, dry, smooth, and free from all bond-breaking contaminants.

STEP 2: Remove and replace any damaged structural wall components.



STEP 3: Apply a coat of MEL-PRIME™ on the raw edges of exterior gypsum board.



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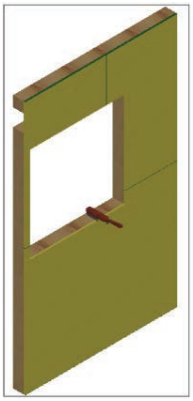
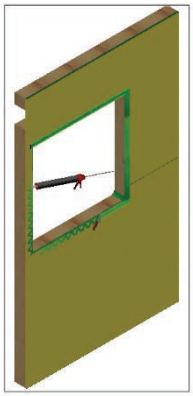
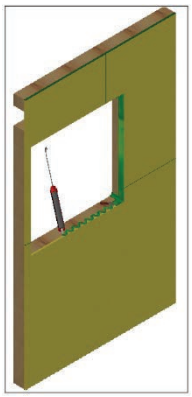
STEP 4: Prefill any joints or cracks that are larger than ¼" (6.35 mm) and less than ½" (12.7 mm) with AIR-SHIELD LIQUID FLASHING. Apply a generous bead of material over the joint, press, and spread into the joint. Allow material to skin over prior to full application of AIR-SHIELD LIQUID FLASHING.



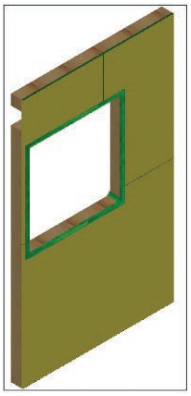
STEP 5: Prefill any joint or cracks larger than ½" (12.7 mm) with AIR-SHIELD LIQUID FLASHING. Install KOOL-ROD™ into joint to control sealant depth and apply AIR-SHIELD LIQUID FLASHING. Smooth out using a W. R. MEADOWS SPREADER TOOL or putty knife and allow to cure prior to full application of AIR-SHIELD LIQUID FLASHING.



STEP 6: Start at the top of the rough opening, apply a bead of AIR-SHIELD LIQUID FLASHING in the rough opening to be sealed and spread the material using a W. R. MEADOWS SPREADER TOOL or putty knife across the rough opening surface at an even consistency. Test the thickness of the material and ensure that it has a thickness of 12-15 mils using a wet mil gauge.



STEP 7: Apply a generous bead of AIR-SHIELD LIQUID FLASHING to the vertical surface around the rough opening and spread this material with a W. R. MEADOWS SPREADER TOOL or putty knife in an even, monolithic manner 4"-6" (100-152 mm) onto the vertical surface around the rough opening. Make sure material contains no pinholes and is void-free. Again, make sure material is even, monolithic, and undamaged. Test the thickness to ensure the material has a thickness of 12-15 mils.



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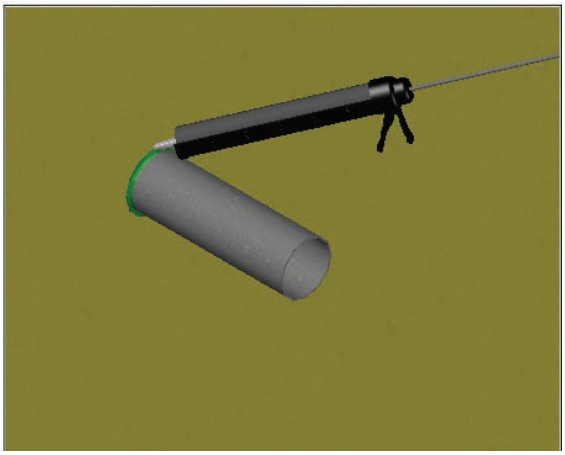
WALL PENETRATIONS

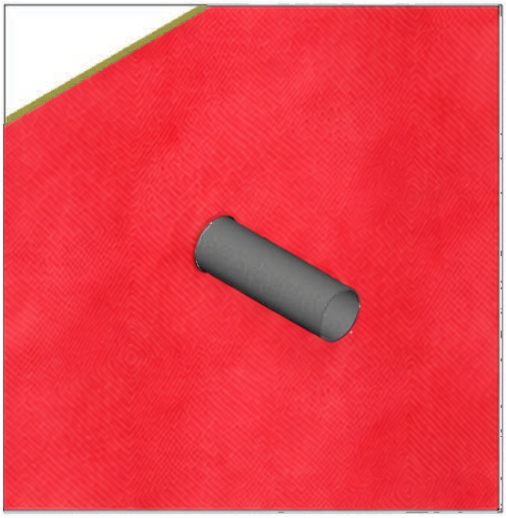
The following procedure shows the use of AIR-SHIELD LIQUID FLASHING as the material to be used for the detailing of penetrations.

PIPE PENETRATIONS

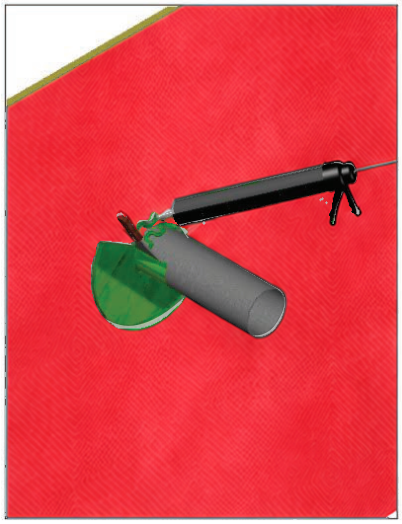
STEP 1: Line the penetration at the sheathing with AIR-SHIELD LIQUID FLASHING to seal up the gaps.



STEP 2: Lay sheet of AIR-SHIELD SMP over sheathing.

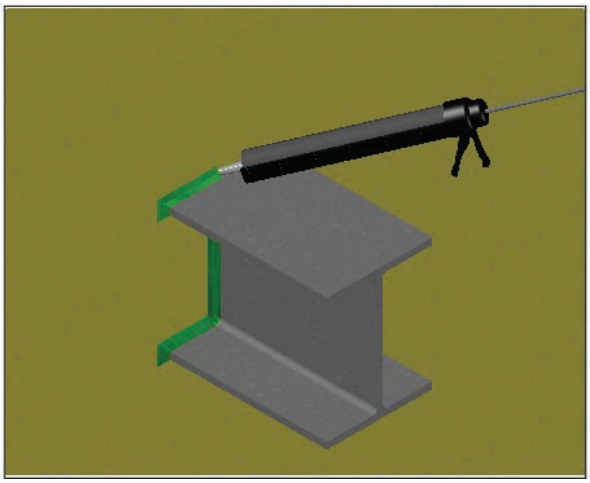


STEP 3: To ensure seal, apply AIR-SHIELD LIQUID FLASHING over penetration and spread continuously around the penetration, 3" (76.2 mm) in all directions, for proper seal of AIR-SHIELD SMP.



OTHER PENETRATIONS

STEP 1: Line the penetration at the sheathing with AIR-SHIELD LIQUID FLASHING to seal up the gaps.



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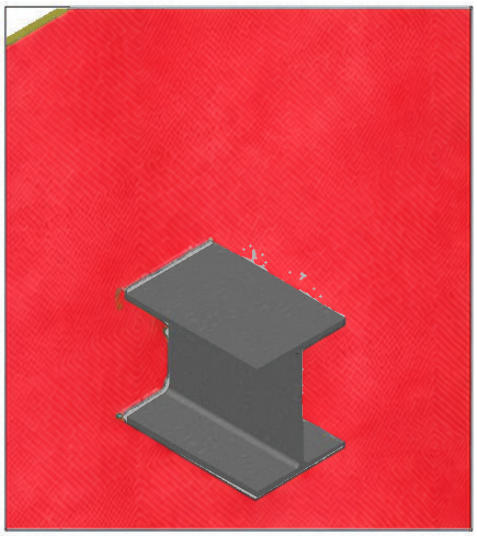
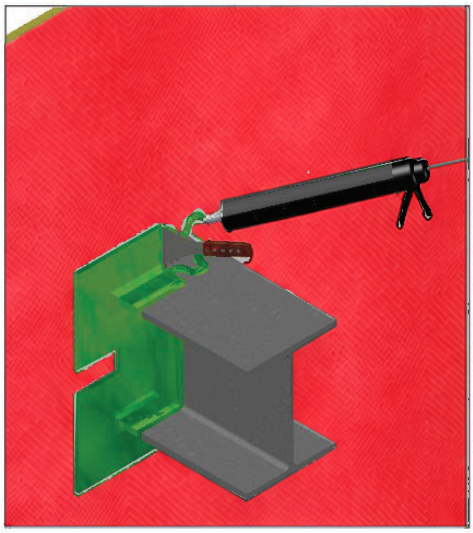
STEP 2: Lay sheet of AIR-SHIELD SMP over sheathing.

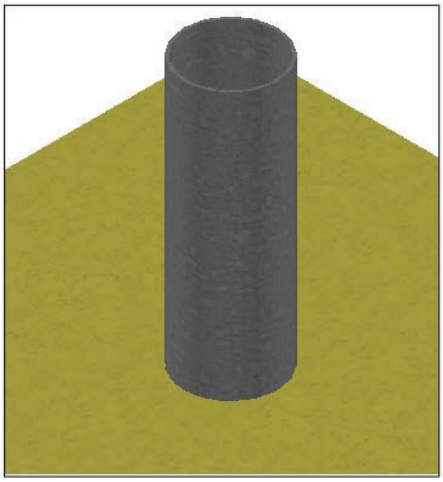


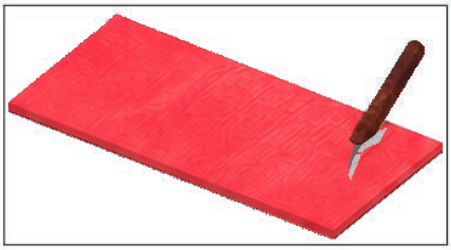
STEP 3: To ensure seal, apply AIR-SHIELD LIQUID FLASHING over penetration and spread continuously around the penetration for proper seal of AIR-SHIELD SMP.

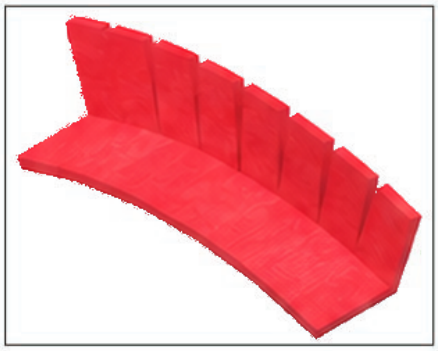


The following procedure shows the step-by-step procedure for the use of AIR-SHIELD SMP sheet membrane for the detailing of pipe penetrations. This is an alternate method to the use of AIR-SHIELD LIQUID FLASHING.

STEP 1: Prepare AIR-SHIELD SMP membrane for application by cutting slits [minimum 2.5" (63.5 mm)] down membrane.







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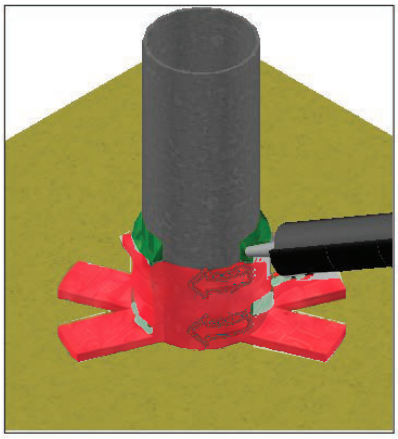
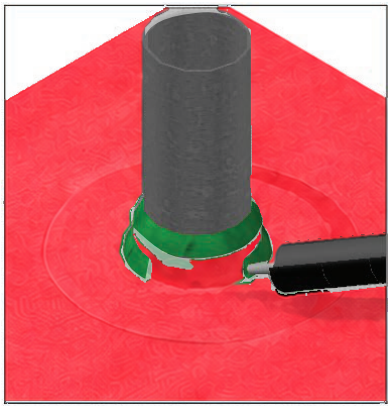
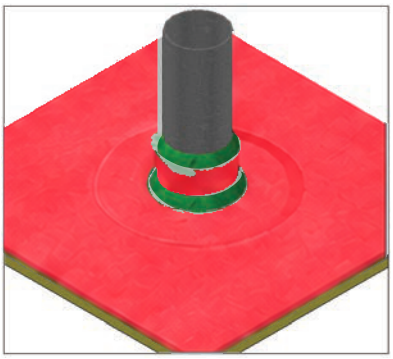
STEP 2: Apply AIR-SHIELD SMP membrane around penetration, then followed by full sheet of AIR-SHIELD SMP sealed at penetration with bead of AIR-SHIELD LIQUID FLASHING for complete barrier.



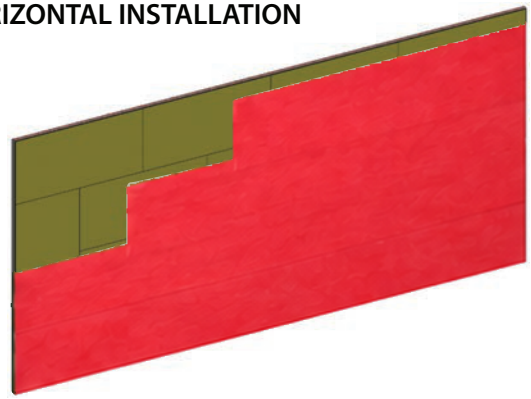




INSTALLATION OF AIR-SHIELD SMP SHEET MEMBRANE

AIR-SHIELD SMP should be installed with a hand roller and stiff brush to create a continuous and effective bond with the substrate. Always install with the upper courses lapped over lower courses, in a shingle fashion. All horizontal and vertical overlaps should be a minimum of 2 ½" (63.5 mm).

HORIZONTAL INSTALLATION



STEP 1: Snap chalk line for guidance.

STEP 2: Pre-cut material to required length.

STEP 3: Roll cut length of membrane with release paper outwards.

STEP 4: Starting at the corner, peel back release paper by approximately 6" (152.4 mm).

STEP 5: Fold release paper back and using hand roller or stiff brush, lightly apply the exposed adhesive surface to the prepared substrate.

STEP 6: Remove release paper only as membrane is being applied.

STEP 7: Starting in the middle, use hand roller or stiff brush to smooth out any air bubbles, releasing the air to each side.

STEP 8: Overlap subsequent courses of membrane a minimum of 2 1/2" (63.5 mm).

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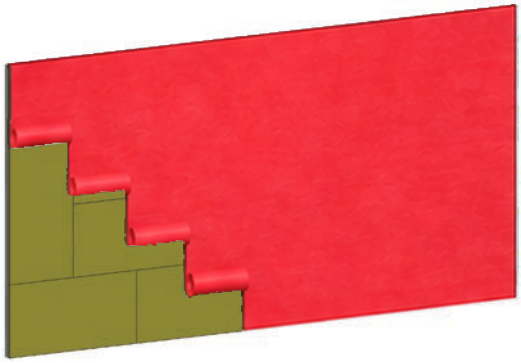
VERTICAL INSTALLATION



STEP 1: Snap chalk line for guidance.

STEP 2: Pre-cut material to required length.

STEP 3: Roll cut length of membrane with release paper outwards.

STEP 4: Starting at the corner, peel back release paper by approximately 6" (152.4 mm).

STEP 5: Fold release paper back and using hand roller or stiff brush, lightly apply the exposed adhesive surface to the prepared substrate.

STEP 6: Remove release paper only as membrane is being applied.

STEP 7: Starting in the middle, use hand roller or stiff brush to smooth out any air bubbles, releasing the air to each side.

STEP 8: Allow rest of rolled up material to drop down - with release paper still attached. Check for proper alignment. When aligned, use hand roller or stiff brush across the entire adhered section.

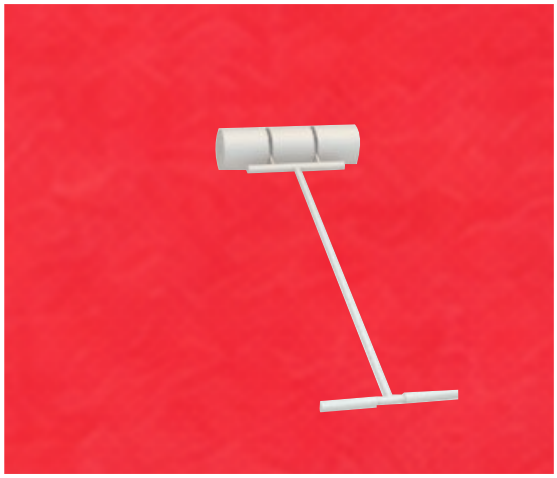
STEP 9: Drop roll down, pulling off release paper.

STEP 10: Smooth out air bubbles with stiff brush/roller.

STEP 11: Overlap subsequent courses of membrane a minimum of 2 1/2" (63.5 mm).

IMPORTANT

Failure to roller the membrane effectively may result in poor adhesion to the substrate. Poor adhesion may result in air pockets (bubbles) appearing, especially when AIR-SHIELD SMP is facing into direct sunlight. To remedy this, roller over the bubbles ensuring a proper bond to the substrate is achieved.



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