



Thermoplastic Single Ply and Multi-Ply Roofing Systems

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FLEX SELF-ADHERING REINFORCED TPO MEMBRANE

Membrane Application

- 1) Flex Self Adhering TPO Membrane (SAM) is a heat-weldable single-ply thermoplastic polyolefin (TPO) sheet designed for fully adhered new roof construction and re-roofing applications.
- 2) Flex (SAM) is nominal 45-mil or 60-mil reinforced TPO membrane laminated to an elastomeric pressure-sensitive adhesive.
- 3) Flex Self Adhering TPO Membrane (SAM) is manufactured in roll sizes of 5' or 10' wide and 50' or 100' lengths.
- 4) Flex ISO polyisocyanurate insulation board is mechanically attached or adhered to the deck with Flex Deck Insulation Adhesive.
- 5) The membrane is positioned onto the substrate and adhered with the factory applied adhesive. The sheets are overlapped approximately 2" along the length of the roll. The lap is sealed by the hot air welding method.
- 6) **CAUTION** The installation must be performed when the ambient air temperature is 50°F or higher.

Approved Substrates

- 1) Flex ISO II or ISO III polyisocyanurate roof insulation board minimum thickness of 1".
- 2) DensDeck Prime or DensDeck DuraGuard roof cover board 1/4", 1/2", 5/8" thickness.
- 3) CDX Plywood minimum of 15/32" thick.
- 4) Oriented Strand Board (OSB) minimum of 7/16" thick

Installing Membrane

- 1) The Flex Self Adhering TPO Membrane (SAM) may only be installed when the ambient air temperature is 50° F or warmer.
- 2) The substrate to which the membrane is to be applied must be dry and very clean. Clean the substrate prior to placing the membrane with a broom or a leaf blower.
- 3) Roll out the Flex SAM TPO Membrane and allow the sheet to relax.
- 4) Fold the membrane in half along the length of sheet to expose the underside of the membrane covered with the release paper.
- 5) The release paper is slit in the center of the membrane to facilitate removing the lining. Start removing the release paper from the center to the edge of the membrane.

CAUTION

A static electric charge may develop when removing the poly release liner from the elastomeric pressure sensitive adhesive on the back of the membrane sheet. To avoid the possibility of ignition, lids must be closed on any flammable solvent-based adhesives and a fire extinguisher should be readily available.

- 6) Carefully roll the self adhering membrane onto the substrate avoid wrinkling the sheet.
- 7) Roll the membrane with a heavy segmented roller.
- 8) Repeat the process with the other half of the sheet.

Hot Air Welding

- 1) The hot air welding process utilizes the same equipment and techniques as welding the standard Flex TPO Plus Membranes.
- 2) A selvedge edge is manufactured along the length of one side of the membrane and is free from adhesive. This selvedge edge is placed over the non-selvedge edge of the adjacent sheet approximately 2". An adequate hot air weld is a minimum of 1 1/2" in width.
- 3) The membrane rolls should be placed on the roof to provide for shingling of the seams to avoid bucking water.
- 4) The ends of the rolls are butted together and overlaid with Flex TPO Plus 6" Trim strip hot air welded over the joint.
- 5) All edges of the trim strip are completely welded to the field membrane.
- 6) Flex TPO Cut Edge Sealant is installed to the edges of the trim strip.

Flashings

- 1) All walls or vertical surfaces must be primed with Flex HP-250 Primer prior to installing Flex Self Adhering TPO Membrane.
- 2) The field membrane is secured at the base of all walls with Flex plates and fasteners or Flex Termination Bar.
- 3) The selvedge edge of the flashing membrane must over lap the adhered field membrane and minimum of 4" and be completely hot air welded to the field membrane.
- 4) Vertical joints are completed by overlaying with Flex TPO Plus 6" Trim strip hot air welded over the joint.