



Thermoplastic Single Ply and Multi-Ply Roofing Systems

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FLEX THERMOPLASTIC POLYOLEFIN (TPO) ROOF MEMBRANES ADHERED SYSTEMS

Approved Substrates and Deck Requirements

The following roof decks/substrates are approved for the installation of Flex TPO Plus adhered roof systems in areas where the average wind speeds are equal to or less than 55 mph and the height of the building does not exceed 250'.

1. Steel Decks 22 gauge or heavier with a minimum pullout resistance of 360 pounds per fastener.
2. Steel Decks lighter than 22 gauge with a minimum pullout resistance of 300 pounds per fastener.
3. Structural Concrete minimum compressive strength 3000 psi., with a minimum pullout resistance of 800 pounds per fastener.
4. Wood Plank (3/4" min.), CDX Plywood (15/32" min.) with a minimum pullout resistance of 360 pounds per fastener.
5. OSB (oriented strand board) min. 7/16" thick with a minimum pullout resistance of 250 pounds per fastener.
6. Gypsum Deck with a minimum pullout resistance of 300 pounds per fastener.
7. Cementitious Wood Fiber Deck with a minimum pullout resistance of 225 pounds per fastener.
8. Lightweight Insulating Concrete with a minimum compressive strength of 225 psi.

The following roof decks/substrates are approved for direct application of the Flex TPO Plus adhered roof systems.

NEW CONSTRUCTION

1. Structural Concrete with a minimum compressive strength 3000 psi.
2. Lightweight Insulating Concrete with a minimum compressive strength of 225 psi. New Construction only. Flex Insulvents are required to be installed at a minimum of 1 vent per 2000 square feet of roof area except on installation where the lightweight insulating concrete was poured over a slotted steel deck.
3. Plywood (min. 15/32") or OSB (min. 7/16")
4. Gypsum

REROOF/RECOVER

1. Existing Smooth Surface Built Up Roof
2. Existing Built Up Roof with a Mineral Surface Cap Sheet
3. Existing Modified Bitumen Roof

Note: Direct application of the Flex TPO Plus Adhered Membrane over existing BUR or Modified Roofing may result in discoloration of the membrane. Installations that are aesthetically critical should be installed over an approved cover board.

REROOF/TEAR OFF TO ANY DECK

1. Approved Flex ISO Insulation Board
2. Approved DensDeck Cover Board
3. Approved OSB Board

INSULATION SECUREMENT

Structural Concrete, 22 gauge or heavier Steel, and 3/4" min. thick wood plank.
Insulation Board placed in a single layer or as the top layer and attached to the deck.

1. Flex ISO 1 1/2" thick - 10 Flex Fasteners and 3" Insulation Plates per 4' x 8' Board.
2. Flex ISO 2" thick - 8 Flex Fasteners and 3" Insulation Plates per 4' x 8' Board.
3. Dens Deck 1/4" or 1/2" thick - 12 Flex Fasteners and 3" Insulation Plates per 4' x 8' Board.
4. Dens Deck 5/8" thick - 8 Flex Fasteners and 3" Insulation Plates per 4' x 8' Board.
5. OSB Board - 17 Flex Fasteners and 3" Insulation Plates per 4' x 8' Board.

All other approved insulation or cover boards require attachment to the deck at a minimum rate of 1 Flex Fastener and 3" Insulation Plate per 2 square feet or 16 fasteners per 4' x 8' board.

OPTIONAL INSULATION SECUREMENT

Approved Insulation Board may also be adhered to the appropriate substrates by the following components.

1. Hot Steep Asphalt
2. Flex Deck Insulation Adhesive
3. Flex OlyBond Adhesive

REROOF/RECOVER

Prior to installing insulation or cover boards the existing roof covering must be prepared in the following manner.

1. Existing Gravel Surfaced BUR. Power Broom surface to remove all loose gravel. Existing roof material must be inspected and all wet material removed and replaced with new insulation.
2. Existing Single Ply Membrane. Slice the existing membrane into sections no larger than 10' x 10'.
3. Spray on Polyurethane Foam. Remove existing roof covering completely to structural deck.

Contact Flex Technical Service for information regarding the installation of Flex TPO Plus adhered roof systems in areas where the average wind speeds are greater than 55 mph and the height of the building exceeds 250'.