



Thermoplastic Single Ply and Multi-Ply Roofing Systems

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FLEX METAL ROOF RETROFIT

Metal Roofing is often considered a good choice for a roof covering. Lower installation costs, hail and fire resistance are a few of the benefits associated with a metal roof. However as a metal roof system weathers and ages it becomes increasingly difficult to maintain its waterproofing integrity. Metal roofs expansion and contraction with temperature changes can result in seam and detail flashing leaks which become increasingly difficult to repair. Fastener failure and rusting are other maintenance issues that become a frequent cause of water infiltration and interior building damage as the roof continues to age.

Historically there have been limited options for a solution to a leaking metal roof system. The seams and exposed fasteners could be treated with fabrics and mastics and a specialized roof coating is applied over the existing metal. The existing metal roofing could be covered with a sprayed on polyurethane foam system which also requires a specialized coating be applied to the foam for waterproofing. Coatings require frequent maintenance and upkeep and must be reapplied on a regular basis. The final option was to replace the old metal roofing with new metal roofing, which is labor intensive and places the interior of the building at additional risk to damage during the removal process.

A Flex Cool Roof Membrane offers a cost effective and visually attractive solution to the leaking metal roof replacement problem. A Flex Metal Roof Retrofit roofing system offers a long term, energy efficient, and low maintenance alternative to traditional metal repair, coatings or replacement. The lightweight insulation and Flex Membrane White Reflective Roof System is designed to be installed directly over the existing metal roof. The end result is an attractive conversion of a rusty, leaking metal roof with a low emissivity rating and a minimum in energy saving insulation value into an Energy Star and CRRC accepted Cool Roof.

The Flex Metal Roof Retrofit roofing systems can be installed as an adhered or mechanically attached roof system. The installation is performed with a minimum of disruption to the buildings normal activity and follows a few easy steps.

- 1) Solid wood blocking is installed between the metal roof flutes at the eave edge and gable edges of the building and at the base of all roof penetrations. The wood shall be installed to be flush with the top edge of the flute. The wood blocking allows for solid fastening of Flexclad Metal Edgings and Flashing or Flex Architectural Metal Edge Systems.
- 2) An approved roof insulation board is loose laid in the space between the existing metal roof flutes and the space is filled to the top of the flutes.
- 3) An approved roof cover board or Flex Insulation Board is mechanically attached with appropriate Flex Screws and Plates to the existing metal roof.

- 4) A new Flex Membrane Roof System is installed either adhered or mechanically attached over the cover board or insulation board.
- 5) A Flex Membrane edge metal system is installed at the eave and gable edges of the new roof to complete the system.

The Flex Roof Membrane is a thermoplastic material and all the field seams and flashing seams are hot air welded in place. Hot air welded seams have long been recognized as the strongest roof seam available and will remain intact for the lifetime of the roof membrane. There are no glues, tapes or caulking to fail and create a maintenance issue a few years after being installed.

The Flex Roof Membranes have undergone extensive third party testing. The Flex Roof Membranes are approved by Underwriters Laboratories for a Class A fire rated roof assembly. The Flex Roof Membranes have been tested and approved for wind uplift pressures equal to a Factory Mutual Class 1-150 rating. The Flex Roof Membranes have been tested and passed the State of Florida impact resistance from windborne debris requirement for Hurricane Protection Areas.

The new energy efficient roof system is approved for a variety of Flex Membrane Roof Warranty options. Flex has been manufacturing high quality thermoplastic roof membranes for over twenty years. As a result of Flex's manufacturing experience and the proven long term watertight performance of the Flex Roof Membranes, Flex provides a roof system warranty for approved assemblies. The Flex Roof System Warranties are available for 10, 15 and 20 years based on the Flex Roof System components and the location of the building.