



# VERSIWELD® ROOFING SYSTEMS MAINTENANCE AND REPAIR

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# VERSIWELD ROOFING SYSTEMS MAINTENANCE AND REPAIR

## A. INTRODUCTION

Generally, the VersiWeld Roofing Systems are warranted up to 5, 10 or 15 years. These warranties, in the event of a leak, will cover the cost of labor and material to correct problems in the roofing system that are caused by faulty workmanship or a Versico supplied product.

In many cases, the VersiWeld Roofing System is installed in conjunction with other products (not manufactured or marketed by Versico) or terminated to building components which may fail and cause a leak. Such a failure is excluded from the Versico warranties.

Periodic maintenance to the roofing system will help to address those locations where moisture could infiltrate and cause damage. It is imperative that the building owner recognizes the importance of preventative maintenance in an effort to increase the life expectancy of the roofing system beyond the warranty period.

## B. PREVENTATIVE MAINTENANCE

The following is a list of general care and maintenance requirements for VersiWeld Roofing Systems. These maintenance items will help attain maximum performance from the roofing system.

### 1. General Care and Maintenance

- a. **Provide proper drainage.** Keep the roof surface clean of leaves, twigs, paper or accumulated dirt at drain areas to avoid clogged drains. Excessive ponding of water on the surface of the membrane will increase the probability of moisture entering the structure in the event of a puncture or cut in the membrane.

- b. **Avoid degrading the membrane.**

**Do not expose the membrane** to the following materials due to possible degradation of the membrane:

- 1) Liquids containing petroleum products
- 2) Solvents
- 3) Grease used for lubricating roof top units
- 4) Oils (new or old) used for air conditioning or compressor units

5) Kitchen wastes or other animal fats

6) Chemicals

Catch pans and proper drainage of these pans or other means of containment may be used for membrane protection. Prolonged exposure to these materials will cause swelling and possible degradation of the membrane if spills are not removed.

Versico may be contacted to identify specific affects of these materials on the membrane.

- c. **Limit foot traffic.** Unprotected areas of the roofing membrane are more susceptible to damage from reoccurring foot traffic. Care must be used to avoid damage to the membrane.

**CAUTION:** The roofing membrane is slippery when wet. Versico recommends the placement of walkways to and from all areas needing maintenance. Exercise caution when not walking on walkways, particularly while walking on Versiweld membrane since ice or frost build up may not be as visible as it may be on the membrane surface.

- d. **Exercise care with tools and equipment** to avoid puncturing the membrane when it is necessary for workers to be on the roof to service rooftop equipment, e.g., HVAC units, antennas, etc.

**When servicing** units, care should be taken when placing metal doors, lids, pans, or sharp objects on the membrane surface.

**When moving** units or equipment on roofs, avoid overloading and membrane damage by installing smooth plywood over the membrane prior to moving the equipment.

- e. Avoid damaging the membrane if the removal of snow is necessary. Use plastic shovels and pay particular attention when working around curbs or other areas where wall flashing can be damaged. Snow blowers and shovels with sharp edges must not be used.
- f. Exercise care when painting walls (above the flashing) or other rooftop equipment with oil based paint. Oil based paint, when in contact with the membrane, may cause degradation.
- g. Remove all debris (such as, glass, bolts, nails, screws, metal shavings, etc.) and any other material that may promote punctures or cuts to the membrane.
- h. Remove all spills of material which may degrade the membrane (such as solvent based materials, oil based paint, etc.).

## 2. Periodic Inspections

A periodic inspection program should be established by the building owner. Roof inspections should be conducted by qualified personnel, beginning when the roof is completed and continuing at least twice a year thereafter, preferably, in the spring and the fall.

The **inspection** should concentrate on "**high risk**" areas such as roof perimeters, drains and around all rooftop equipment, as well as general inspection of the entire roofing system.

Periodic inspections should also include the examination of the roof deck from the underside for evidence of leaks, deteriorated decking, structural cracks, or movement and other deficiencies. Parapets and edgings should also be examined for evidence of cracking, deterioration and moisture infiltration.

In addition to the scheduled semi-annual inspections, roof inspections should also be conducted whenever any of the following conditions occur:

- a. **Exposure of the roof to severe weather conditions**, such as strong winds, hail or long continued heavy rain.

**Examine the roof** for severely ponded conditions, broken pavers, displaced pavers or gravel, debris, and any other damage to the building components that may allow moisture to infiltrate. The membrane should also be examined in areas where damages have been identified for punctures, tears or loose fasteners.

- b. **After repair or replacement of rooftop equipment**, and at any other time when the roof may become exposed to activities of other trades where damages may occur.

**Examine the roof** for spills, debris, sharp objects, membrane punctures, and possible delamination on adhered roofing systems caused by constant foot traffic.

- c. Roof inspection records should be initiated during the inspection process and be included with the historical records for the building for future reference.

## C. LEAK INVESTIGATION

1. On metal decks, it is important to identify the direction of the deck flutes and deck slope. Moisture may infiltrate through the roofing system and migrate in the lower flutes of the deck and leak inside the building in low areas.
2. On concrete decks, or on projects where the existing roofing material is left in place, some leaks may be as a result of moisture entrapment at the original time of installation.
3. On poorly insulated roofing assemblies, some reported leaks may be the result of condensation; therefore, it is important to determine the leak location and frequency.

4. Begin leak investigations by conducting a thorough, visual inspection of the general location on the roof where leaks have been detected inside the building.
  - a. **Inspect** field seams, areas of ponded water (if the roof is dry at the time of investigation, areas of ponded water can be identified by accumulated residue on the membrane).
  - b. **Examine** lower areas of the roof for moisture beneath the membrane (soft insulation can be detected when walking on the membrane).
  - c. **Check** areas around mechanical rooftop equipment, drains, gravel stops, curbs, expansion joints, pipes, etc. to identify cuts, punctures or damaged field seams.
  - d. **Explore** the condition of metal flashing (i.e., edging, coping, expansion joint covers, etc.) for improperly sealed joints.
5. When a visible source of the leak has not been identified, wet the membrane at the anticipated leak area with water. Use a squeegee to remove the excess water. As the membrane dries, small cuts or tears will remain wet on the membrane.

#### D. EMERGENCY REPAIRS (TEMPORARY REPAIRS)

**Repairs should only be performed by qualified workers. Emergency repairs required to provide immediate protection from water infiltration may be performed by the building owner; however, permanent repairs must be completed by a Versico Authorized Roofing Contractor when weather conditions permit.**

**Use** Versiweld Cut-Edge Sealant to make temporary repairs. Notify Versico of this action in writing.

**Do not use roof cement** to repair or install the membrane. Roof cement contains petroleum products which degrade the membrane.

##### 1. Wet Surface Emergency Repairs

- a. Clean the membrane of the dirt film which may have accumulated on the surface.
- b. Remove as much water as possible.
- c. Clean the membrane surface around the cut or tear with white gas, alcohol or an alcohol based solution, such as, auto windshield washing fluid.

White VersiWeld membrane must be thoroughly cleaned with no streaking.

- d. Apply VersiWeld Cut-Edge Sealant to the VersiWeld membrane over the cut area. If all water has been removed, allow the previously applied cleaner to dry prior to applying the sealant.

## 2. Dry Surface Emergency Repairs

- a. Clean the membrane of the dirt film by scrubbing well with a low sudsing soap and water. Rinse the area with clean water and allow to dry.
- b. Clean the membrane surface around the cut or tear with white gas, alcohol or an alcohol based solution, such as, auto windshield washing fluid.

White VersiWeld membrane must be thoroughly cleaned with no streaking.

- c. Apply VersiWeld Cut-Edge Sealant to VersiWeld membrane over the cut area.

## E. PERMANENT REPAIRS

**Permanent repairs must be completed by a Versico Authorized Roofing Contractor. Versico must be contacted by the building owner to coordinate all permanent repairs.**

### 1. Membrane Cleaning

For VersiWeld TPO Roofing Systems, a solvent cleaner alone is not adequate for cleaning membrane after exposure to weather conditions since a thin layer of dirt or debris begins to adhere to the membrane surface. The following procedures must be used prior to cleaning the membrane.

- a. Excessive dirt and water must be broomed free from the area to be repaired.
- b. Using a scrub brush, warm water and a low sudsing soap, such as Spic-N-Span, Tide or Lestoil (approximately 1/4 - 2 cup of cleaner to 1 gallon of water), scrub the membrane to break up the dirty film.

Note: An electric driven floor scrubber with a bristle type brush approximately 3/4 inch to 1-1/2 inches in length is recommended.

- c. Rinse with clean water and allow to dry.
- d. Follow repair procedures included in this section to complete the repair.

#### e. Cold Weather Cleaning

When the membrane surface temperature is below 32° Fahrenheit, soap and water cleaning may not be possible due to potential freezing of water.

1. Denatured alcohol may be added to water as required to avoid freezing. Depending on temperatures, a maximum recommended quantity for very low temperature is one part denatured alcohol with two parts water. This mixed solution can be used for the procedure of scrubbing with soap and rinsing.
2. Denatured alcohol may also be used full strength to assist in drying a wet seam area.
3. Denatured alcohol is FLAMMABLE and POISONOUS. Follow all safety precautions listed on the container including protective gloves and goggle or face shields.

## 2. Repair Procedures - VersiWeld TPO Roofing Systems

Repairs to cuts and tears in the membrane must be accomplished by seaming a membrane section over the affected area.

- a. Clean the membrane as outlined previously to remove dirt and contaminants.
- b. When the repair membrane is TPO membrane, follow standard membrane heat-welding procedures.

## F. WIND DISTURBANCE

The Membrane System Warranties offer wind protection up to 55 mph peak gusts which is measured at 10 meters above ground level. Certain Total System Warranty projects may be warranted up to peak gust wind speeds exceeding 55 mph. When wind disturbance is encountered, Versico must be contacted to investigate the causes and to offer alternate enhancements.

Depending on the type of roofing system, the wind impact will vary.

### 1. Fully Adhered Roofing Systems

If membrane delamination, insulation facer delamination or loss of insulation attachment (mechanical attachment or hot asphalt) occurs, Versico must be contacted to evaluate the situation and determine the causes.

- a. **Major delamination** may be corrected by ballasting, if building structure permits, or by total membrane and underlayment replacement in the affected area. Contact Versico for requirements.

### 2. Mechanically Attached Roofing System

Correction, repairs or enhancements to Mechanically Attached Roofing Systems will greatly vary depending on original roof design, wind zone, building height and any large openings in the building. Versico must be contacted to evaluate the situation and determine a solution or enhancement.

## **G. LOOSE WALKWAYS**

If loose walkways are observed, the membrane must be cleaned as outlined previously. Reweld the VersiWeld Walkway in place.

**Note:** Walkways are a maintenance item and are not warranted by Versico.

## **H. ROOF ALTERATION**

1. To assure the continuation of the Membrane System Warranty, modification to the roofing system (addition of units, pipes, satellite dishes, etc.) should be communicated to Versico to review the proposed details and determine compliance with Versico's specification prior to proceeding with any alteration.
2. Coordinate the installation with the Versico Authorized Roofing Contractor so the tie-in will be in accordance with Versico's specifications and details.

Prior to proceeding with any roof alteration, Versico must approve the proposed details.

- a. The approval process begins upon receipt of a shop drawing which outlines those locations where the alteration will take place. Along with the shop drawings, the Versico Authorized Roofing Contractor or the building owner must notify Versico of the proposed alteration in writing and identify the project name, location, and warranty number which was originally assigned by Versico.
- b. At Versico's discretion, an inspection may be required for a charge to ensure compliance with the current published VersiWeld Specifications and Details.

**This section represents the applicable information available at the time of its publication. Owners, Specifiers and authorized roofing contractors should consult Versico or their Versico Representative for any information which has subsequently been made available.**

**Review the appropriate Versico warranty for specific warranty coverage, terms, conditions and limitations.**

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