

# X-TENDA COAT

## *100% Acrylic Fluid Applied Elastomeric Coating System*

August 2008

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## PART 1 – GENERAL

### 1.01 DESCRIPTION

This Versico X-Tenda Coat Coating System was developed to extend the life of aged single-ply roof membranes as well as existing built-up and metal roof assemblies, by forming a uniform waterproofing elastomeric seal that enhances normal weathering and aging and restores watertight performance. It is available in a variety of standard and special order colors.

The coating is spray or roller applied in a minimum of two coats after the membrane has been washed, primed and thoroughly rinsed. Proper preparation of the field seams and flashings is required prior to application of the X-Tenda Coat Coating System. Newly installed single-ply roof membranes should be aged for 60 days prior to applying the X-Tenda Coat Coating System.

### 1.02 QUALITY ASSURANCE

- A. The coating shall show no deleterious effects (i.e. - no surface chalking or cracking, no delamination and no color fade) after 5000 hours of testing in accordance with ASTM G 23.
- B. X-Tenda Coat Coating shall show no more than 0.3% weight increase when measured with a moisture meter after being placed in a pressurized test chamber producing 5" of water pressure, equivalent to 100 mph wind pressure for a period of 40 hours continuous testing in accordance with Federal Specification TTC-555B.
- C. The coating system must be applied by a Versico Authorized Roofing Applicator in compliance with Versico's specification and specific written approval granted for the project. There must be no deviations made without the **PRIOR WRITTEN APPROVAL** of the Versico Warranty and Review Group.
- D. After completion of the coating application and upon receipt of the "Daily Quality Control Form," an inspection shall be conducted by a Technical Representative of Versico to ascertain the Versico X-Tenda Coat Coating System has been applied according to Versico's published specifications applicable at the time of bid.
- E. The application of this coating system must be in accordance with Versico's estimated application rate for required dry film thickness, published application instructions and Material Safety Data Sheets.

### 1.03 SUBMITTALS

- A. The **Application for 5 or 10-Year X-Tenda Coat Coating Warranty** must be completely executed and submitted for Versico's review and approval prior to application. **As-Built projects are not permitted.**

- B. A **Daily Quality Control Form** monitoring application activities shall also be completed during coating application and forwarded to Versico upon completion. The form should include information pertaining to wet-mil thickness, the quantity and batch numbers of the material applied and total square feet coated recorded daily.

#### **1.04 PRODUCT DELIVERY, STORAGE AND HANDLING**

Materials shall be handled and stored pursuant to the Manufacturer's instructions and all applicable safety regulations. Contaminated, damaged or unsealed materials, or materials not conforming to the specified requirements shall not be used in the installation.

- A. Deliver materials to job site in the original, unopened containers labeled with the manufacturer's name, brand name and installation instructions.
- B. Do not allow the materials to freeze.
- C. Do not thin the X-Tenda Coat Coating
- D. Job site storage temperatures in excess of 90°F may affect product shelf life. Do not store sealed containers in prolonged sunlight.

#### **1.05 JOB CONDITIONS/CAUTIONS AND WARNINGS**

Install all materials in strict accordance with manufacturer's published safety, weather and temperature precautions. Take necessary measures to protect unrelated work and other adjacent surfaces from overspray or spillage. Refer to the Material Safety Data Sheets (MSDS) and Technical Data Bulletins (TDB) for additional information concerning actions to be taken for spills and run-off into protected streams.

- A. Store Versico's X-Tenda Coat Coating, Universal Primer and Prime and Seal on job site between 50°F and 90°F.
- B. Do not apply X-Tenda Coat Coating or components when the ambient or surface temperature is below 50°F or above 140°F.
- C. Do not apply if surface moisture is present, when the dew point is within 5°F of the surface temperature or when there is a possibility of temperatures falling below 32°F within a 24-hour period.

**1.06 WARRANTY**

- A. A **5 or 10 year System Warranty** is available for a charge. Refer to the following chart for applicable dry-mil thickness.

| <b>5 or 10 Year SYSTEM Warranty</b>  |                          |             |              |                         |                  |                 |                   |             |
|--------------------------------------|--------------------------|-------------|--------------|-------------------------|------------------|-----------------|-------------------|-------------|
| <b>Aged Membrane 1 year or older</b> |                          |             |              |                         |                  |                 |                   |             |
| Roof System                          | Universal Cleaner/Primer | EPDM Primer | Metal Primer | Prime-and-Seal Basecoat | X-Tenda Basecoat | X-Tenda Topcoat | Dry-Mil Thickness |             |
|                                      |                          |             |              |                         |                  |                 | 5-Yr. Warr        | 10-Yr. Warr |
| EPDM                                 |                          | X           |              |                         | X                | X               | 20                | 26          |
| TPO/Hypalon                          | X                        |             |              |                         | X                | X               | 20                | 26          |
| PVC                                  | X                        |             |              | X                       |                  | X               | 20                | 26          |
| Metal                                | X                        |             | X            | X                       |                  | X               | 20                | 26          |
| Smooth Surface BUR, APP or SBS       | X                        |             |              | X                       |                  | X               | 28                | N/A         |

The issuance of this warranty is contingent upon Versico’s review and approval of the “Application for X-Tenda Coat Coating Warranty,” “Daily Quality Control” forms and a final inspection by a Versico Technical Representative.

- B. A **5 or 10 year Material Warranty** is available from Versico. Refer to the following chart for required cleaner/primer requirements and dry-mil thickness:

| <b>5 or 10 Year MATERIAL Warranty</b> |                          |             |              |                         |                       |                      |                   |             |
|---------------------------------------|--------------------------|-------------|--------------|-------------------------|-----------------------|----------------------|-------------------|-------------|
| <b>Aged Membrane 1 year or older</b>  |                          |             |              |                         |                       |                      |                   |             |
| Roof System                           | Universal Cleaner/Primer | EPDM Primer | Metal Primer | Prime-and-Seal Basecoat | X-Tenda Coat Basecoat | X-Tenda Coat Topcoat | Dry-Mil Thickness |             |
|                                       |                          |             |              |                         |                       |                      | 5-Yr. Warr        | 10-Yr. Warr |
| EPDM                                  |                          | X           |              |                         | X                     | X                    | 16                | 20          |
| TPO/Hypalon                           | X                        |             |              |                         | X                     | X                    | 16                | 20          |
| PVC                                   | X                        |             |              | X                       |                       | X                    | 16                | 20          |
| Metal                                 | X                        |             | X            | X                       |                       | X                    | 16                | 20          |
| Smooth Surface BUR, APP or SBS        | X                        |             |              | X                       |                       | X                    | 24                | 28          |

- C. An ENERGY STAR® approval with the use of white X-Tenda Coat Coating can be achieved with a minimum dry film thickness of 10 mils.

**PART 2 - PRODUCTS**

**2.01 GENERAL**

The components of the X-Tenda Coat Coating System are to be products of Versico or accepted by Versico as compatible. The installation, performance or integrity of products by others, **when selected by the specifier and accepted by Versico**, is not the responsibility of Versico and is expressly disclaimed by the Versico Warranty.

## 2.02 MATERIALS/RELATED PRODUCTS

- A. **X-Tenda Coat Coating (ASTM D6083)** - A water-based, elastomeric coating of 100% acrylic resins combined with reinforcing laminar pigments, an effective biocide package and non-migrating fire retardants, resulting in durability, weatherproofing, ultraviolet resistance, algae/mildew resistance and fire resistance. The coating is available in standard colors of white or light gray. The light gray X-Tenda Coat is recommended as a basecoat over EPDM, TPO and CSPE roof membranes. The white X-Tenda Coat Coating Systems are eligible for the ENERGY STAR rating. Available in 5-gallon and 55-gallon containers.

### Physical Properties

| TEST                                  | METHOD     | TYPICAL PROPERTIES   |
|---------------------------------------|------------|--|
| % Solids by weight                    | ASTM D2369 | 60% (± 2%)   |
| % Solids by volume                    | ASTM D5201 | 54% (± 2%)   |
| Weight per Gallon                     | ASTM D1475 | 11.8 lbs (1.41 kg/l)   |
| Tensile strength                      | ASTM D412  | 250 psi (+/- 20) @ 75° F (24° C)<br>440 psi (+/- 20) @ 0° F (-18° C) |
| Elongation                            | ASTM D412  | 75° F (24° C) = 300%<br>0° F (-18° C) = 340%                         |
| Hardness, Shore A                     | ASTM D2240 | 60 ± 5   |
| Permeance (perms)<br>20 mils (0.5 mm) | ASTM E96   | 3.0  |
| UV Resistance                         | ASTM G23   | 5,000 hrs  |
| High Temperature Resistance           | ASTM D794  | No age hardening up to 250° F  |

- B. **Prime and Seal Base Coat:** A light gray in color, water-based elastomeric acrylic basecoat used exclusively for PVC, metal, smooth surface built-up and modified bitumen roof systems, prior to application of X-Tenda Coat. Available in 5-gallon and 55-gallon containers.
- C. **Coating-Ready Cover Tape:** An elastomeric, modified butyl rubber, polyester fabric-backed tape required to cover seams with delamination between ½" to 2". Seams with delamination greater than 2" must be repaired with splicing cement and overlaid with QA Cured Coverstrip. The Coating Ready Cover Tape is also recommended as an overlay for non-delaminated seams and is required for projects requesting a 10-year System Warranty. Available in 50' rolls packed 12 per carton.
- D. **EPDM Coating Primer:** A spray applied, water-based wash primer used as a soaking detergent to prepare the surface and increase the bond of the X-Tenda Coat Coating to the EPDM substrate. Available in 5-gallon containers.
- E. **Universal Primer:** This Universal Primer is used as a wash primer to prepare TPO/Hypalon, PVC, metal, and asphaltic-based surfaces for application of X-Tenda Coat Coating System. Available in 1 and 5 gallon containers.
- F. **X-Tenda Coat Metal Primer** – This product will be used primarily for applications over lightly rusted metal deck areas as a rust and stain inhibitor prior to the application of the Prime and Seal Base Coat. The X-Tenda Coat Metal Primer is a single component, latex primer that is blister and stain resistant to prime existing metal roofs prior to coating application. This water-based, medium-viscosity material conforms to all local, state and federal environmental and VOC requirements and is available in 1-gallon cans or 5-gallon pails.

- G. **Versico QA Cured Coverstrip:** A nominal 40 mil black, cured EPDM membrane laminated to a nominal 30 mil cured, pre-applied adhesive tape. Available in 6 and 9 inch widths and 100 feet long rolls used in conjunction with Weathered Membrane Cleaner and HP-250 Primer to overlay delaminated seams and cuts in the EPDM membrane.
- H. **Versico QA Seam Tape:** A 3 or 6 inch wide by 100 foot long splice tape used to reseal open field seams.
- I. **V-150 Primer:** A solvent-based primer used to prepare the surface of EPDM membrane for application of Splice Tape or QA Cured Coverstrip.
- J. **Splice Adhesive:** A high strength, butyl based contact cement, which is used to re-adhere open or lifted seams.
- K. **Weathered Membrane Cleaner:** A clear, solvent based cleaner used to loosen and remove dirt and other contaminants from the surface of exposed EPDM membrane (for repairs) prior to applying V-150 Primer or Splice Adhesive application.
- L. **Other Related Materials** – Refer to the “Products” Section in the Versico Specification Manual for other related materials (i.e., Lap Sealant, Water Cut-Off Mastic, etc.).

## **PART 3 – EXECUTION**

### **3.01 GENERAL**

- A. Coordinate work to avoid conflict with building operations and take necessary measures to protect building site and contents as well as vehicles from coating overspray, spillage, falling objects, etc.
- B. Do not proceed with primer/coating application until all membrane repairs are completed.
- C. Refer to the following attachments:
  1. Attachment I – X-Tenda Coat EPDM Installation Guide
  2. Attachment II – X-Tenda Coat Metal Roof Installation Guide
  3. Attachment III – X-Tenda Coat Smooth BUR/Modified Bitumen Roof Installation Guide

### **3.02 SURFACE INSPECTION**

- A. Inspect roof surface for delamination, punctures, tears or cuts, open or partially opened seams and protruding fasteners. Small tears and cuts or seams delaminated 2" or less may be repaired with Coating-Ready Cover Tape once the membrane surface has been primed, rinsed and allowed to properly dry. Seams delaminated more than 2" must be re-adhered and overlaid with minimum 6" wide QA Cured Coverstrip before priming the membrane surface for coating.
- B. Flashing details must be examined for loose or deteriorated flashing, cuts, tears and open inside or outside corners. Membrane and flashing terminations should be examined at perimeters, roof penetrations and drains to ensure watertight performance. Deficient terminations should be corrected in accordance with the appropriate Versico published detail.
- C. Areas where soft insulation has been detected should be examined further and if necessary core cuts should be taken to determine if moisture is present. Wet insulation, if found, should be removed and replaced with compatible material of equal thickness.

- D. Examine roof surfaces for excessive ponding. Small incidental areas of ponded water will not impact the performance of this coating system; however, in accordance with industry standards, the roofing assembly **should be designed to prevent ponding** of water on the roof for prolonged periods (longer than 48 hours). If necessary, tapered edge strips, crickets or saddles are to be installed where periodic ponding may occur.
- E. Roof surface shall be clean, dry, free of dirt, dust, oil, surface chemicals or other contaminants that may adversely impact coating adhesion.
- F. Complete and forward to Versico the warranty request form, and if necessary include details for Versico's review and approval.

### 3.03 SURFACE PREPARATION

- A. Prior to any repairs, excessive dirt must be cleaned from the surface area using a scrub brush, warm water and low-sudsing soap. If necessary, use an electric driven floor scrubber with a bristle type brush approximately 3/4 to 1-1/2 inches in length is recommended.

**Note:** All **metal surfaces** must be free of rust scale, forming oils, metal slivers, weld slag and other foreign contaminants that may interfere with optimum adhesion. Metal surfaces must be chemically cleaned or blast abraded according to the specific project requirements. Prior to coating over any existing paint or coating, a test area must first be applied to verify compatibility and adhesion.

- B. Remove heavy deposits of dirt, leaves, pine needles and other debris using a broom or air blower. Any rocks, branches or other large foreign objects should also be removed.
- C. Rinse the area with clean water and allow to completely dry. Complete membrane and flashing repairs along with proper terminations in accordance with Versico Specifications.
- D. Apply the **EPDM Coating Primer or Universal Primer** using a hand-pump, compression type sprayer or airless spray equipment at the rate of 500 square feet per gallon.
  - 1. When using a hand-pump sprayer, adjust nozzle to achieve a uniform spray pattern with a 3 to 4 foot arc.
  - 2. When using airless spray equipment, use a .015" to .019" reversible tip with a 40 to 50° fan angle.
- E. Allow applicable **Primer** to stand a minimum of 10 minutes to saturate the membrane surface contaminants.

**Note:** Prolonged contact between the Primer and the membrane, will not adversely impact the performance of the Primer.

- F. Using a minimum 2,000-psi pressure washer, rinse the membrane surface with clean water. **Beginning at the lowest point** of the roof, **work toward the highest point** keeping the pressure washer tip within 12" of the membrane surface. **Once at the highest point, work down with a final rinse** to remove residue from the roof surface.

**Flat Roofs** - work away from and toward roof drains to achieve a double rinse. The coating primers, in a diluted state, are safe to rinse down roof drains and are not harmful to surrounding landscape.

- G. **Prior to application of the "Versico X-Tenda Coat Coating," allow the membrane to dry thoroughly.**

Metal roofs requiring application of X-Tenda Coat Metal Primer must first be treated with Universal Primer as outlined in paragraph 3.03 F. For base and topcoat applications over metal roofs, refer to paragraph 3.04 F.

#### H. **Membrane Repairs Using Coating-Ready Cover Tape**

1. Cut Coating-Ready Cover Tape to desired length with a knife or scissors.
2. Slowly remove release paper backing and press firmly into place, centering tape over crack or seam. Take care to prevent contamination of the butyl adhesive prior to application.
3. Remove any bubbles or buckling by pressing by hand or utilizing a seam roller.
4. Initial bond is immediate. Full bond requires approximately 24 hours.

### 3.04 COATING APPLICATION

- A. Do not apply coating if weather conditions will not permit complete cure (24 hour period) before rain, dew, fog or freezing temperatures occur. Apply coating in the same direction as the prevailing wind and if necessary use protective screens to contain overspray.
- B. Record the overall weather conditions, including surface temperature, surface moisture, ambient temperature, relative humidity and wind velocity at designated time intervals on the Daily Quality Control Report form.
- C. Using a high-pressure compressed air or an air blower, blow all dust, dirt and other contaminants off the roof surfaces.
- D. The X-Tenda Coat Coating must be applied in a minimum of 2 coats. Use a medium-nap roller or airless sprayer to apply the coating. Extend the coating up and over all roof substrates on vent pipes, parapets and other protrusions to terminate a minimum of 3 inches above the substrate, creating a self-terminating flashing, and to provide an aesthetically pleasing appearance

**Note:** The Versico Authorized Roofing Contractor may elect to apply the X-Tenda Coat Coating in more than 2 application coats at a thinner wet film thickness. This will decrease the drying time between applications.

#### E. **Metal roofs-**

1. X-Tenda Coat Metal Primer may be applied by brush or conventional airless sprayer. Depending on the substrate, its surface profile and porosity, approximate application rates will vary. On **galvanized metal or aluminum, 300 square feet per gallon coverage rates** may be achieved.
  2. Prior to application of X-Tenda Coat Metal Primer, **abrade** the existing material to a feathered edge where the surface may have been previously treated.
  3. X-Tenda Coat Metal Primer can be coated with Prime and Seal Base Coat as soon as it is thoroughly dried but not later than **48 hours** past initial application.
- F. To achieve the desired dry film thickness, Versico recommends the application rates as shown on **Attachment I** at the end of this section.

- G. Inspect the roof surface once the base coat is applied for splits, tears or other damage in the membrane surface that may have been missed in the surface preparation process. These areas can be repaired and reinforced using Coating-ready Cover Tape.

| COVERAGE RATES     |                    |                    |
|--------------------|--------------------|--------------------|
| Gallons per Square | Wet Film Thickness | Dry Film Thickness |
| 3/4                | 12 mils            | 6 mils             |
| 1                  | 16 mils            | 8 mils             |
| 1 – 1-1/4          | 20 mils            | 10 mils            |
| 1 – 1-1/2          | 24 mils            | 12 mils            |

- H. Allow the base coat to completely dry prior to application of the finish coat. Apply consecutive coats of X-Tenda Coat Coating in a perpendicular direction to the previous coat.

**3.05 COATING PROBLEMS AND REPAIRS**

The following is a list of conditions that may occur during application and suggested repairs prior to the Acrylic Coating being fully cured.

- A. **Wash-off** (when the X-Tenda Coat Coating is not allowed to cure thoroughly)

Wash-off (chalk-like in appearance) may occur if rain or moisture comes in contact with the X-Tenda Coat Coating during or prior to curing. If wash-off occurs, the affected area must be power washed to remove coating residue prior to reapplying the X-Tenda Coat Coating.

- B. **Snowflaking, Feathering and Spider Webbing**

This is an **appearance** that the finished coating may exhibit when the X-Tenda Coat Coating is applied and the surface reaches freezing temperatures before the coating is fully cured. This normally occurs within a 24-hour period from the time of application. Generally these areas will “self heal” when exposed to heat and sunlight. In the event that they would not self heal, the affected surface must be power washed and Versico’s X-Tenda Coat Coating must be reapplied.

- C. **Lifting**

This wrinkled appearance is caused when freezing of the coating occurs. The coating surface will exhibit extreme wrinkles and have loss of adhesion. These areas will not “self heal” and must be removed, power washed and new coating must be applied.

- D. **Blistering**

Small blisters (approximately 1/8" diameter) that appear in the coated surface. Blisters are caused when the coating is applied to a surface area that has exceeded the recommended application temperature and prevents gases from escaping. Areas where blistering occurs, should be removed by scraping the surface with a putty knife and recoated with X-Tenda Coat Coating. Power washing is not required prior to re-applying the coating.

- E. **Mud Cracking**

The coating is applied too heavy and the surface develops a skin preventing proper curing of the applied coating below causing the surface to crack. Mud cracking typically occurs at overlapping areas

or “knit lines” in the coating process. Areas where mud cracking occurs must be removed by scraping surface with a putty knife, and new X-Tenda Coat applied.

### **3.06 CLEANUP**

- A. Maintain work and work areas in a clean, safe condition at all times during application. Remove excess materials, trash and debris from the jobsite daily.
- B. At the completion of the project, clean area of any spills and containers, and clean up all roofing debris, leaving jobsite in a clean and orderly condition.
- C. Upon completion of the roof coating system, a copy of the completed “Daily Quality Control Form” should be forwarded to Versico to initiate a final inspection by a Versico Field Service Representative.

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**This specification represents the applicable information available at the time of its publication. Owners, specifiers and Versico authorized roofing contractor should consult Versico or their Versico Manufacturer's Representative for any information which has subsequently been made available.**

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

# Attachment I

## X-Tenda Coat EPDM Installation Guide



Priming of the roof membrane can take place 24-48 hours in advance of the coating application. Prior to application of the EPDM coating primer, the surface area should be cleaned of heavy deposits of dirt, leaves, branches, and other debris that may have accumulated on the roof surface.



Apply EPDM coating primer with a hand pump type agricultural sprayer. Application is full strength at the rate of 500sq ft per gallon.



After application, the EPDM coating is allowed to stand for a minimum of 10 minutes. Please note that prolonged contact between the EPDM coating primer and the membrane will not adversely impact the performance of the primer.



Using a minimum 2000 psi pressure washer, rinse the membrane surface with clean water. Rinsing of the membrane shall begin at the low point of the roof working towards the highest point. The tip of the wand should be held 6-12" above the roof surface when rinsing.



Once at the highest point, work back down to the low point with a final rinse to remove residue from the roof surface.



To expedite the drying time and to remove incidental areas of ponded water, squeegee the roof membrane from the high point to the drainage areas.



Once all surface areas are completely dry, membrane repairs and seam overlayment can begin with the Coating-Ready Cover Tape. Broom or blow off the surface areas with a power leaf blower just prior to commencement of Coating-Ready Cover Tape application to remove any airborne debris or dust that may have accumulated on the surface area.



Cut Coating-Ready Cover Tape to the desired length with a utility knife or scissors. Remove release paper backing and press firmly into place, centering tape over cuts or seam overlaps. Remove any bubbles or buckling by firmly pressing with hand or seam-roller.



Repeat process for all areas, including vertical surfaces, that are to receive Xtenda Coat coating. A minimum of 3" overlay should be maintained at intersections of Coating-Ready Cover Tape.



As indicated in the photograph, certain conditions such as curbs, skylights, vent pipes, and other miscellaneous penetrations may require double layers of Coating-Ready Cover Tape to adequately cover repair areas.



Once the roof area is properly prepared with all repairs completed, application of the Xtenda Coat base coat may begin. Refer to precautions listed in Section 3.04 prior to commencement of coating application. The Xtenda Coat coating must be installed in a minimum of 2 separate applications.



Using the provided wet film thickness gauge, periodically check to ensure proper wet film thickness coverage of the X-tenda Coat Coating (minimum one measurement per square). The wet film thickness gauge should be gently inserted into the applied wet coating making sure that the gauge is perpendicular to the surface area. If the desired wet film thickness is not obtained, additional coating should be immediately applied to the affected areas.