



APPLICATION INSTRUCTIONS

VULKEM® AT

Part of the Vulkem® Roofing Series
Single-Component, Low-VOC,
Moisture Cured Coating

1. PURPOSE

- 1.1 The purpose of this document is to establish uniform procedures for installing the Vulkem® AT waterproofing membrane for waterproof roofing applications.
- 1.2 The techniques involved may require modifications to adjust to jobsite conditions. Consult your Tremco Representative for specific design requirements.

2. SCOPE

- 2.1 This document will provide the necessary instructions for the application of the Vulkem AT Waterproofing System to qualify for the manufacturer's warranty. Tremco recognizes that site specific conditions, weather patterns, contractor preferences and membrane detailing may require deviation or alteration from these prescribed installation procedures. When such circumstances and situations exist on a project, Tremco recommends that the local Tremco Sales Representative or Technical Services be contacted for assistance and approval as required.

3. SYSTEM COMPONENTS

- Dymonic 100
- TREMprime VB Plus Primer
- Tremco Epoxy Primer
- Permafab
- Vulkem 191 Primer
- Vulkem 45 SSL White

4. JOBSITE PREPARATION

- 4.1 Cover and protect existing adjacent portions of building and building equipment from damage, discoloration, and spills from the waterproofing materials to be installed.
- 4.2 Mask all surfaces to be protected. Seal joints subject to infiltration by coating materials.
- 4.3 Limit traffic and material storage to areas of the roof that have been protected.
- 4.4 Maintain temporary protection and leave protection in place until all roof coating has been completed.
- 4.5 Ensure compliance with all environmental regulations of authorities having jurisdiction.
- 4.6 Limit all potential spread areas of dust and debris. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas. Remove debris from building roof by chute, hoist, or other device that will convey debris to grade.
- 4.7 Shut down air intake equipment in the vicinity of the install in coordination with the Owner. Cover air intake louvers before proceeding with re-coating work that could affect indoor air quality or activate smoke detectors in the ductwork.
- 4.8 Verify that rooftop utilities and service piping affected by the install have been shut off before commencing installation.
- 4.9 Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecasted.
- 4.10 Do not permit water to enter into or under existing system components that are to remain.
- 4.11 Flashings, blisters, areas of insulation replacement, and other damaged areas must be repaired and allowed to fully cure prior to applying the Vulkem AT system to the entire roof.
- 4.12 Check for adhesion and compatibility of any remaining, tightly adhered, existing coating with Vulkem AT Base Coat. A test application is the best method of determining compatibility with and adhesion to a previously coated surface. Contact Tremco's Technical Department for further information.

5. SUBSTRATE PREPARATION

5.1 Concrete:

- a. Repair, clean, and prepare concrete to sound condition free of grease, oils, coatings, dust, curing compounds and other contaminants.
 - i. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
- b. Concrete Repair: Remove defective concrete and repair honeycombs, cavities, joint cracks, voids and other defects by routing to sound material and patching. Patch all unsound or defective concrete with repair mortar recommended for application and approved by Architect.
- c. Detergent Cleaning: Remove oil, grease smear and asphalt residue with trisodium phosphate. For oil contaminated surfaces, use steam cleaning in conjunction with a strong emulsifying detergent. Rinse thoroughly with potable water.
- d. Mechanical Abrasion: Concrete slabs should be cleaned, roughened and made absorptive by mechanical abrasion. Remove surface laitance and abrade surface to CSP 3-6 in accordance with ICRI Guideline 310.
- e. Testing: Following surface preparation, perform testing to verify concrete substrate is adequate prepared to receive fluid applied roofing.
 - i. Pull Test: Verify that the cleaned surface pulls concrete when tested per ASTM D 4541.
 - ii. Moisture Test: Verify that concrete substrate is visibly dry and exhibits a moisture level of 6% or less using a Tramex Moisture Meter.
- f. Existing Flashing and Detail Preparation: Repair flashings, gravel stops, copings, and other roof-related sheet metal and trim elements. Reseal joints, replace loose or missing fasteners, and replace components that cannot be repaired to weathertight and like-new condition.
- g. Clean substrates of contaminants such as asphalt, sheet materials, dirt, and debris, and prepare for application of re-coating system.
- h. Check for adhesion and compatibility of any remaining, tightly adhered, existing coating with Vulkem AT Base Coat. A test application is the best method of determining compatibility with and adhesion to a previously coated surface. Contact Tremco's Technical Department for further information.
- i. Do not damage metal counterflashings that are intended to remain. Replace damaged metal counterflashings with counterflashings with those of the same material and finish.

5.2 Built-Up Roofing (BUR), Modified Butuminous, and Single-Ply Restoration:

- a. Remove all loose dirt, dust, debris, etc., by mechanical brush, stiff broom, vacuum, and power washing. Power washing must use a pressure washer using no less than 2,000 psi water pressure. All surfaces must be clean and dry. Surfaces exhibiting algae growth must be cleaned with a bleach/water solution and rinsed thoroughly.
- b. Flashings, blisters, areas of insulation replacement, and other damaged areas must be repaired and allowed to fully cure prior to applying the Vulkem AT system to the entire roof.
- c. Blister & Fishmouth Treatment:
- d. Cut out and repair with materials matching the existing roof assembly.

6. DETAIL WORK

6.1 Flashings, blisters, areas of insulation replacement, and other damaged areas must be repaired and allowed to fully cure prior to applying the Vulkem AT system to the entire roof.

6.2 Blister & Fishmouth Treatment:

- a. Cut out and repair with materials matching the existing roof assembly.

6.3 Flashings:

- a. If flashings are damaged beyond repair, flashing must be replaced with material matching the existing roof assembly prior to application of the Vulkem AT system.
- b. Apply Tremco Epoxy Primer at ½ gallon per ft² (8 wet mils) on properly prepared concrete. Allow primer to cure.
- c. Apply TREMprime Non-Porous Primer at 1,400 - 1,800 ft² per gallon on properly prepared metal tie-in areas. Allow primer to cure.
- d. Apply Vulkem AT Base Coat over the entire vertical flashing at 2 gallons per 100 ft². (32 wet mils). The coating shall be applied up to or underneath all terminations, a minimum of 8" up the vertical surface, a minimum of 4" onto the roof field surface, and 2" beyond the reinforcement in each direction, feather out edges.
- e. Embed Permafab into the wet base coat and brush or roll for proper adhesion and removal of all voids, pinholes, air pockets, etc. The Vulkem AT Base Coat must achieve 100% bleed through of the Permafab reinforcement. Adjacent pieces of Permafab should be lapped a minimum of 3" on side laps and 6" on end laps.

- f. Once cured, apply Vulkem AT Top Coat to the entire flashing surface at the rate of 2 gallons per 100 sq. ft. (32 wet mils), ensuring a consistent finish free of bare spots or pin-holing.
- g. Reinstall metal terminations or counterflashing as required.

6.4 Roof Penetrations:

- a. If penetrations are damaged beyond repair, flashing must be replaced with material matching the existing roof assembly prior to application of the Vulkem AT system.
- b. Apply Tremco Epoxy Primer at ½ gallon per ft² (8 wet mils) on properly prepared concrete. Allow primer to cure.
- c. Apply TREMprime Non-Porous Primer at 1,400 - 1,800 ft² per gallon on properly prepared metal tie-in areas. Allow primer to cure.
- d. Apply Vulkem AT Base Coat over the entire vertical flashing at 2 gallons per 100 ft². (32 wet mils). The coating shall be applied up to or underneath all terminations, a minimum of 8" up the vertical surface, a minimum of 4" onto the roof field surface, and 2" beyond the reinforcement in each direction, feather out edges.
- e. Embed Permafab into the wet base coat and brush or roll for proper adhesion and removal of all voids, pinholes, air pockets, etc. The Vulkem AT Base Coat must achieve 100% bleed through of the Permafab reinforcement. Adjacent pieces of Permafab should be lapped a minimum of 3" on side laps and 6" on end laps.
- f. Once cured, apply Vulkem AT Top Coat to the entire flashing surface at the rate of 2 gallons per 100 sq. ft. (32 wet mils), ensuring a consistent finish free of bare spots or pin-holing.
- g. Reinstall metal terminations or counterflashing as required.

6.5 Drains

- a. Remove existing clamping ring and clean membrane under surface of clamping ring. Note: Clamping ring must be reinstalled if precipitation is in the forecast to ensure water does not enter the building below the membrane or roof substrate at the drain.
- b. Apply Tremco Epoxy Primer at ½ gallon per 100 sq. ft. (8 wet mils) on properly prepared concrete. Allow primer to cure.
- c. Apply Tremco Non-Porous Primer at 1,400 - 1,800 sq. ft. per gallon on properly prepared metal tie-in areas. Allow primer to cure.
- d. Apply Vulkem AT Base Coat over the entire drain sump area at 3 gallons per 100 sq. ft. (48 wet mils) on smooth surface and at 4 gallons per 100 sq. ft. (64 wet mils) on granule surface. The coating shall be applied beyond the drain sump and onto the roof surface a minimum of 8" onto the roof field surface, and 2" beyond the reinforcement in each direction, feather out edges.
- e. Embed Permafab into the wet base coat and brush or roll for proper adhesion and removal of all voids, pinholes, air pockets, etc. The Vulkem AT Base Coat must achieve 100% bleed through of the Permafab reinforcement. Adjacent pieces of Permafab should be lapped a minimum of 3" on side laps and 6" on end laps.
- f. Once cured, apply Vulkem AT Top Coat to the entire flashing surface at the rate of 2 gallons per 100 sq. ft. (32 wet mils), ensuring a consistent finish free of bare spots or pin-holing.
- g. Apply a solid bead of Dymonic 100 around the base of the clamping ring and reinstall clamping ring and all drain bolts

7. MEMBRANE APPLICATION

NOTE: The Vulkem AT system is not recommended for roofs where plies or ply-sheets have become brittle or where the insulation has become saturated. Not recommended over coal tar roofs, and silicone-based coatings. Not recommended for vehicular traffic. Apply when ambient temperatures are between 50°F - 110°F. Surfaces must be completely dry and clean. Do not apply when precipitation is imminent. **CAUTION:** Application of this product in high humidity or temperatures, or over water saturated substrates can lead to improper curing, surface defects, and/or loss of gloss. All surfaces suspect for moisture contamination should be evaluated prior to application. Tremco makes no warranty as to appearance or color since application methods and job site conditions are beyond our control and can affect product performance.

WARNING: Vulkem AT Base and must be top coated within 72 hours of application. If exposed beyond this time period, clean the surface and apply Vulkem 191 Primer at ¼ gallon per 100 ft² (4 wet mils) prior to applying the next coat. Additionally, flashings, blisters, areas of insulation replacement, and other damaged areas must be repaired and allowed to fully cure prior to applying the Vulkem AT system to the entire roof.

7.1 General Application Guidelines:

- a. Primer: Apply Vulkem 191 Primer at ¼ gallon per 100 sq. ft. (4 wet mils) to the entire roof surface and allow to cure.
- b. Vulkem AT Base Coat:
 - i. Apply Vulkem AT Base Coat at 3 gallons per 100 sq. ft. (48 wet mils) on smooth surfaces or at 4 gallons per 100 sq. ft. (64 wet mils) on granule surfaces.
 - ii. Embed Permafab into the wet base coat and brush or roll for proper adhesion and removal of all voids, pinholes, air pockets, etc. The Vulkem AT Base Coat must achieve 100% bleed through of the Permafab reinforcement. Adjacent pieces of Permafab should be lapped a minimum of 3" on side laps and 6" on end laps.

- iii. Allow base coat application to cure prior to application of Vulkem AT Top Coat.
- c. Vulkem AT Top Coat:
 - i. Apply Vulkem AT Top Coat over cured base coat at a rate of 2 gallons per 100 sq. ft. (32 wet mils), ensuring a consistent finish free of bare spots or pin-holing.
 - ii. Do not permit traffic on completed roof surfaces until cured.
- d. Vulkem AT Walkway Application — Pedestrian Traffic Areas:
 - i. In areas where walkways are required, the following method is the preferred walkway option for warranty purposes.
 - ii. Allow completed Vulkem AT system to cure until it can support foot traffic.
 - iii. It is recommended to tape off walkway areas for clean edges and best results.
 - iv. Apply Vulkem AT Top Coat at 1.25 gallons per 100 sq. ft. (20 wet mils).
 - v. Immediately broadcast an approved slip resistant aggregate into the wet top coat at 20-30 lbs per 100 sq. f
 - vi. Back roll aggregate and top coat creating an even dispersal.
 - vii. Remove masking tape before top coat cures.

8. CLEAN UP

- 8.1 As work progresses, it is essential to keep equipment in clean, working condition using isopropyl alcohol, MEK, or xylene.
- 8.2 At the conclusion of the project, all equipment should be cleaned and returned to its designated location. Disposal of empty, partially full, or full pails or drums should be discussed with the building owner, contractor, or engineer.

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