

SECTION 07140

AVM UNDER TILE WATERPROOFING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. AVM Under Tile Waterproofing on concrete decks below tile and pavers.
2. AVM Under Tile Waterproofing on plywood decks below tile and pavers.

B. Related Sections:

1. Section 03300: Cast in Place Concrete
2. Section 06100: Rough Carpentry
3. Division 7: Flashings
4. Division 9: Floor finishes
5. Division 15: Floor drains.

1.02 SYSTEM DESCRIPTION:

*Note to Specifier: Specify optional thickness of 40 mils if required.*

- A. Under Tile Waterproofing membrane shall be AVM System 700, a monolithic waterproofing membrane not less than 25 mils thick, consisting of a heavy duty reinforced polyester fabric embedded in acrylic waterproofing paste.
- B. The system shall be designed for use as a waterproofing and anti-fracture membrane for substrates which will have bricks, pavers and other finish materials installed directly on the membrane.

1.03 SUBMITTALS:

- A. Certificates: Submit a certificate stating applicator is approved by AVM, and, upon completion, shall submit a certificate stating that waterproofing systems have been installed in conformance with approved submittals and AVM recommendations.
- B. Product Data: Submit product data including complete installation instructions.
- C. Drawings: Submit details for each condition of the work. Show all adjoining work, and indicate methods of adhesion and attachment, laps, and related conditions.
- D. Samples: Submit waterproofing membrane samples, not less than 6 inches by 6 inches in size.

- E. Experience Record: Submit a list of at least five installations on which each of the materials and systems proposed for use are in satisfactory service.
- F. Submit certificate, letter or other evidence, indicating that applicator is authorized by AVM Industries to install the specified products.

1.04 QUALITY ASSURANCE

- A. Approvals: AVM Under Tile Membrane shall bear approvals as follows;  
  
City of Los Angeles Research Report RR 25431.  
ICBO ES ER-5880
- B. The system shall conform to ANSI A118.10, and shall be approved for use as a waterproofing membrane below tile.
- C. Qualifications of Installer: A firm which has at least 3 years experience in work of the type required by this section, and is authorized by AVM Industries to install the specified products.
- D. Pre-Installation Conference and Inspection: After approval of submittals but prior to starting installation of work of this section, Contractor shall conduct a meeting at the job site attended by the Tile Contractor, Contractor, Owner, Architect, applicator, and a representative of the waterproofing material manufacturer. The waterproofing applicator and the material manufacturer's representative shall inspect the substrates to receive work of this section and submit a written report of defective conditions to Owner and Contractor.

*Note to specifier: The following is optional. Contact manufacturer.*

- E. Manufacturer's Representative: Make arrangements necessary to have a trained representative of the manufacturer on-site periodically during application of waterproofing work to review installation procedures.
- F. Materials shall comply with current State of California and local Air Quality Management District requirements for volatile organic compounds, (not over 350 grams per liter).

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Delivery of Materials: Deliver materials in manufacturer's unopened containers fully identified with manufacturer's name, product name and shelf life.
- B. Storage of Materials: Store materials in unopened containers at temperatures between 50 degrees F. and 90 degrees F. Do not store materials in direct sunlight or where they could be damaged by water, rain or dampness. Store off ground and protect from damage.

1.06 PROJECT CONDITIONS:

- A. Protection: Apply suitable impervious type masking to preclude staining of adjacent surfaces and provide additional protection as necessary to supplement masking; cover entire area of building subject to damage or staining.
- B. Protection During Installation: Protect adjacent work during installation of work of this Section.
- C. Weather Conditions: Do not apply work of this Section if temperature of surfaces to receive waterproofing or ambient temperature are below 40 degrees F. Do not install any materials when water or dampness in

any form is present on the substrate, if materials are wet, or if rain is imminent.

- D. Coordination: Coordinate installation of AVM SYSTEM 700 with installation of tile and other finish materials, so that AVM System 700 is not left exposed unprotected for more than 30 days. With protective coating, the membrane may be left exposed up to 90 days.
- E. Floor and Area Drains: Obtain details of floor and area drains and review with manufacturer of the waterproofing system to assure compatibility. Report conditions which require correction.

1.07 WARRANTY:

- A. Furnish written warranties, against defects in materials and workmanship and agreeing to maintain work of this section in watertight condition for five years. All components of the finished system shall be included in the waterproofing warranty.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURER:

- A. AVM Industries, LLC  
8245 Remmet Avenue  
Canoga Park, CA 91304  
818) 888-0050  
888) 414-1041  
FAX (818) 888-0030  
www.avmindustries.com

2.02 MATERIALS

- A. Fabric: AVM Mat 800, heavy duty, cross stitched, polyester.
- B. Waterproofing Paste: AVM Paste 700, water based acrylic.
- C. Primer: AVM Primer 100.
- D. Patching Compound: AVM Acripatch 5020.
- E. Protective Coating: AVM Protective Coating, Cementitious mix, 6,000 psi compressive strength, consisting of the following:
  - 1. AVM Concrete Additive 7700.
  - 2. AVM Aggregate 200.
- F. Sealants: Sika Flex 1A, or equal, recommended by membrane manufacturer.
- G. All Other materials: Manufacturer's standard for items required or type be suited for intended use.

PART 3 - EXECUTION

3.01 INSPECTION:

- A. Examine substrate, adjoining construction and conditions under which work is to be installed. Do not proceed with work until unsatisfactory conditions have been corrected.

- 1. Concrete Substrates: Verify that mortar bed or concrete surface provides adequate slope for drainage.
- 2. Plywood Substrates: Verify that plywood is minimum 5/8 inch thick, exterior grade, Structural, CDX or ACX with smooth side up, and with maximum span of 16 inch between supports. Verify that edges are supported and rigidly attached to supports. Verify that fasteners are flush with plywood surface, or slightly depressed.

- B. AVM System 700 shall not be installed on OSB or other manufactured chip-type boards.

### 3.02 PREPARATION

- A. Preparation of Surfaces: Clean substrate of materials, including curing compounds, form release agents and retarding agents, which would impair bond of membrane to substrate. Patch cracks, voids and honeycombs to provide smooth, structurally sound surface. Cut off high spots and grind smooth. Apply AVM System 700 only after curbs, blocking, drains, drains piping, conduits and other items have been installed.
- B. Related Sheet Metal: Verify that sheet metal flashing and related accessories are clean, secure and joints solidly embedded in sealant compatible with the membrane. Remove oil residue from galvanized and bonderized surfaces. Seal joints in sheet metal at corners, drains and scuppers, voids, holes and posts.
- C. Plywood Substrate: Seal plywood joints and cracks flush with AVM Acripatch 5020. Immediately prior to application of membrane, clean surface to remove all residual dust.
- D. Concrete Substrate: Clean concrete of dust, dirt, oil, grease and curing compounds. Prime concrete, if concrete surface is smooth and unless concrete has fine broom finish. Clean hairline cracks and rout out cracks larger than 1/16 inch. Seal cracks flush with AVM Acripatch 5020 patching compound. Immediately prior to application of membrane, clean surface to remove all residual dust.
- E. Special attention shall be provided for smooth interior concrete surfaces that have been exposed to fine drywall dust residue. Wet mop the substrate to remove all dust residue, and apply Primer 100 prior to applying the membrane.

### 3.03 PROTECTION OF ADJACENT CONSTRUCTION

- A. Protect building from damage resulting from spillage, dripping and dropping of materials. Prevent materials from entering and clogging drains and water conductors. Repair and restore or replace other work which is spoiled or damaged in connection with performance of waterproofing work.

### 3.04 INSTALLATION

- A. Install AVM System 700 in accordance with manufacturer's printed instructions except as hereinafter specified. Arrange the work so that the complete membrane is applied in a continuous operation.
- B. Install a strip, not less than 6 inches wide, of fabric embedded in AVM 700 Paste at deck perimeters, joints, cracks, sheet metal, drains,

- scuppers, posts, doorways and similar penetrations and terminations of the membrane. Apply a second layer of fabric and AVM 700 Paste at corners and areas subject to stress and movement. Tuck the fabric tightly into the corners and seal with AVM 700 Paste. Allow to dry until dry to the touch.
- C. Precut the fabric allowing minimum of 2 inch overlap at seams and ends. Allow for fabric to extend up base flashings and coves. Apply a liberal coat of AVM 700 Paste to an area 4 inches larger than the fabric. Embed the fabric into the wet paste, and remove all wrinkles. Apply a second coat of AVM 700 Paste over the wet fabric. Allow to dry. Apply a final coat of AVM 700 Paste over the entire area and allow to cure.
- D. Unless otherwise indicated, extend AVM System 700 one to two inches above finished surface elevation, on vertical surfaces where waterproofing is turned up or down.
1. Drains: Coordinate acceptable types of floor and area drains with requirements of Division 15. Remove primers and paint from areas of the drain body in contact with the membrane so that the paste bonds directly to raw metal. Apply membrane around the drain, extending it in the drain bowl flange and out 12 inches onto the deck.
2. Flashing - penetrations:
- a. Flash all penetrations (pipes, supports, vents, etc.) passing through the membrane. All penetrations shall be properly secured to the deck.
  - b. The flashing seal shall be made directly to the penetration passing through the membrane. The flashing shall not be terminated to an intermediate element (metal flashing, insulation, surface treatment etc.,).
  - c. Flexible penetrations shall be enclosed in a stable "goose neck" set in membrane and secured to the deck. Use a field fabricated pipe seal to flash the "goose neck".
  - d. Hot pipes (temperatures over 180 degrees F.): Provide flashing to an intermediate "cool" sleeve in accordance membrane manufacturer's recommendations.
- E. Detailing: All detailing, flashings and terminations shall be done in accordance with manufacturer's standard guideline details. Use the longest pieces of flashing or reinforcing which are practical based on job site conditions.
- F. Expansion Joints: Do not cover structural expansion joints. Refer to drawings and AVM for procedures.
- G. After the membrane has cured, inspect the surface, and remove bubbles, clumps or other imperfections by cutting out the defective areas and reinstalling the membrane in accordance with manufacturer's recommendations.

- H. Examine the surface and if imperfections or pinholes in the sealed surface are found, apply an additional coat of AVM 700 paste over the surface at the rate of one gallon per 100 square feet, or until imperfections are sealed.

3.05 WATER TEST:

- A. Before applying protective coating over AVM System 700 on horizontal surfaces, test for leaks with a 2 inch depth of water maintained for 24 hours. Examine substructure for leaks. Repair leaks, if any, and repeat test until no leakage is observed.

3.05 PROTECTIVE COATING:

*Note to specifier: Protective coating is optional on concrete decks if membrane will be covered within 30 days. To extend exposure to 90 days, or for extra protection, apply protective coating. Protective coating is required when membrane is installed directly on plywood decks.*

- A. Clean surfaces to receive protective coating immediately prior to beginning application.
- B. Mix AVM Concrete Additive 7700 and AVM Aggregate 200 to soft paste consistency, in accordance with manufacturer's recommendations.
- C. Apply a thin (approximately 1/16 inch) layer of the mixture evenly and smoothly over the entire area. Finish to light broom texture to aid in bond of tile setting materials.

3.06 PROTECTION:

- A. Protect AVM System 700 from damage by subsequent construction operations.

END OF SECTION