Tile Assembly, Radiant Heat, Interior Floors, Over Wood Frame, Joists 16" o.c./Plywood Subfloor, Unbonded Mortar Bed Encapsulating Hydronic Tubing

AVM Systems 700/750

Notes:
1. See AVM tile detail notes sheet for notes 1, 4, 5, 6, 14.
2. AVM recommends using thin-set that meets ANSI A118.4 specifications, such as AVM thin-set 770. For best results, use AVM thin-set 780.

AVM Thinset 770 or 780
Protective coating (optional)
Membrane AVM System 700 or 750
Unbonded mortar bed
Reinforcing
Cleavage membrane
Hydronic tubing encapsulated in mortar bed (AVM Crete 6400 or 6460)
Gap
Plywood T&G subfloor
Sawn lumber, truss or i-joist

16" O.C.
1. AVM System 750, non-breathable, non-reinforced liquid rubber membrane. ICC ESR-3450, ICC PMG-3450 AVM System 700, breathable, fully reinforced, UV stable, acrylic membrane. ICC ESR-2662, LARR 25431, LARR M-050065. Although either membrane may be used, this type of application, AVM recommends using the AVM System 750. Optional: For extra protection, AVM recommends installing the “protective Coating” after the membrane is installed and tested. Anti-Fracture: If anti-fracture properties are desired, please see Note #15 for additional anti-fracture information.

2. AVM System 700, breathable, fully reinforced, UV stable, acrylic membrane. ICC ESR-2662, LARR 25431, LARR M-050065. AVM System 700, non-breathable, non-reinforced liquid rubber membrane. ICC ESR-3450, ICC PMG-3450. Although either membrane may be used, this type of application, AVM recommends using the AVM System 700. Optional: For extra protection, AVM recommends installing the “protective Coating” after the membrane is installed and tested. Anti-Fracture: If anti-fracture properties are desired, please see Note #15 for additional anti-fracture information.

3. AVM System 750, non-breathable, non-reinforced liquid rubber membrane. ICC ESR-3450, ICC PMG-3450. AVM System 700, breathable, fully reinforced, UV stable, acrylic membrane. ICC ESR-2662, LARR 25431, LARR M-050065. Either membrane may be used, this type of application. Optional: For extra protection, AVM recommends installing the “protective Coating” after the membrane is installed and tested. Anti-Fracture: If anti-fracture properties are desired, please see Note #15 for additional anti-fracture information.

4. The substrate surfaces must be structurally sound, clean, and dry, free of contamination, and prepared according to AVM’s Installation Instructions and industry standards. When installing AVM’s membranes on slabs on grade and/or hard to bond surfaces, use AVM’s epoxy primer.

5. AVM recommends all parties to consult approved resources and design professionals to ensure a complete and proper assembly.

6. Please refer to the TCNA® Handbook for Ceramic Tile Installation and AVM’s current data sheets and documentation for complete instructions and application limitations.

7. When installation is over slabs on grade, (on-ground concrete), installation of a waterproofing membrane is optional. If a membrane will be installed, verify moisture! If moisture exceeds 3%. Use a calcium chloride test, or exceeds other acceptable standards, consult with AVM prior to proceeding with installation. If a membrane will not be installed, the Protective Coating is not needed either.

8. Mortar Beds: The following mortar beds are recommended: AVM Crete 6400 (best) or AVM Crete 6460. Mortar beds must achieve a minimum of 2,000 PSI and be installed per TCNA’s standards. When installed over and bonded directly to concrete substrates (excluding lightweight concrete substrates) the mortar bed may be un-reinforced. (If over 1,250 cubic feet, reinforced with “2”x2” wire). When installed over wood floor substrates and/or as a non-bonded mortar bed, the mortar bed needs to be fully reinforced with Metal Lath 2.5 (aka Diamond Lath, min 25 Lbs/50’ Yard) and be a min. of 1.25 inch thick to create rigidity. Mortar beds (concrete float) installed over and bonded to concrete/block walls do not need to be reinforced. Mortar beds (concrete float) installed over Wood and other substrates should be reinforced with metal lath 2.5. (These recommendations are based on using AVM Crete 6400 or 6480, high-performance polymer modified mortar beds)

9. Reinforcement: AVM System 750: AVM recommends reinforcing the membrane in the following areas by embedding AVM Mat 800 into the membrane: at all corners (such as walk-to-wall and wall-to-floor corners), at drains, all penetrations and any transition in the surface. Reinforcement: AVM System 700: AVM System 700 is fully reinforced. Extra reinforcement (double fabric) at corners and other critical areas is optional. Refer to each system’s installation instructions for further details.

10. Roof Membranes: Roof membranes (also referred to as primary membranes) are often used in exterior roof or deck tile applications when installed over living or usable spaces. These assemblies have two membranes in them. A lower membrane (roof or primary membrane) and an upper membrane (secondary membrane) just below the tile, stone, etc. (the mortar bed separates the two) For the lower membrane (roof or primary membrane) AVM recommends use AVM System 500 applied at a min 120 mils dry and fully reinforced with AVM Mat 800. Or, you may use other approved roofing membranes. (Consult with roofing membrane manufacturer) If a Drainage Mat is specified, consult with AVM for Drainage Mat recommendations.

11. AVM System 750, non-breathable, non-reinforced liquid rubber membrane. ICC ESR-3450, ICC PMG-3450. Only AVM System 750 is recommended for this type of application. Optional: For extra protection, AVM recommends installing the “protective Coating” after the membrane is installed and tested. Anti-Fracture: If anti-fracture properties are desired, please see Note #15 for additional anti-fracture information.

12. If drainage is a consideration: Verify that proper drains are used. (Tile drains also known as Double Drains/Triple Drains, etc.) Also verify that all drains, drainage elevations, sloping and ties-ins are correct.

13. When the terms “Backer-Board” or “Cement Backer Board” or “Fiber Cement Backer Board” or “Coated Glass mat Water-Resistant Gypsum Backer Board” etc. are used, they are not exclusive to a particular manufacturer. Equal Backer Units from multiple manufacturers may be used. Consult your with design professional for more information. All joints/seams, etc. must be fully reinforced with AVM Mat 800.

14. Self Leveling underlayment may be used in lieu of the specified underlayment.

15. Anti-Fracture: Anti-Fracture membranes must be fully reinforced with fabric to work properly. If installing AVM System 700, it’s already fully reinforced, so no additional reinforcement is required. If installing AVM System 750, it has no reinforcement except at corners and other critical areas. Therefore, fabric must be embedded in the entire membrane. Use AVM Mat 800 for reinforcement. If the sole purpose of the membrane installation is for crack isolation, then refer to the “Crack Isolation (Anti-Fracture) Details” for additional installation information.

16. Shower receptors, curbs, seats, etc. must be properly waterproofed and installed to avoid water damage to adjacent building materials.