



Installation Instructions For Forevercoat® 100 Cal-Fire (AVM System 100-CF)

PART I-GENERAL

1.01 Description

The Forevercoat® 100 - is Traffic Bearing, Walking and Roof Deck Waterproofing System, which can be applied directly to plywood and sheet metal flashing. It is designed for use on roofing, external balconies, patios, walkways, stairs, courtyards, sun decks and pool decks. The Forevercoat® 100 has a Class-A and 1-Hour fire ratings and has an ICC (ESR-2125) and Cal-Fire Approvals.

1.02 Applicator

The applicator shall be approved by AVM Industries and be completely experienced in the application of the materials of this system.

1.03 Product Delivery and Storage

- A. **Delivery:** Deliver all products to the project site in their original, sealed containers or packaging, with manufacturer's name and label intact.
- B. **Storage and Handling**
 - 1. Handle and store containers in accordance with printed instructions.
 - 2. Do not store materials in direct sunlight or where they might be damaged by rain or water.
 - 3. All system components shipped in bags must be stored in a cool DRY place.
 - 4. Keep all materials out of reach of children.
 - 5. If irritation occurs during use, liberally flush the skin with water and see a physician.

1.04 Project Conditions

- A. Do not apply materials at temperatures below 40° F and falling or if precipitation is imminent. Use caution when applying materials at temperatures above 100°F. Do not apply materials at temperatures above 110°F or rising.
- B. Warn personnel against hazards of materials to the skin and eyes. All personnel handling the Forevercoat system components should read and familiar themselves with each component's SDS and complete safety requirements.
- C. No special protective gear is required during the application of the system materials, except for eye protection such as safety goggles, a dust mask and gloves. Dry mixes contain Silica sand. Take all necessary safety precautions. Fiberglass mat (mat 100) may cause skin irritation. Wear gloves when handling the fiberglass mat.
- D. Protect adjacent surfaces which could be damaged during the application procedure.
- E. The deck substrate shall be properly sloped to freely drain and eliminate the ponding of water.



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PART II - PRODUCTS

2.01 FOREVERCOAT® 100 System Materials

- AVM Crete 6400** A proprietary concrete mix made of a single component blend for sloping and leveling.
- AVM Aggregate 400-SC:** 50-pound bag of AVM Aggregate 400-SC, a single component of AVM's proprietary concrete mix.
- AVM Metal Lath 2.5#:** Electro Galvanized metal lath 2.5LBS per sq/yard (28"x96" each, in bundles of 10). (Sold by others)
- Staples:** 16-gauge non-rusting staples with 1-inch crown and 5/8" inch long legs. (Sold by others)
- Primer:** AVM Primer 100 (Acrylic), suitable for wood and sheet metal substrates.
- Membrane:** AVM Membrane 100 consists of:
1. AVM Mat 100, a fiberglass mat with a minimum weight of 3/4 ounce per square foot.
 2. AVM Base Resin 100, acrylic base coat resin. (Laminating resin)
- Texture Coat:
(Crete 6200)** A proprietary concrete made of mixing AVM's Aggregate 200 with AVM's Additive 7400.
- AVM Aggregate 200:** 50-pound bag of AVM Aggregate 200, an AVM proprietary concrete mix.
- Additive 7400:** A Proprietary Concrete Additive to be mixed with the Aggregate 200 concrete mix.
- Top Coat:** AVM Top Coat Sealer 4150, pigmented or clear.
- Sealant:** AVM Aussie Seal M for sealing of perimeter joints and other waterproofing system discontinuities.
- Patching Compound:** AVM Acripatch 5020, for filling in joints, voids, cracks, not exceeding 1/4" maximum thickness.



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PART III – EXECUTION

3.01 Inspection of Plywood Substrates

- A.** Plywood must be at least 5/8" inch thick, Exterior Grade, Structural plywood (no OSB) with maximum span of 16" between supports. All plywood edges must be properly supported and fastened to the support structure below. Joints must be properly blocked. All nails or screws shall be flush to the plywood surface or slightly sunk in. Plywood must have 1/8" inch spacing between sheets, installed perpendicular to the supports below and installed per code.
- B.** Plywood substrate shall be clean, free of dirt, dust, oil, grease and other materials that can prevent or reduce the bonding of the system to the plywood.
- C.** Plywood shall be securely attached with glue to wood beams and joists. In lieu of glued connections, screw or nail plywood with non-rising, ring shank nails spaced at 6 inches on centers maximum. If other, contact AVM.

3.01 Inspection of Plywood Substrates (Cont.)

- D.** Damaged plywood substrate areas with noted defects or deflections shall be repaired or replaced prior to commencement of deck system application.
- E.** Verify that substrate provides adequate slope for proper drainage. (Minimum slope required is 1/4" per foot)
- F.** Verify that all sheet metal flashing and related accessories are properly secured and joints solidly imbedded in sealant. Install Galvanized or preferably Bonderized edging metal where shown or required for a complete installation.
- G.** It is recommended to install the Wall-To-Deck sheet metals (L-Metals, Zee Bars, etc.) over the AVM Crete, if possible. However, If the metals are already in place, this is acceptable as well. Simply install the AVM Crete over them.

3.02 Preparation of Plywood Substrates

- A.** Clean (scrape if necessary) all sheet metal areas to receive the deck coating. Sheet metals need to be wiped clean using a rag and water mixed with a strong detergent. (Make sure all oil residues are removed) Stainless Steel and Copper flashings should also be lightly sanded to improve adhesion!
- B.** Apply sealant to all exposed sheet metal joints, and other hard to reach areas, especially areas prone to leaking. Special attention should be given to the following areas: Corners, around drains and scuppers, voids, holes, and around posts.
- C.** Optional: Seal plywood joints and cracks flush with the AVM Acripatch 5020 patching compound.
- D.** Thoroughly clean the areas to receive the Forevercoat® 100 system with a blower to remove all dust and debris.



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3.03 System Application

Important Note: The following material coverages may vary based on job conditions, Substrate conditions and other factors. Please read the coverage chart carefully prior to the application of the Forevercoat® 100 System.

Installing the AVM Crete 6400

Installing the AVM Crete over Plywood Surfaces - Steps A, B & C are required!

- A. Primer:** (Optional) Apply AVM Primer 100 to all plywood or sheet metal surfaces scheduled to receive the AVM Crete 6400. Apply at the rate of approximately one (1) gallon per 200-300 square feet. Allow primer to cure until dry to the touch. (approximately 15-45 minutes depending on temperature and wind conditions) If over 24 hours have passed since the initial primer application, re priming may be required.
- B. Metal Lath:** Lay out the AVM Metal Lath 2.5# on the entire plywood area to receive the AVM Crete. Terminate the AVM metal lath 2.5# ¼ inch away from any walls or posts and far enough from the deck's edges to properly detail the edges. (See AVM's edge details for more information) Fasten the AVM Metal Lath 2.5# sheets by stapling them to the deck using 16 gauge Galvanized staples (or other non-rusting type) with 1 inch crown and 7/8" inch long legs at the rate of 16 staples per square foot.

Seams: Side by Side method: Lay the sheets of the Metal Lath 2.5# as close as possible to each other without overlapping them. (Maximum distance between sheets should not exceed ¼ inch). Staple the sheets together at the rate of one staple every 3 inches (three inch on center), and by shooting one leg of the staple into one sheet and the other staple leg into the other sheet, tying them together.

Overlapping Method: Overlap the sheets of the Metal Lath 2.5# ¼" - ½". Staple the sheets together at the rate of one staple every 3 inches (three inch on center), and by shooting one leg of the staple into one sheet and the other staple leg into the other sheet, tying them together.

Drains: The layout of the Metal Lath 2.5# depends on the type of drain. Make sure that the water will flow over the concrete and into the drain. Do not allow the water to go anywhere but into the drain.



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Installing the AVM Crete 6400 over Plywood Substrates - Steps A, B & C are required! (Cont.)

- C. **AVM Crete 6400:** Use caution when applying the AVM-Crete 6400 at temperatures above 100°F. Mix one bag of the AVM Aggregate 400-SC with approximately one gallon of water using an electric drill and paddle. **Mix Well!** Add water as needed to achieve the desired consistency. Apply the AVM Crete by using a trowel or float. The AVM Crete may be worked down to a minimum total dry thickness of ¼ inch. If more than 1.5" in thickness of the AVM Crete 6400 is required, its best to add ½ gallon (approximately 7 pounds) of dry 1/4" Pea Gravel to each mix of one bag of AVM Aggregate 400-SC.

Over Plywood: Spread a thin layer of Crete 6400 over the lath and work it in. Make sure all the holes in the metal lath are filled up and completely covered. Continue adding/floating more Crete 6400 as needed to achieve desired elevations, proper slope, and minimum thickness. Regardless of floating method being used, make sure all the holes in the metal lath are completely filled with the Crete 6400 material.

Curing Time: For AVM Crete 6400 ½ inch thick or less allow 24-48 hours curing time. For AVM Crete over ½ inch thick allow a minimum of 72 hours curing time. (The curing times are based on nice sunny days reaching 75°F and no more than 50% relative humidity. Actual curing times may vary based on weather conditions) Do not proceed to the next step if the AVM Crete is not sufficiently cured.



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Installing the Forevercoat® 100 waterproofing Layers

- A. **Cleaning:** Lightly scrape the surfaces to receive the Forevercoat® 100 system. Fix imperfections, if any. Then thoroughly clean the AVM Crete or other surfaces using a broom or (preferably) a blower.
- B. **Patching:** Apply the AVM Acripatch 5020 using a scraper or trowel at the edges of the AVM Crete, at transitions to flashings if needed and where hairline cracks and other imperfections exist. (refer to AVM's details for more info) Allow the AVM Acripatch 5020 sufficient time to dry. (Do not exceed 1/8th" per lift, and maximum 1/4" thick)
- C. **Cleaning:** Once cured, lightly scrape the AVM Acripatch 5020 surfaces. Fix imperfections if any. Then thoroughly clean the areas to receive the AVM Forevercoat® 100, using a broom or (preferably) a blower.
- D. **Primer:** (Optional) Apply AVM Primer 100 to all the surfaces scheduled to receive application. Apply at the rate of approximately one (1) gallon per 200 square feet. Allow primer to cure until dry to the touch. (approximately 15-45 minutes depending on temperature and wind conditions) Cover all primer within 24 hours of initial application or re-priming may be required.

- E. **Reinforcing Mat:** Lay out the AVM Mat 100 in shingle fashion, with the top layer at the higher level overlapping the lower level a minimum of 2 inches. Overlap mat over all sheet metals and other items as follows:

Edge Metal: See AVM's details for proper membrane termination.

Stucco Stops/Screeds: Roll up the mat until it reaches the stucco stop or a minimum 1 inch high.

Other: Overlap mat 2", in such a way that once the waterproofing membrane is cured, water will not be able to penetrate the structure.

Drains: Mat layout depends on the type of drain. Make sure that the water will flow over the mat and into the drain. Do not allow the water to go anywhere but into the drain. Refer to drain manufacture's details as well.

1. Before applying the AVM Base Resin 100, cut out all bubbles and replace damaged mat as required.
2. For better look, feather out mat joints and check corners and edges for gaps, twists, or other damage.
3. Repair or replace the mat as required.

- F. **Base Coat Resin:** Apply the AVM Base Resin 100 over the AVM Mat 100 at the rate of 40-50 square feet per gallon. Work the AVM Base Resin 100 into the reinforcing mat using a roller and a brush. Apply sufficient pressure to the roller to thoroughly embed the AVM Base Resin 100 into the mat. Allow the base coat membrane (Membrane = Mat + Base Resin) to cure at least overnight. Prior to resuming work, verify that the base coat membrane has thoroughly cured.



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G. Base Coat Membrane Inspection

1. After the base coat membrane has cured, carefully inspect the surface for bubbles located at the mat's joints or within the field area. In addition, thoroughly check the membrane for pinholes in the base coat membrane's surface.
2. If bubbles are found, remove the bubbles and surrounding area by cutting them out and reinstalling the base coat membrane per the base coat membrane installation instructions.
3. Remove blotches, clumps and other imperfections using a scraper or a knife. If necessary, re install a small piece of the base coat membrane per the base coat membrane installation instructions.
4. Carefully inspect the membrane for pinholes. (The mat should be completely saturated) If not fully saturated, or pinholes are found, apply a second coat of the AVM Base Resin 100 at the rate of one (1) gallon per 100-150 square feet, or until the pinholes are sealed.
5. Thoroughly clean the base coat membrane by broom or (preferably) by blower. If you wish, you may apply a thin coat of the AVM Acripatch 5020 or Texture 100 at the mat's seams and in other areas where imperfections still exist. (This helps to hide the seams and to make the deck coating look more uniform once completed) To ensure proper adhesion of the texture coat to the membrane, the membrane surface must be fresh and tacky. If the surface is not fresh and tacky, or the membrane was installed more than 48 hours prior to the texture coat installation, apply a thin fresh coat of Base Resin 100 (approximately 150-200 sq.ft. per gallon).

H. **Texture Coat:** Use caution when applying the AVM-Crete 6200 at temperatures above 100°F. Surface Prep: Prior to application, thoroughly clean the base coat membrane by broom or (preferably) by blower. Mix one bag of the AVM Aggregate 200 with approximately 1.0-1.25 gallons of Additive 7400 using an electric drill and paddle. **Mix Well!** Add Additive 7400 as needed to achieve the desired consistency. Smooth, broom or sponge finish: Apply (spread) the AVM Crete by using a trowel, float or sponge to the desired finish. The AVM Crete 6200 may be worked down to a minimum total dry thickness of 1/8" inch. Spraying the Crete 6200 for a Textured look: Spray the AVM Crete 6200 with a hopper gun at the rate of one (1) gallon of mixed Crete 6200 per 40-60 square feet. (See coverage chart for different types of texture coverages) Adjust the spray nozzle to apply the material to match the approved sample. Allow the Crete 6200 to properly cure prior to walking on the deck's areas. After curing, remove all masking materials. Then lightly scrape the Crete 6200 surfaces with a scraper and remove all loose materials and residue (preferably by blower) prior to beginning the application of the AVM Top Coat Sealer.

I. **Top Coat Sealer:** Thoroughly clean and lightly scrape the deck's surfaces prior to applying the AVM Top Coat Sealer. (Lightly scrape the deck's surfaces to remove any loose material). Then clean the Crete 6200 surfaces with a stiff broom, or preferably a blower. Once the surfaces are cleaned, Apply the AVM Top Coat Sealer over the Crete 6200 at the rate of 100-120 square feet per gallon. Allow the AVM Top Coat Sealer to cure for several hours. (Preferably 24 hours) If you cannot wait 24 hours, light foot traffic may be allowed when the AVM Top Coat Sealer is dry to the touch.

Important Notes: Apply the Top Coat Sealer with clean brushes and ½" knap rollers. For better results, apply the AVM Top Coat Sealer early in the morning when the temperatures are cooler. (Especially when applying the AVM Top Coat Sealer to Non Shaded areas in hot weather) Apply the AVM Top Coat Sealer "Wet on Wet"! Applying new (wet) AVM Top Coat Sealer over cured AVM Top Coat Sealer may create two different shades.



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3.06 Quality Control

- A. Visually inspect all coated surfaces to ensure a full and proper coating application, especially at corners, drainage scuppers and hard to reach areas.
- B. All unsatisfactory areas shall be repaired prior to final acceptance.

3.07 Protection of Installed Work

- A. The completed system shall be protected from all pedestrian traffic for the first 24 hours after application.
- B. Protect completed system from "heavy" pedestrian and wheeled traffic for the next 72 hours.

3.08 Clean Up

- A. At completion of installation remove all temporary protection and barricades from the work.
- B. Clean entire work area or where needed. Repair all damage or remove and replace work which cannot be repaired. Touch up all marred and abraded surfaces.

3.09 Limitations

The Forevercoat® 100 system materials have been tested and approved to be installed directly over sheet metal substrates. However, AVM Industries does not recommend installing this system over substrates consisting only of sheet metals or substrates containing large sheet metal areas. If you wish to install this system over large sheet metal areas, please consult AVM Industries Technical Support department prior to proceeding with such an installation. Failure to do so could void the system's warranty!



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PART IV - METHOD OF REPAIR

Repairing Damage to the Forevercoat® 100 Waterproofing System (Substrate is not damaged)

4.01 Damage Description: Top coat is stained, peeling, cracking or is simply very old. (Crete 6200 layer is not damaged)

Method of Repair:

1. Scrape off any loose top coat using a scraper or and a stiff brush.
2. Remove anything that might prohibit bonding of the new Top Coat Sealer. (High pressure washing is recommended)
3. Re-coat the damaged areas with new AVM Top Coat Sealer. See Section 3.05 item 'T' for application instructions. Epoxy Primer 400 is recommended prior to top coat sealer installation when existing deck coating is over 2 years old.

4.02 Damage Description: Texture and Top Coat are damaged or peeling, yet the membrane is not damaged.

Method of Repair:

1. Scrape off any loose Crete 6200 or top coat using a scraper or and a stiff brush.
2. Remove anything that might prohibit bonding of the new materials. (High pressure washing is recommended)
3. Apply new Crete 6200 where needed. See Section 3.05 item 'H' for application instructions.
4. Recoat the damaged areas with new AVM Top Coat Sealer. See Section 3.05 item 'I' for application instructions.

4.03 Damage Description: The entire Forevercoat® 100 is damaged or peeling yet the substrate is not damaged.

Method of Repair:

1. Scrape off any loose Forevercoat® 100 coating using a scraper. You may also use a sharp knife to cut out and then peel off any bad sections. Make sure to remove all coating that is not securely bonded to the substrate below!
2. Remove/peel off anything that might prohibit bonding of the new materials. (High pressure washing is recommended)
3. Apply the new Forevercoat® 100 system where needed per the installation instructions.

4.04 Damage Description: The Forevercoat® 100 is damaged or peeling and the substrate is damaged as well.

Method of Repair:

1. You MUST contact AVM Industries or an authorized AVM Industries installer to review the damage. Since the substrate is damaged, the repairs must be done very carefully to ensure the Fire Resistance and the Structural Strength of the damaged deck areas are not compromised!

***** END OF SECTION, Installation Instructions for Forevercoat® 100 *****

See Technical Data, Specifications and Coverage Chart on following pages.



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PART V - COVERAGE CHARTS AND SPECIFICATIONS

The following coverages are based on controlled tests. Actual coverages may vary.

Material Crete 6400	One Bag Makes	One Bag Covers at 1/8" Thick	One Bag Covers at 1/4" Thick	One Bag Covers at 1/2" Thick
Aggregate 400-SC	4 Gallons of Mixed Product	40 Square Feet	20 Square Feet	10 Square Feet
Weight of 1 sq. ft. of Crete 6400 installed and Cured		@ 1/8" thick = ~1.25 Lbs	@ 1/4" thick = ~2.50 Lbs	@ 1/2" thick = ~5.00 Lbs
Important Note: Crete 6400 is the wet concrete mix you get after mixing the Aggregate 400-SC concrete bag with water.				

Material Crete 6200	One Bag Makes	One Bag Covers at 1/8" Thick	One Bag Covers at 1/4" Thick	One Bag Covers at 1/2" Thick
Aggregate 200	4 Gallons of Mixed Product	40 Square Feet	20 Square Feet	10 Square Feet
Weight of 1 sq. ft. of Crete 6200 installed and Cured		@ 1/8" thick = ~1.25 Lbs	@ 1/4" thick = ~2.50 Lbs	@ 1/2" thick = ~5.00 Lbs
Important Note: Crete 6200 is the wet concrete mix you get after mixing the Aggregate 200 concrete bag with Additive 7400.				

Materials	Over Plywood	Over Concrete	Over Sheet Metal
AVM Primer 100	200-300 Sq. Ft./Gal.	200-300 Sq. Ft./Gal.	200-300 Sq. Ft./Gal.
AVM Base Resin 100	40-50 Sq. Ft./Gal.	40-50 Sq. Ft./Gal.	40-50 Sq. Ft./Gal.
AVM Mat 100	Allow 10-20% waste	Allow 10-20% waste	Allow 10-20% waste
AVM Crete 6200 Sprayed Sand Finish	40-60 Sq. Ft./Gal.	40-60 Sq. Ft./Gal.	40-60 Sq. Ft./Gal.
AVM Crete 6200 Sprayed Knock Down Finish	40-60 Sq. Ft./Gal. depending on the desired look	40-60 Sq. Ft./Gal. depending on the desired look	40-60 Sq. Ft./Gal. depending on the desired look
AVM Crete 6200 Troweled Smooth	35 Sq. Ft./Gal.	35 Sq. Ft./Gal.	35 Sq. Ft./Gal.
AVM Top Coat Sealer	100-120 Sq. Ft./gal	100-120 Sq. Ft./gal	100-120 Sq. Ft./gal

Technical Data - AVM System 100®		Shelf Life and Storage - AVM System 100®	
Fire Rating	Class A 1-Hour Cal-Fire	Shelf Life Liquids	One year in original unopened packaging. Shelf life may be extended up to two years with prior approval from AVM.
Weatherometer	No Cracking, Softening, Crazing	Shelf Life Bagged Goods	Unlimited. Bagged goods may be used if not hardened and/or have no chunks in them.
Abrasion	4.58% (Pass)	Shelf Life Mats and Metals	Unlimited Shelf Life. Mats and metals may be used if in good condition.
Wind Uplift	Over 135 Lbs/Sq. Ft. or ~227 MPH.	Storage Conditions:	Store dry at 50-90F. If frozen, discard
Bond Strength (Once Cured)	134 PSI		
Minimum Dry Thickness - Complete System: 0.4". (400 Mils) (AVM Crete 6400 must be at least 0.250" thick when dry)			



**Installation Instructions For
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Packaging	
	AVM Acripatch 5020..... 2.0 / 5.0 Gal Pails
	AVM Aggregate 400-SC 50 LB Bag
	AVM Metal Lath 2.5#10 sheets/bundle
	AVM Primer 100 2.0 / 5.0 Gal pails
	AVM Base Resin 100 2.0 / 5.0 Gal pails
	AVM Texture 100 2.0 / 5.0 Gal pails
	AVM Top Coat 4150 2.0 / 5.0 Gal pails
	AVM Mat 100..... 1750 SqFt Roll
	AVM Aggregate 20050 LB Bag
	AVM Additive 7400 2.0 / 5.0 Gal pails

Approx Shipping Weights	
	AVM Acripatch 5020 2.0/5.0 Gal..... 15 / 39 Lbs.
	AVM Aggregate 400-SC 50 Lbs./Bag
	AVM Metal Lath 2.5# 5 Lbs./sheet
	AVM Primer 100 2.0/5.0 Gal 18 / 46 Lbs.
	AVM Base Resin 100 2.0/5.0 Gal 18 / 46 Lbs.
	AVM Texture 100 2.0/5.0 Gal..... 23 / 56 Lbs.
	AVM Top Coat 4150 19 / 47 Lbs.
	AVM Mat 100..... 82.1 Lbs
	AVM Aggregate 200 50 Lbs./Bag
	AVM Additive 7400 100 2.0/5.0 Gal..... 18 / 46 Lbs

Note: Weights of components may vary.