



INDUSTRIES, INC.

8245 Remmet Ave Canoga Park, CA. 91304 (818) 888-0050

Sections: 071400 / 071416
Fluid Applied Waterproofing
ICC ESR-2503 / LARR 25550
Rev. 03/2011
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**Installation Instructions - AVM System 502
AUSSIE MEMBRANE II - Fluid Applied Waterproofing Membrane**

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Important Notes: Spraying the Aussie II product requires training and experience. Do not rely on these installation instructions alone. The Aussie II membrane can be applied in many different applications and substrates. These installation instructions are These installation are “General” in nature and will not cover every scenario. Please consult with AVM Industries prior to applying the Aussie II membrane on a job.



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General

Description

The AVM System 502, AUSSIE MEMBRANE II is a vapor-proof, brown rubber/bitumen liquid emulsion with excellent adhesion, which dries to a tough, black seamless flexible waterproof membrane. The AUSSIE MEMBRANE II is a thixotropic cold-applied bitumen emulsion with added rubber latex. It exhibits excellent elongation and recovery properties.

Where To Use

Walls: Waterproof below-grade concrete and block walls, basements, wet rooms and Blind Side Waterproofing, etc.

Floors: In-between slab waterproofing. To provide a sandwich membrane in-between two concrete slabs.

Roofs: To be used in Green Roof applications or in Roof Paver systems.

Planters: Waterproof planters and other landscaping features.

Balconies: For waterproofing under concrete toppings on balconies, walkways and other common areas (Including over living space). concrete topping (sometimes referred to as hard rock) must be a minimum 3.0" thick, properly reinforced and minimum 2500 PSI.

Under Tile: Waterproof under terrazzo and ceramic tile applications when using a thick-set or mud-bed over the membrane.

Approvals

ICC-ESR 2503 and Los Angeles Research Report (L.A.R.R.) #25550. AVM System 502, AUSSIE MEMBRANE II meets AC-29 Testing Standards. (These standards are used by ICC for below-grade fluid applied waterproofing membranes testing).

Applicator

The applicator shall either be an AVM Industries Authorized Installer or be completely experienced in the application of the materials of this system and has read and understood these installation instructions prior to commencing the work.

Product Delivery, Storage and Handling

- A. Delivery of all the AVM System 502 materials to the job site must be in their original sealed containers, with the manufacturer's name and label intact.
- B. Store at temperatures between 50°F and 90°F. Do not store materials in direct sunlight or where they may be damaged by water or rain.
- C. Keep all materials out of the reach of children.
- D. If irritation occurs during use, liberally flush affected areas with water. If irritation continues, see a physician immediately.

Limitations

Temperatures: Do not apply when temperatures cannot be maintained above 50°F for a minimum of 48 hours or until cured or if precipitation is imminent. Do not apply materials in direct sunlight at temperatures above 100°F.

UV Resistance: Install acceptable protection as soon as the membrane has cured. Do not leave membrane exposed to UV for more than 14 days! Strictly adhere to the Installation Instructions. Failure to do so, may result in the membrane's failure.

Green/Wet Concrete: Substrates do not need to be fully cured. The AUSSIE MEMBRANE II may be applied to damp surfaces. Do not apply the AUSSIE MEMBRANE II to waterlogged surfaces. If substrates are oozing water, allow 24 hours cure time after water has stopped oozing prior to installing the Aussie Membrane.

PSI: On traffic bearing surfaces, concrete substrates shall achieve a min compression strength of 2500 psi prior to installation.

Acceptable Substrates

Concrete substrates exceeding 2000 psi, concrete blocks (CMU), ICF (Insulated Concrete Forms)

Steam Rooms: Maximum temperatures for the AVM System 502 are 167°F or 75°C.

Safety

No special protective gear is required during the application of the system materials, except safety glasses for eye protection.

Tools Needed for Application: A. Cutting Knife B. Brush C. Roller D. Dual sprayer System



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Products

AUSSIE MEMBRANE II Materials

- Primer (Use the Aussie II Resin without hardner) or AVM Primer 500 (Water-Based) supplied in 5 gallon buckets.
- AUSSIE MEMBRANE II supplied in 250 gallon Totes..
- Optional reinforcement: AVM Mat 800, Polyester Stitchbond, 6"x300' and 40"x324', as supplied by AVM Industries.

Substrate Inspection and Preparation

Inspection of Concrete or Block Wall Substrates

- A. Substrates shall be sound, stable, clean, free of dirt, dust, oil, grease and curing agents.
- B. Concrete finish shall be straight without waviness or noted defects, finished with a light broom surface texture. Block walls to have all grout lines filled up!
- C. Damaged surfaces with noted defects shall be repaired prior to commencement of the AUSSIE MEMBRANE II application.
- E. On horizontal surfaces, Verify that substrate provides adequate slope for proper drainage. (Minimum slope: 1/4" per foot)
- F. When applicable, verify that all sheet metal flashing and related accessories are properly secured and joints solidly imbedded in sealant. Install edging and other related metals where shown or required for a complete installation.
- G. Expansion Joints: **DO NOT COVER EXPANSION JOINTS!** If expansion joints exist, contact the architect or AVM Industries for further instructions on how they should be waterproofed.

Preparation of Concrete and Block Wall Substrates

- A. Remove latence, oil, grease, curing agents, debris and other deleterious materials from surfaces scheduled to receive application. On horizontal, older, or very dirty substrates, high pressure washing or bead blasting are highly recommended. If needed, apply a thin slurry coat of AVM Crete 6200.
- B. Clean hairline or small cracks and rout out all cracks wider than 3/16 inch. Seal the large cracks flush with Sika Flex 1A or equivalent caulking.
- C. Cold Joints and other wall-to-deck joints: Wherever possible, install a 45 degree cant strip at these joints. Minimum cant strip size shall be 3"x3". Failure to install cant strips could cause premature failure of the membrane and void the warranty.
- C. Just prior to beginning the installation of the Aussie Membrane, thoroughly clean the areas to receive this work with a broom or blower to remove all debris and dust from the work area.

System Application

Important Note: The following material coverages may vary based on job conditions, Substrate conditions and other factors. Please read the coverage charts carefully prior to the application of the Aussie Membrane.



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Membrane Installation Instructions

Primer (Optional) AVM Industries highly recommends applying a primer prior to installing the Aussie Membrane. Always apply the primer when installing the AUSSIE MEMBRANE II over horizontal surfaces. There are two primers to choose from. Aussie II resin without the hardner (sprayed without the salt water) or AVM Primer 500, a blue, water-based primer. Apply either primer using a roller, brush or sprayer. Allow to cure. Typical cure time is less than 30 minutes at 75⁰F with 50% relative humidity.

Reinforcement Reinforce all cracks, joints and corners by covering them with the 6" fabric embedded in some of the AUSSIE MEMBRANE II material. Apply a second layer of the 6" fabric and AUSSIE MEMBRANE II material at critical corners and areas subjected to stress or movement. Allow to dry until dry to the touch before proceeding to the next step. Reinforcing corners and other critical areas helps strengthen the membrane in the most critical areas, thus reducing potential failures.

AUSSIE MEMBRANE II Installation - Standard Warranty (For extended warranty applications, see last page)

Apply the AUSSIE MEMBRANE II using a roller, brush or sprayer. Minimum thickness of the completed, cured membrane shall be as follows:

Refer to: **AUSSIE MEMBRANE II (AVM System 502) - Min Thickness Table and Protection Guidelines**

Mixing: Mix the Aussie Membrane II in the tote by either circulating it thru the spray pump by-pass for about 10–15 minutes or by drill and paddle for about 10-15 minutes. Do not add water, solvent or anything else to the product!

Application: (Spray)

Test the spray equipment on a piece of scrap cardboard to make sure it's spraying properly. Apply product spraying up and down until saturated but stop before dripping or sagging occurs. Once dry to the touch, apply a second coat spraying side to side. Check for pinholes and proper thickness using a mil gauge. Make sure the membrane reached its minimum required thickness per the Minimum Thickness Table. Continue spraying additional coats as described above until the required thickness has been achieved! Full cure is typically achieved after 24 hours. Drying times may vary based on temperature, humidity and other factors.

Important Notes:

- 1. Spraying the Aussie II product requires training and experience. Do not rely on these installation instructions alone.**
- 2. Drying time between coats should not be more than one (1) or two (2) minutes max. If more time has passed, you must wait 12 hours to allow all the water to exit the system before applying another coat! Failure to allow proper water evacuation before installing the next coat could result in separation between the layers due to water accumulation.**
- 3. The Aussie II membrane can be applied in many different applications and substrates. These installation instructions are "General" in nature and will not cover every scenario. Please consult with AVM Industries prior to applying the Aussie II membrane on a job.**

Membrane Inspection

1. Visually inspect all coated surfaces to ensure a full adhesion and proper coating application, especially at corners, drainage areas, footings and other hard-to-reach areas.
2. Carefully inspect the membrane for pinholes. (The membrane should be completely and evenly sealed) If pinholes are found, apply additional coats of the Aussie Membrane II until the imperfections are sealed.
3. If bubbles, or other imperfections are found, remove them and the surrounding area by cutting them out and reinstalling the membrane per the membrane installation instructions.
4. **Flood testing is highly recommended whenever possible. Do not flood test until membrane has fully cured!**

The Following Pages Contain the Specifications Listed Below:

1. Flood Testing Procedures
2. Protection Board / Drainage Board / Drainage System Specifications
3. Repair Specifications
4. Coverage Charts and Technical Information



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Flood Testing Specifications

It is not always practical or feasible to do a flood test, but when it can be done it can be very helpful in finding leaks and fixing them quickly and inexpensively. Examples: 1. Planter boxes where the drains can be sealed and the planter boxes filled with water. 2. In some applications, the Aussie Membrane II is buried underneath the finished surfaces (such as tile or concrete topping) and is not readily accessible for repairs. If leaks are found, the only way to repair them would be to remove the tile or topping, repair the damaged membrane, and then reinstall the tile or topping. This would be time consuming, inconvenient and costly. If all possible, dam these areas and fill with water to test for waterproofness before proceeding to the next step.

Flood testing provides an efficient and economical method to test the waterproofness of the membrane prior to proceeding with the installation of the protective component or the finished surfaces. Following are some guidelines for flood testing.

5. **Make sure the membrane is fully cured!**
6. Visually inspect corners and other hard to reach areas for openings where water might penetrate.
7. Fix all openings prior to proceeding with the flood test

8. Close the drains using drain plugs or other methods
9. Be careful not to damage the membrane while walking on it or plugging the drains.
10. Slowly fill the deck area with water. Do not overfill! Be extra careful when flood testing on decks built over wood substrates! The extra weight of the water could cause damage or cause the deck to collapse. If you are not sure the deck can support the extra weight of the water, consult with an architect or structural engineer before flood testing!

Protection Board / Drainage Board / Protective Panels / Root Barriers / Drainage System Specifications

- PB:** Protection Boards: Several types of Protection Boards are commonly used and acceptable for use with the Aussie Membrane.
1. 1/4" fanfold foam boards such as Amoco, Dow or Insulfoam.
 2. Foam panels, typically 1/2" thick or more.
- PP** Asphaltic Protective panels 1/4" or thicker made by Gardner/Apoc or equal. Consult with AVM or Engineer for proper thickness.
- DB:** Drainage Boards: Several types of Drainage Boards are commonly used and acceptable for use with the Aussie Membrane.
1. For vertical applications use Drainage Boards with a minimum 3/8" thick cores, such as AVM Drain Board 6000 or equal.
 2. For horizontal applications several different types of drain boards may be used depending on the application. It's best if you call AVM for proper drain board selection. Examples include AVM Drain Board 9000 or equal when heavy loads are required such as for vehicular use. For Pedestrian topping slabs use AVM Drain Board 6000. For Roof gardens use AVM Drain Board 9900.
- A system to release hydrostatic pressure must be installed in all areas greater than 2 feet deep or if wall runs are longer than 30 feet.
- FD:** French Drains: At footings, cold joints and other areas where water could accumulate, use a french drain system (or other approved method) to remove water and release hydrostatic pressure. If weep-holes are used, make sure to cover the weep-hole's entrances with gravel, fabric or other acceptable means to prevent the weep-holes from clogging. Make sure a sufficient number of weep-holes are installed and that they are large enough to handle the amounts of water expected to pass thru them.

**REFER TO THE "AUSSIE II (AVM System 502) - Min Thickness Table and Protection Guidelines"
FOR MORE INFORMATION**



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Repairing Damage to the AVM System 502, AUSSIE MEMBRANE II (When the substrate is not damaged)

Damage Description (1)

A leak or a bad section of the AUSSIE MEMBRANE II is detected. No protection or finished surfaces are installed.

Method of Repair

1. Cut out an area of the membrane 6" larger in diameter than the defective area.
2. Clean the substrate of any loose materials using a scraper or a stiff brush.
3. Remove anything else that might prohibit bonding of the new materials.
4. Reapply the AUSSIE MEMBRANE II to the damaged area following the appropriate installation instructions. (min 4" overlap)
5. Allow to properly cure. Once cured, visually inspect the repaired area for imperfections.
6. Continue to add layers until the proper thickness is achieved.
7. (Optional) Do another flood test.

Damage Description (2)

A leak or a bad section of the AUSSIE MEMBRANE II is detected. Protection/Drainage Board is installed. No finished surfaces are installed.

Method of Repair

1. Remove Protection/Drainage boards from an area 9"-12" larger in diameter than the defective area.
2. Cut out an area of the membrane 6" larger in diameter than the defective area.
3. Clean the substrate of any loose materials using a scraper or a stiff brush.
4. Remove anything else that might prohibit bonding of the new materials.
5. Reapply the AUSSIE MEMBRANE II to the damaged area following the appropriate installation instructions. (min 4" overlap)
6. Allow to properly cure. Once cured, visually inspect the repaired area for imperfections.
7. Continue to add layers until the proper thickness is achieved.
8. (Optional) Do another flood test.
9. Re-install Protection/Drainage Board.

Damage Description (3)

A leak or a bad section of the AUSSIE MEMBRANE II is detected. Protection/Drainage Board is installed. Topping surface is installed as well.

Method of Repair

1. Gently as possible, remove the finished surface from an area 16"-24" larger in diameter than the defective area. Be careful not to damage the membrane underneath!
2. Remove Protection/Drainage boards from an area 9"-12" larger in diameter than the defective area.
3. Cut out an area of the membrane 6" larger in diameter than the defective area.
4. Clean the substrate of any loose materials using a scraper or a stiff brush.
5. Remove anything else that might prohibit bonding of the new materials.
6. Reapply the AUSSIE MEMBRANE II to the damaged area following the appropriate installation instructions. (min 4" overlap)
7. Allow to properly cure. Once cured, visually inspect the repaired area for imperfections.
8. Continue to add layers until the proper thickness is achieved.
9. (Optional) Do another flood test.
10. Re-install Protection/Drainage Board.
11. Re-Install Finished Surface Materials.

Repairing Damage to the AVM System 502, AUSSIE MEMBRANE II (When the substrate is damaged)

Damage Description (4)

A leak or a bad section of the AVM Membrane is detected and the substrate is damaged as well.

Method of Repair

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



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Coverage Charts & Technical Information

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

Materials	One Kit Makes	One Kit Covers at 1/16" Thick
Optional Slurry Coat - AVM Crete 6200	4 Gallons of Mixed Product	80 - 100 Square Feet
Weight of 1 Sqft of AVM Crete 6200 installed and Cured		1 Sqft at 1/16" thick = ~0.625 Lbs

Materials	Over Block Walls (CMU)	Over Concrete
AVM Primer 500 (Optional) Water-Based Primer	150-200 Sqft/gal	200-300 Sqft/gal
Aussie Membrane II (See coverage table)	22-25 Sqft/gal at 60 Dry Mils	25 Sqft/gal at 60 Dry Mils
Matt 800 6"x300 feet long for cant strips & corners	270-300 Feet. Allow 5%-10% waste	270-300 Feet. Allow 5%-10% waste



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Technical Data - AVM System 502, AUSSIE MEMBRANE		
Color:	Dark brown. After drying: black	
Specific Gravity:	1.189 gr/cm ²	
Flash Point:	Non-flammable	
Service Temperature:	15°F-177°F (-10°C to +80°C)	
Application Temperature:	42°F-132°F (+5°C to 55°C)	
Tensile Strength:	>15.4 Lbs (>7 kg)	ASTM D412
Elongation at break:	>1000%	ASTM D412
Resistance to water pressure 1 tm 24 hr	Passed	ASTM D751
Water vapor transmission	4.0 gr/m ² 24 hr	ASTM D96
Recovery	85%	IS 1536
Creep At 177°F (80°C)	No Creep	DIN 52123
Resistance to Standing Water	Passed	ASTM D2939
Bacterial Attack in soil 30 days @ 105°F (40°C)	Passed	ASTM D2939
Crack bridging	>3/16" (>5mm)	IS 1731
Certifications:	ISO 9002, Green Label, I.Q. Net (International Certification Network)	

General Information - AVM System 502, AUSSIE MEMBRANE	
Shelf Life: (Liquids)	One year from manufacturing date in original unopened packaging.
Storage Conditions:	Store dry/shade at 50-90F. If frozen, discard
Cement Mixing Ratio:	One 50 Lbs bag Aggregate 200 to 1.0-1.25 gal additive 7400
Aussie Primer Color	Black
Primer 500 Color	Blue
AUSSIE MEMBRANE II Color:	Black
Additive Color:	AVM Additive 7400 is Milky/Clear
Slurry Coat	AVM Crete 6200 is Gray.
Slurry Coat Strength:	AVM Crete 6200 achieves over 6200 PSI when cured, providing excellent protection and bonding

Packaging:	AVM Aggregate 200 50 LB Bag AVM Additive 7400..... 2.0/5.0 Gal pails AVM Primer 500.....5.0 Gal pail Aussie Membrane II 250 Gal Tote Mat 800 6" wide x 300 Ft. Long..... 150 Sq. Ft	Approximate Shipping Weights:	AVM Aggregate 200..... 50 Lbs/Bag AVM Additive 7400 2.0/5.0 Gal..... 18/46 Lbs AVM Primer 500 44.0 Lbs Aussie Membrane II..... 2,625 Lbs Mat 800 6" wide x 300 Ft. Long 3.0 Lbs
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Applications with Extended Warranties

Aussie Membrane II Installation - Extended Warranty

Apply the Aussie Membrane II using a sprayer. Minimum thickness of the completed, cured membrane shall be as follows:

Installation Guidelines			
Depth Range	Min Thickness of Cured Membrane	Authorized Installer Required	Types of Protection & Drainage System Required
Up to 4 feet deep	90 Mils	Yes	(Protection Board) or (Drainage Board), + (French Drain)
4-8 feet deep	120 Mils	Yes	(Drainage Board), + (French Drain)
8-14 feet deep	150 Mils	Yes	(Drainage Board), + (French Drain)
14-20 feet deep	180 Mils	Yes	(Drainage Board), + (French Drain)
Deeper than 20 feet	Consult AVM Industries before proceeding with membrane installation		
Notes:	1. Mils thickness specifications are for "DRY FILM" thickness 2. French Drain system or equal is not applicable for installations over horizontal surfaces. 3. French Drain recommended, but not required for applications less than 18" deep. 4. Cant strips at 45° are required at cold joints and other horizontal/vertical intersections. 5. On applications over block walls (CMU) less than 8 feet deep, 90 mils dry thickness recommended. See "Minimum Thickness Table" for the latest info		