



AUSSIE MEMBRANE 570 HOT RUBBER

INSTALLATION INSTRUCTIONS

Aussie Membrane 570 - Hot Rubber

General

These pre-installation and application guidelines are intended as a guide to the products' safe and proper storage, handling, and application.

Product Description

Aussie Membrane 570 – Hot Rubber, is a hot-applied asphalt-based composition membrane applied in a liquid state to form a continuous, seamless, tough, flexible, black, fully-adhered waterproofing membrane.

Aussie Membrane 570 – Hot Rubber exhibits excellent elongation and recovery properties and maintains excellent long-term stability.

Where to Use

Over Portland cement structural concrete surfaces including precast and poured in place roofs, parking structures, podium decks, plaza decks, bridge decks, etc. Other common waterproofing applications include between-slabs, under topping-slabs, green roofs, under roof paver systems, tunnels, re-roofs, and many other applications. Aussie Membrane 570 – Hot Rubber may also be used over gypsum and wood surfaces. Do not install Aussie Membrane 570 – Hot Rubber over structural light weight concrete without prior approval from AVM. Light Weight insulating concrete is not an approved substrate.

Application and performance advantages of the Aussie Membrane 570 – hot rubber;

- Monolithic Membrane
- Spreads Thicker
- Faster Installations

Aussie Membrane 570 – Hot Rubber is applied at thicknesses of 180 mils (4.8 mm) and 215 mils (5.5 mm) vs. 60-90 mils (1.5-2.3 mm) with most competitive membranes. This greater thickness allows for a wider variety of substrate conditions increases crack bridging ability enhances self-healing properties and provides a more reliable waterproofing system over time.

Tenacious bonding

Aussie Membrane 570 – Hot Rubber bonds to any sound concrete, masonry, steel or wood surfaces, and readily conforms to any surface irregularities, protrusions, corners, etc. Should damage occur, leakage can be more quickly traced and the membrane easily repaired since the membrane restricts the migration of water between it and the substrate.

Flashing & reinforcement

Reinforcement is not usually needed to bridge cracks up to 1/6" (1.6 mm). On large cracks and at critical points and terminations, sheet reinforcing encapsulated between two coats of Aussie Membrane 570 provides triple protection.

Cold weather application

Aussie Membrane 570 – Hot Rubber can be applied in temperatures down to 0°F (-18°C) on a clean, dry, frost-free surface. (Concrete must not contain excessive moisture! Contact AVM for details) Aussie Membrane 570 – Hot Rubber exhibits excellent low-temperature flexibility and adhesion characteristics.

Sets up rapidly

Aussie Membrane 570 – Hot Rubber does not "cure", rather simply cools, thus it is not affected by adverse weather such as rain, snow, or frost, immediately after application. Once the membrane is protected, the deck can be opened up to subsequent trades, thus speeding the job.

Tie-ins

Previously installed Aussie Membrane 570 – Hot Rubber remelts sufficiently when lapped with new material to form a monolithic bond. This makes the Aussie Membrane 570 – Hot Rubber perfect for phased construction or accommodating future tie-ins. There are no seams that can fail with the Aussie Membrane 570 – Hot Rubber.

Self healing

Self-seals minor construction damage for added margin of safety.

Reliability

Aussie Membrane 570 – Hot Rubber conforms to CGSB (Canadian General Standards Board) -37.50-M89 the generally accepted standard for rubberized asphalt membranes.

Melter information

Before Aussie Membrane 570 – Hot Rubber can be applied to an approved substrate, the material must first be melted, then further heated and mixed to develop its full physical properties.

The rubber content of the membrane makes it necessary to use indirect heat in the melting. Therefore a double-jacketed melter (unlike a standard single-shell asphalt kettle) must be used. On older melters, the outer jacket holds a heat transfer oil which, when heated by one or two propane burners, in turn heats the membrane held by the inner jacket. "Air-jacketed" melters are more common today as they eliminate the need for the heat transfer oil and also speed up the heating/melting time.

A mechanical agitator inside the melter keeps the melted material moving, ensuring the uniform transfer of heat throughout the membrane. The agitator is typically located at the bottom of the inner shell and is preferably in the form of rocking or sweeping blades that is powered by a small gasoline or propane powered engine that is mounted on the melters frame.

Double-jacketed melters must be equipped with temperature gauges so that the melter operator can continually monitor the temperature of the membrane – and in the case of oil-jacketed melters, the heat transfer oil. The safe operating temperature for Aussie Membrane 570 – Hot Rubber ranges from 380°F to 400°F (177°C-204°C).

CONTINUOUS HEATING AND AGITATION OF THE SAME MATERIAL FOR 6 HOURS OR MORE, WITHOUT THE ADDITION OF FRESH MATERIAL, IS TO BE AVOIDED!

IN NO CASE SHOULD TEMPERATURES IN EXCESS OF 400°F (204°C) BE IMPOSED ON THE MATERIAL!

AVM INDUSTRIES DOES NOT MANUFACTURE OR SUPPLY DOUBLE-JACKETED MELTERS. THE RESPONSIBILITY FOR THE SAFE AND PROPER USE OF A MELTER, AND FOR CONTROLLING THE MEMBRANE'S TEMPERATURE WITHIN THE PROPER LIMITS BELONGS EXCLUSIVELY TO THE APPLICATOR.

ENVIRONMENTAL CONDITIONS

Aussie Membrane 570 – Hot Rubber can be installed in a wide temperature range. Application below 0°F (-18°C) (ambient temperature) is not recommended for the safety and comfort of the laborers and operation of mechanical equipment.

Aussie Membrane 570 – Hot Rubber must be installed to a DRY substrate. The application of Aussie Membrane 570 – Hot Rubber should not proceed during inclement weather. Sufficient drying time must be allowed before the application of the membrane continues following a rain. Aussie Membrane 570 – Hot Rubber is not affected by rain, snow or frost immediately after application.

Delivery, Storage, and Handling

- a. Delivery of the Aussie Membrane 570 – Hot Rubber must be delivered to the job site in their original sealed containers, with manufacturer's name, packaging and label intact.
- b. Handle and store containers in accordance with printed instructions.
- c. 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.
- d. Failure to comply with the recommended storage conditions may result in premature failure or damage of the product. For specific storage advice, please contact AVM Industries and/or its representatives.
- e. Keep all materials out of the reach of children.
- f. If irritation occurs during use, liberally flush affected areas with water. If irritation continues, see a physician immediately.

Pallets of product are protected with a weather resistant covering. During storage, this covering must be intact to prevent boxes from getting wet. If wet, boxes may lose strength and crush. Rips in the pallet covering should be repaired to maintain packaging integrity. Pallets should be stored on a dry, level surface with good drainage. Pallets should not be stacked because crushing of bottom of boxes may occur. Product properties are not affected by packaging deterioration.

Packaging consists of individual boxes which are palletized into shipping units. Boxes contain a non-adherent film which permits easy removal of the product. Each pallet contains 75 boxes. The weight of product in each box does not exceed 30 lbs. (14kg) and pallet weights do not exceed 2,2500 lbs. (1021kg) Pallets of product are weighed and product is sold by the net weight of product. Product boxes are manufactured from corrugated kraft board producing a minimum bursting test certification of 350 psi (241 N/cm²) and using water resistant adhesives. Boxes use tape closure and do not contain any staples. Boxes are labeled with the product name, part number, lot number, specification conformance, application temperatures and safety instructions. Palletized units are protected from the weather using a three mil thick plastic bag, a weather and moisture resistant cap sheet and a minimum of two layers of six month u.v. protected stretch wrap. Pallets are labeled with the product part number, lot number and net weight.

SAFETY PRECAUTIONS: Since this product is heated to elevated temperatures, it is essential that operations be conducted safely. All personnel need to be aware of hazards of using hot applied materials and safety precautions. Before use, the crew should read and understand product use and safety information on the box and the product SDS. User should check D.O.T. requirements for transportation of product at elevated temperatures above 212°F (100°C).

HAZARDS ASSOCIATED WITH HOT-APPLIED MATERIALS: Skin contact with hot materials causes burns. Over exposure to fumes may cause respiratory tract irritation, nausea, or headaches. Precautions are to be taken to prevent contact with hot material to avoid inhalation of fumes for everyone in the vicinity. Safety precautions should include:

1. Protective clothing to prevent skin contact with hot material.
2. Care when adding product to melters to reduce splashing.
3. Careful operation of wands or pour pots that apply product.
4. Traffic and pedestrian control measures which meet or exceed MUTCD requirements to prevent access to work areas while product is in a molten state.
5. Avoidance of material fumes.
6. Proper application configurations with a minimum amount of material excess.
7. Appropriate cleanup of excessive applications or product spills.

For additional information, refer to Aussie membrane 570 – Hot Rubber Installation Instructions and/or Safety Data Sheets. Or contact AVM Industries at 818-888-0050. www.avmindustries.com

Project Conditions

1. All surfaces to which the Aussie Membrane 570 – Hot Rubber is applied to must be sound and stable, with an even finish (wood float finish or equal) and free from dust, loose debris, grease, curing agents, voids, projections and/or anything else that might inhibit bonding.
2. The Aussie Membrane 570 – Hot Rubber may NOT be applied to damp or waterlogged surfaces (Green Concrete). AVM recommends structural concrete be cured for 28 days (min 14 days) prior to membrane application. Surface moisture levels in the concrete should be 6% or less.
3. Do not apply materials at temperatures below 40°F and falling or if precipitation is imminent. Do not apply materials in direct sunlight at temperatures above 100°F or rising. Contact AVM before installing at temperatures below 40°F.
4. Warn personnel against hazards of materials to skin and eyes. Note other hazardous conditions on the job that might require special protective gear and or any other special protective or safety procedures.
5. Protect adjacent surfaces which could be damaged during the application procedure.
6. This system must not be used to cover Expansion Joints.
7. All horizontal surfaces to receive Aussie Membrane 570 must have a minimum slope of 1/4" per foot. For flat decks with no slope, a 48-hour water test must be completed to verify proper installation of the membrane.

System Application

Read the entire Aussie Membrane 570 – Hot Rubber Installation Instructions Prior to Installation. Application instructions vary based on application surfaces. Following are common (Generic) application instructions for applications over concrete only. For specific application instructions, download the appropriate installation instructions.

Preparation

1. Make sure concrete surfaces are even without holes, gaps, etc. Make sure substrates have no cracks larger than 1/16" wide. (If applying over plywood substrates, refer to the "Topping Slabs Installation Instructions" and "Details" for more information)
2. If necessary, apply a thin slurry coat using AVM Crete 6200.
3. Primer: Apply AVM Primer 500/570 using a roller, brush or sprayer to all surfaces and allow to dry to the touch before installing the Hot Rubber.

Primer Installation

Apply a liberal coat of AVM primer 570 to all surfaces scheduled to receive hot rubber. Allow to dry to the touch.

Membrane Installation

Apply liberal amounts of the Aussie Membrane 570 – Hot Rubber to all surfaces until the desired thickness specified is achieved. Multiple coats may be necessary. If embedding fabric reinforcement, the first coat should be 90 mils thick and the 2nd coat over the fabric should be 125 mils thick (1.33 Lbs/sqft @ 215 mils). Check for pinholes, bubbles and proper thickness using a mil gauge. Fix any imperfections as needed. Full cure is achieved once the membrane has cooled down sufficiently to touch safely. (cool to the touch)

Quality Control

- a. Visually inspect all coated surfaces to ensure a full and proper coating application, especially at corners, drains and other hard-to-reach areas.
- b. All unsatisfactory areas shall be repaired prior to final acceptance.
- c. Perform a 48 hour water test (flood test) whenever possible.

Protection of Installed Work

- a. The completed section shall be protected for the first 24 hours after application or until the surface is sufficiently cured. (The amount of drying time may vary depending on temperature and humidity conditions)
- b. Always protect the waterproofing from possible damage. Install approved "AVM 570 Protection Sheet" or "AVM GPL 16" Polyolifin Plastic Liner (as a root barrier in planter applications) along with AVM approved drain board when required.

Safety

WARNING! DANGER! HOT RUBBER! Refer to the Aussie Membrane 570 – Hot Rubber SDS sheet for details

Availability and Cost

Contact AVM Industries or your approved applicator for pricing and availability.

Technical Services

Technical services are available by contacting our offices at: **888.414.1041** or **818.888.0050** or visit **www.avmindustries.com**

System Specifications

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

Technical Information			
Property		Requirement	Test Method
Recommended application temperature		380°F-400°F (193°C-204°C)	
Flow, 104°F (60°C)		3 mm Max	CGSB 37.50-M89
Cone Penetration	77°F (25°C)	110 Max	CGSB 37.50-M89
	122°F (50°C)	200 Max	CGSB 37.50-M89
Toughness		5.5 Joule Min	CGSB 37.50-M89
Toughness Ratio		0.04 Min	CGSB 37.50-M89
Adhesion Rating		1 Min	CGSB 37.50-M89
Water Vapor Permeance		1.7 ng/Pa. / Sq. Meter Max	CGSB 37.50-M89
Water Absorption		0.35g max gain or 0.18g max loss	CGSB 37.50-M89
Low Temperature Flexibility, -13°F (-25°C)		Pass	CGSB 37.50-M89
Crack Bridging, -13°F (-25°C)		Pass 10 cycles	CGSB 37.50-M89
Heat Stability, 5 hours		Pass	CGSB 37.50-M89
Viscosity at Application Temperature		2-15 seconds	CGSB 37.50-M89
Flash Point, C.O.C.		500°F (260°C) min or 45°F (25°C) min above recommended application temperature.	CGSB 37.50-M89

Packaging	Approximate Shipping Weights	Coverages	VOC
Box / 40 Boxes per Pallet	30 Lbs per Box / 2,250 Lbs per pallet	1.33 Lbs/Sqft @215 Mils	0.4 G/L
AVM Primer 570 5.0 gal. pails	41.0 lbs / bucket	200-400 sqft/Gal	75 G/L
AVM Mat 570, 48" x 360 Yards	40.5 lbs / roll	4320 sq.ft.	n/a

For a complete list of details in CAD or PDF, please visit our website at www.avmindustries.com

Other Important Information

SUBSTRATES: All horizontal surfaces to receive Aussie Membrane 570 must have a minimum slope of 1/4" per foot. For flat decks with no slope, a 48-hour water test must be completed to verify proper installation of the membrane.

CONCRETE (CAST IN PLACE)

There are several different types of concrete (cast in place) used in construction. Some are acceptable substrates for The Aussie Membrane 570 – Hot Rubber, others are not. In general AVM is looking for a concrete substrate that has a compressive strength of 2,500 psi minimum with a density of no less than 90 pcf.

Structural Weight Concrete: Made with aggregates such as sand, gravel and crushed stone, structural weight concrete will have a density of 135-160 pcf, and will retain 3% to 5% moisture by volume when fully cured. AVM recommends a cure/drying time of 28 days, 14 days minimum. Depending on conditions (i.e., ambient temperature, humidity) the concrete may be dry enough to receive application of the membrane in less than the 14 day minimum recommendation. Contact AVM's Technical Services Department for additional information.

Light Weight Concrete: Made with aggregates such as expanded shale, clay, slate or slag, lightweight structural concrete will have a density of 90-115 pcf, and will retain 5% to 20% moisture by volume when fully cured. An ACCEPTABLE substrate for Aussie Membrane 570 – Hot Rubber with certain limitations. Due to the high moisture content of lightweight structural concrete, a cure/drying time of 60 days is recommended, with a 28 day minimum, before application of the membrane is to begin.

Light Weight Insulating and/or Cellular Concrete: Made with aggregates such as vermiculite, perlite, pumice, scoria or diatomite, lightweight insulating concrete will have a density of 15-90 pcf and will retain more than 20% moisture by volume when fully cured. This high moisture content can create bonding and pinholing/blistering problems for the membrane and the low density (less than 110 pcf) may create bonding problems due to the weak, non-durable surface that results. These factors make lightweight insulating concretes UNACCEPTABLE substrates for Aussie Membrane 570 – Hot Rubber.

CONCRETE SURFACE FINISH

A poured in place concrete surface (horizontal) should be finished to a rough texture to provide a "mechanical" bond for the membrane. The texture however, should not be so rough that the membrane cannot be applied at a continuous thickness across the surface. As a minimum, a wood- float or broom finish is required, with a wood-troweled finish preferred. A steel-troweled finish is NOT desirable.

Excessive "bleeding" caused by over-troweling increases the water/cement ratio near the concrete surface, which can result in a weak top layer with poor durability. This layer is commonly referred to as LAITANCE. This is particularly likely to occur if finishing operations take place while bleed water is present.

This weak concrete surface can inhibit the bond of the membrane to the concrete and must be removed.

CONCRETE CURING TECHNIQUES

Probably the most important factor in assuring that the concrete will attain its greatest strength and durability is the extent to which it has CURED.

The curing process, known as HYDRATION, is especially critical during the first few days when the evaporation of water from the concrete is especially rapid. During this time, it is important to retain as much water within the concrete as possible. Several methods are commonly used for doing this.

Water Curing: Water curing is probably the most effective curing method. However, close continuous supervision is required to make sure that cycles between wetting and drying of the concrete are absolutely avoided.

Water curing can be accomplished by "ponding", which covers the slab with water held in place by a dike around the perimeter.

"Spraying" or "Fogging" of the concrete keeps it wet through a system of hoses and nozzles that soak the concrete surface with a continual spray or mist of water.

WET COVERINGS: Burlap fabric has been successfully used to keep a concrete surface wet during curing. The burlap must be carefully placed, leaving no concrete exposed, and then kept wet.

Other wet coverings include earth, sand, hay, straw and sawdust. However, they are messy and more labor intensive, and therefore less practical. The wet covering method also poses a special risk. If allowed to dry out, these materials can actually act as a blotter and speed up the drying of the concrete.

PAPER SHEETS: Paper sheets are a third method of curing concrete. Water-pervious papers require the periodic addition of water to replace water lost through evaporation. Impervious papers require no additional water, acting as a vapor barrier and thereby preventing evaporation of the mix water. With both types of paper, the concrete surface should be thoroughly wetted before they are applied. The sheets must overlap by several inches and must be weighted in place to insure close contact with the concrete surface.

PLASTIC SHEETS: Similar to water-impervious paper sheets, plastic sheets form a vapor barrier that seals moisture in. Light weight (as little as 20 lb / 1,000 sq ft) makes plastic extremely practical and highly labor efficient.

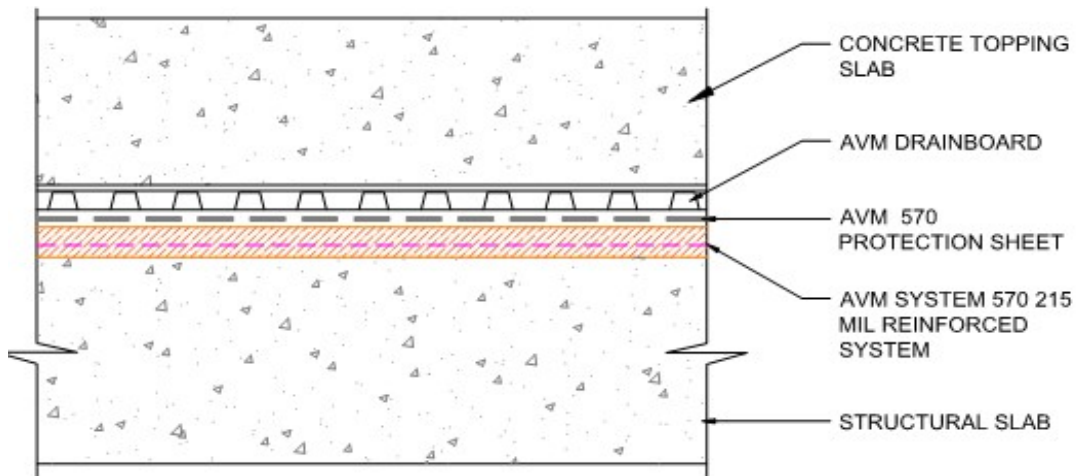
LIQUID MEMBRANE CURING COMPOUNDS: Liquid membrane curing compounds have become increasingly popular due to their ease of application and low material cost. Many are not suitable and therefore should be avoided. Aussie Membrane 570 – Hot Rubber is best applied when traditional methods of concrete curing have been used (i.e. water curing, wet coverings, paper and plastics sheets).

Most liquid membrane curing compounds are normally applied with a hand-held or power sprayer after the concrete has received its final finish and the water sheen on its surface has disappeared. The timing of the application is very critical. If the compound is applied when standing water is present, it will not be able to form the continuous film necessary to prevent evaporation of the water. Weak, improperly cured concrete results. If the curing compound is applied to a surface which has lost some of its mix water, it will be absorbed into the concrete and the result will be equally weak and improperly cured concrete. (Fortunately, when concrete surface has lost some of the mix water, it can be fogged down to seal the pores before the curing compound is applied)

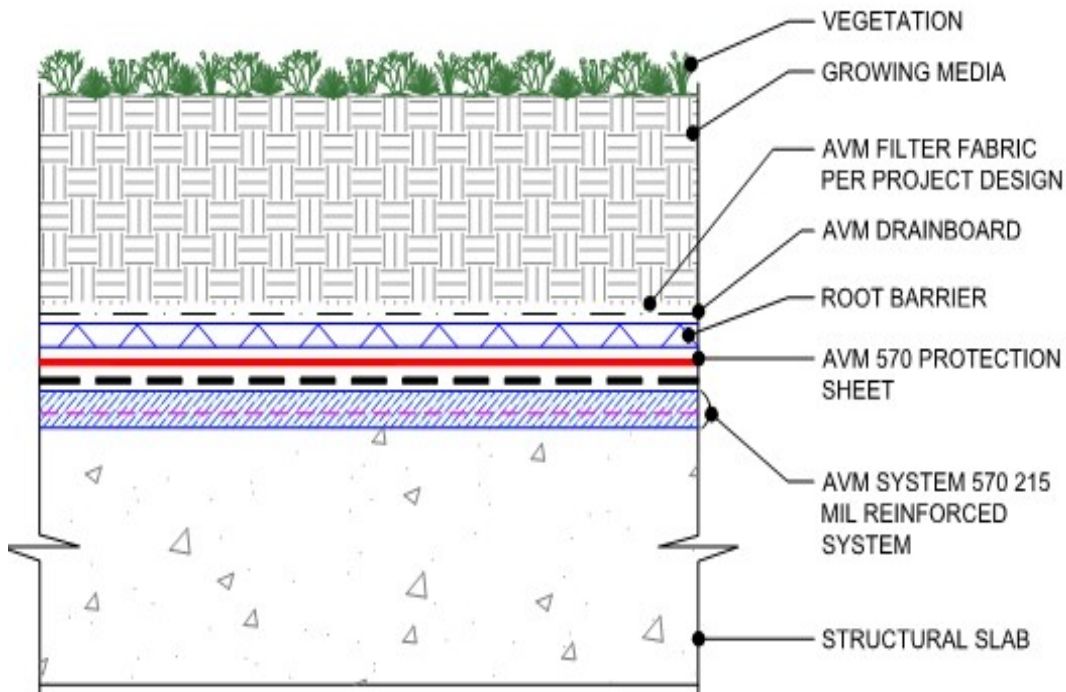
Normally, a single application of a liquid membrane curing compound is applied according to the product manufacturer's specification. However, two lighter applications applied at right angles to each other can better assure complete coverage - reducing the chances that the material will pond in some areas while being missed altogether in others. However, it is recommended that lighter application be applied when a subsequent material (like the Aussie Membrane 570 – Hot Rubber) is to be applied to the concrete.

Conventional liquid membrane curing compounds of wax or resin bases only provide a curing function, synthetic products may also harden, seal and dustproof a concrete surface. The following details these products in relationship to their use with the Aussie Membrane 570 – Hot Rubber.

Details:

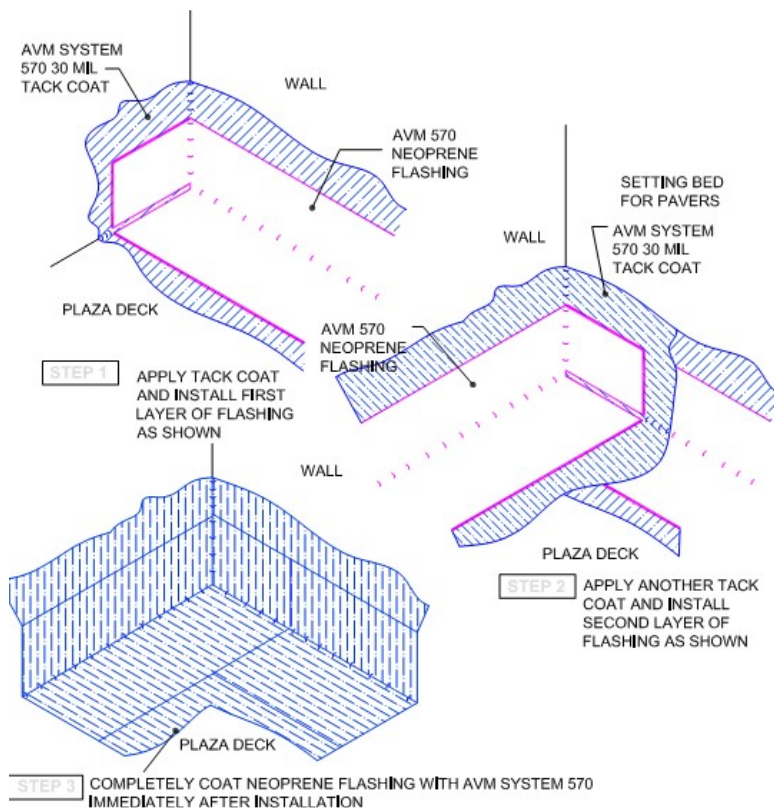


Concrete Topping Slab over Structural Slab

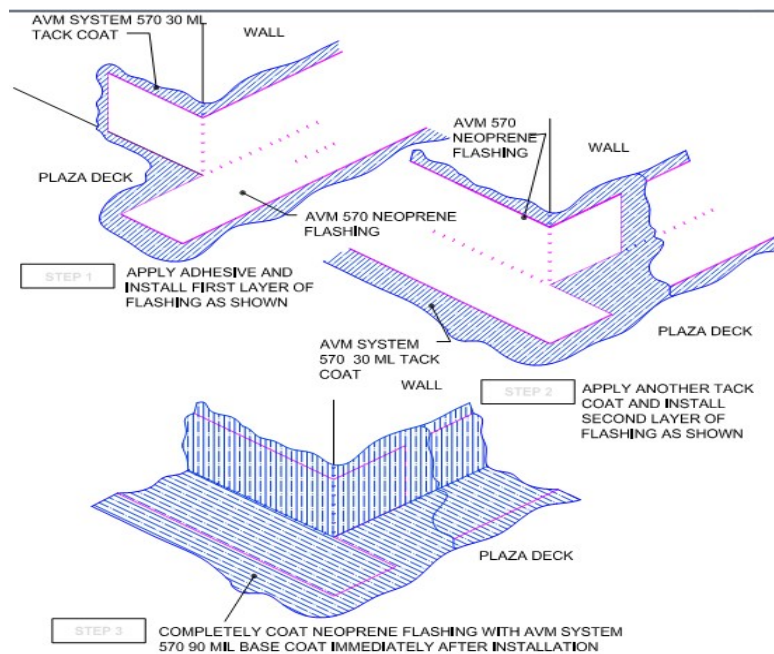


Landscaped Assembly over Structural Slab

Details:

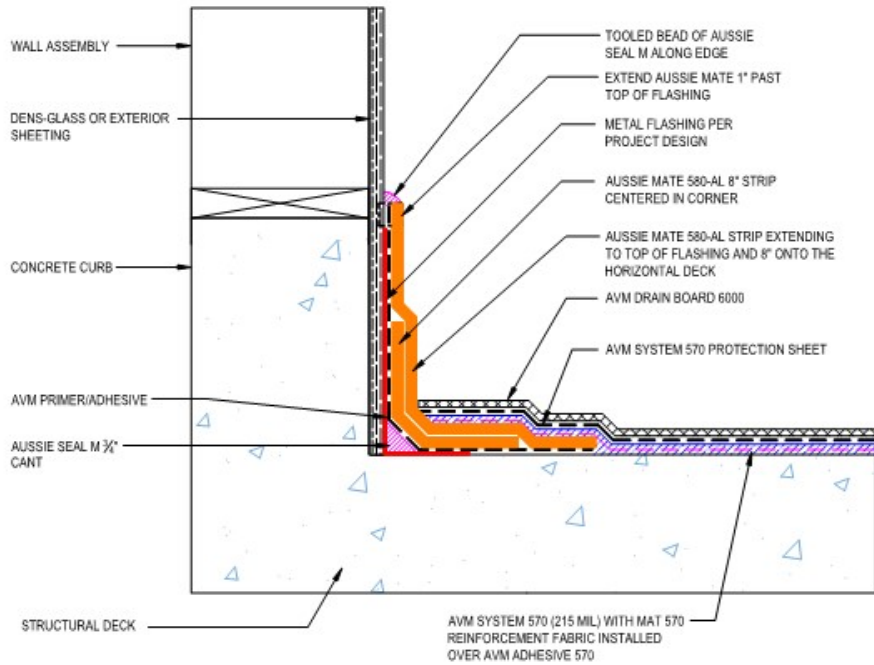


Typical Inside Corner with Neoprene Flashing

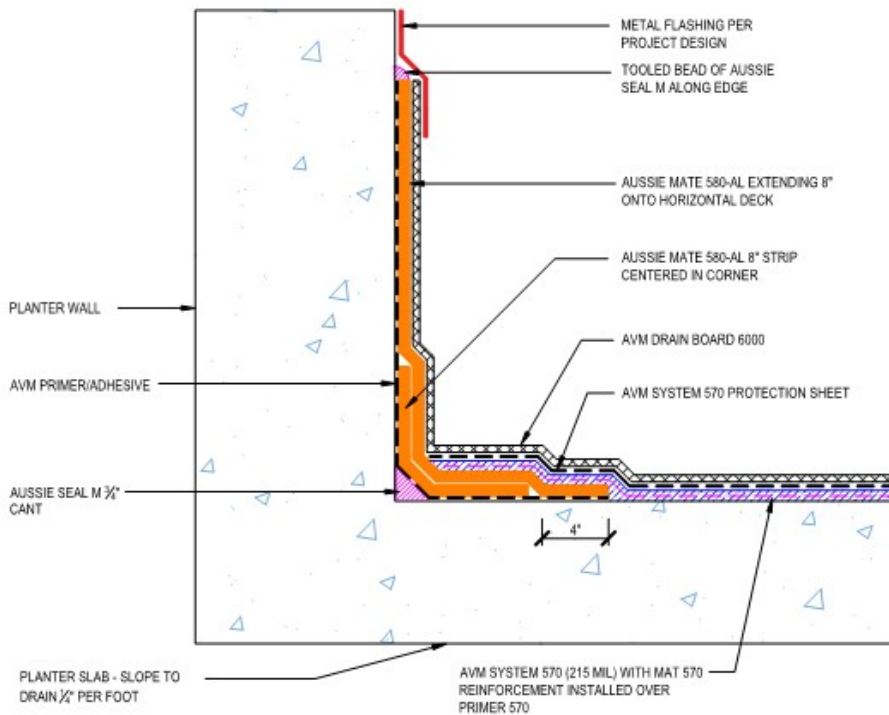


Typical Outside Corner with Neoprene Flashing

Details:

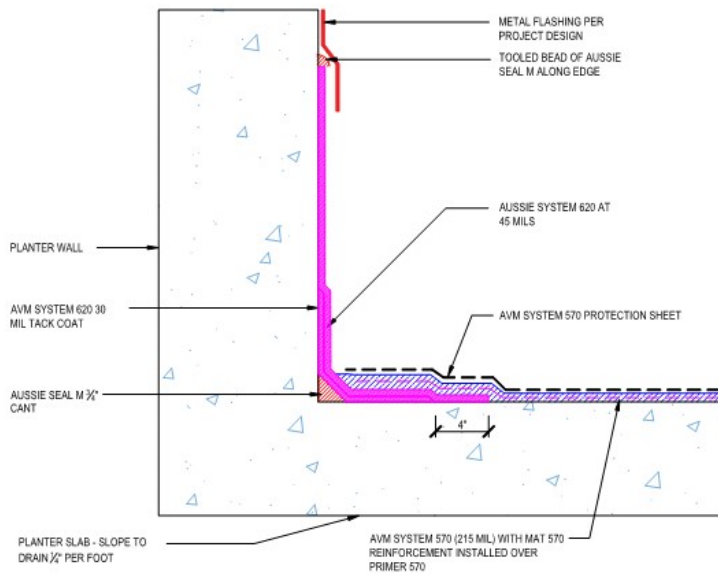


Plaza Deck Corner Transition with Aussie Mate – Option 1

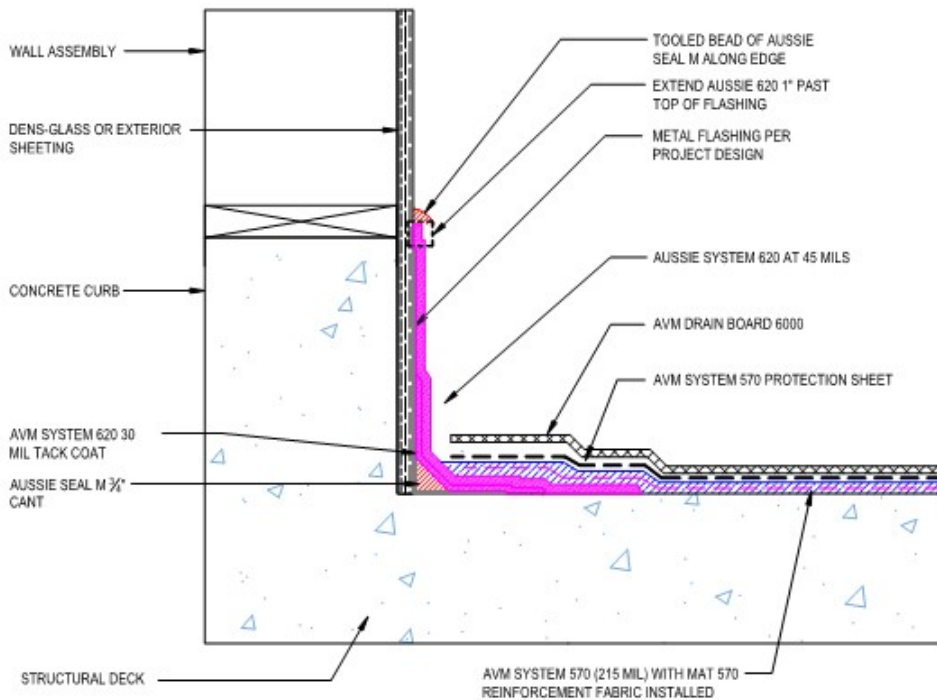


Plaza Deck Corner Transition with Aussie Mate – Option 2

Details:

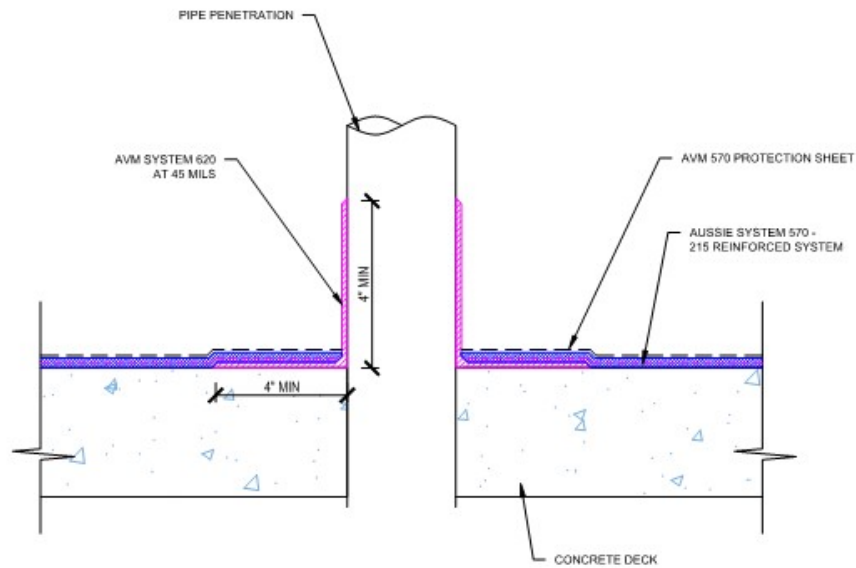


Plaza Deck Corner Transition with 620 Flashing – Option 1

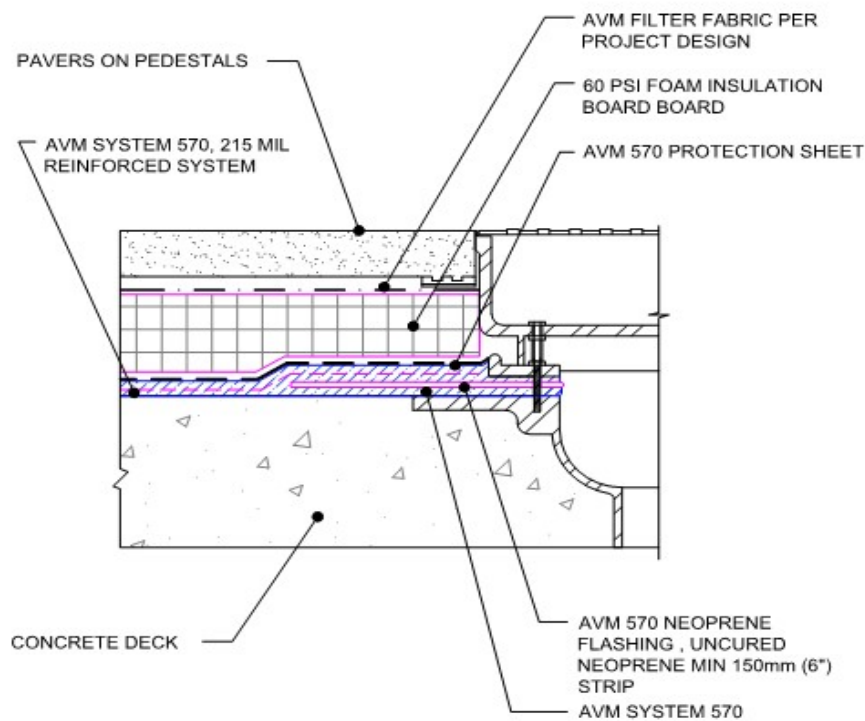


Plaza Deck Corner Transition with 620 Flashing – Option 2

Details:



Typical Pipe penetration with 620



Typical Drain Detail