

AVM SYSTEM 620V - Vehicular Traffic Coating



SYSTEM DESCRIPTION

The AVM System 620V is a two component, fast setting, rapid curing, solvent free, high performance, and high solids polyurea / urethane MMA polymer waterproofing membrane. This membrane can be used as a heavy-duty wearing surface on prepared interior or exterior concrete, under asphalt overlays, plywood and metal surfaces.

WHERE TO USE

Typical uses include vehicular concrete parking decks, mechanical rooms, or any area needing monolithic waterproofing system.

PRODUCTS & ACCESSORIES

AVM Topcoat 620-AL: Two-component, UV stable (aliphatic) hybrid polyurea waterproofing membrane topcoat. 620-AL can be used in multiple coats for the Aussie Coat 620V Vehicular traffic coating system.

AVM Epoxy Primers: Two-component, solvent- based, epoxy primer for use over concrete, plywood, metal flashings and other polyurethane and acrylic deck coatings.

Aussie Seal: Marine grade moisture cure polyether sealant used for metal flashing, cant strips, and detailing

12/20 silica sand/aluminum oxide 10-12 grit: Used as a broadcast sand/aggregate
For traction and grip as required.

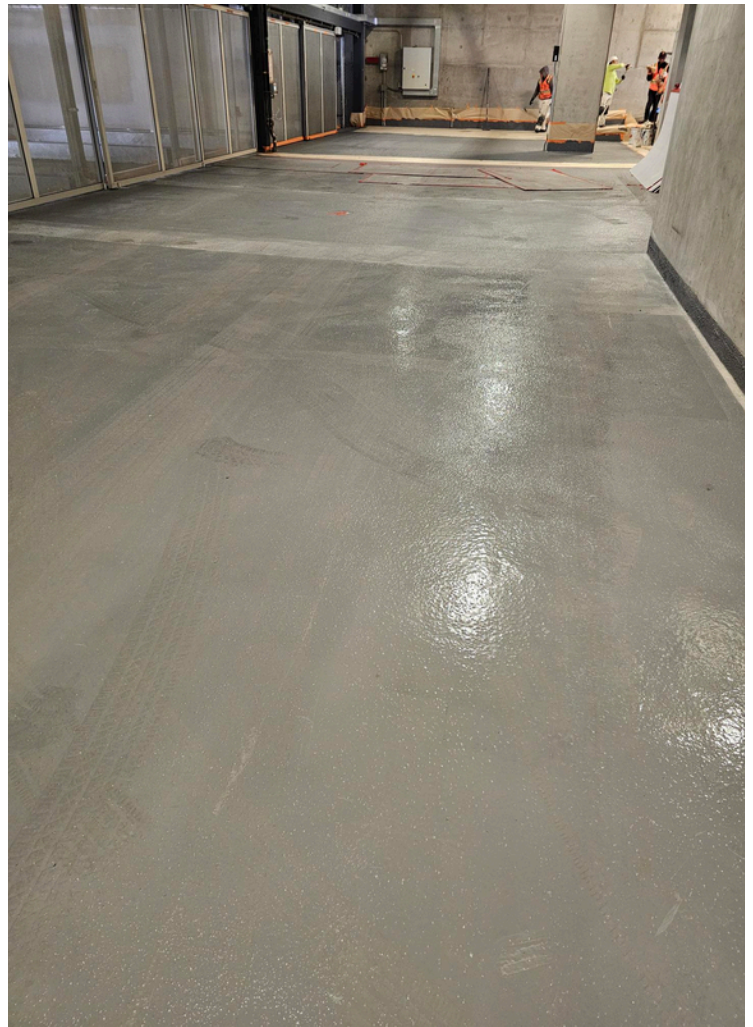
LIMITATIONS

- Do not open until ready to use. Any off ratio mixing of the product will affect the properties and the product may not cure. This product contains Isocyanates and Curative Material.
- Do not apply if precipitation is imminent during application or during curing.
- Epoxy primer may be required when substrate moisture levels are elevated
- Do not apply the membrane to waterlogged or visibly wet surfaces
- Adhesion must be verified with a properly conducted pull test prior to full application
- Install coating in descending temperatures to minimize the risk of outgassing or blistering
- Do not apply materials in direct sunlight or when ambient temperatures exceed 90 degrees Fahrenheit

DELIVERY, STORAGE & HANDLING

- Delivery of all the system materials to the job site must be in their original sealed containers and bags, with the manufacturer's name and label intact.
- Handle and store containers and bags in accordance with printed instructions.
- Store at temperatures between 50°F and 90°F.
- Keep all materials out of reach of children.
- If irritation occurs during use, liberally flush affected areas with water. If irritation continues, see a physician immediately.

The Shelf Life of **AVM System 620** is 1 Year of date of manufacture when stored in recommended conditions.



SECTION 1 – GENERAL INSTALLATION GUIDELINES

1.1 PRIMER

If an adhesion test is completed on the deck and the results determine primer is needed, review data sheets for instructions on specific primer application

1.2 PRIMING REQUIREMENTS

1. **Primer Application:** Where required, prime surfaces with AVM Primer. Allow primer to become dry to the touch but still a little tacky prior to applying the base coat.
2. **Recoat Window & Surface Prep:** If the primer is not sanded to refusal, it should be coated before it becomes tack free. If the surface has become hardened or it exceeds the recoat window, then the surface must be abraded using a 100-grit sanding pad and re-primed before proceeding.

1.3 MOISTURE

Moisture Testing

When installing a seamless coating, checking for moisture is critical to ensure proper adhesion and long-term system performance. Elevated moisture levels can cause adhesion failure, blistering, and coating degradation.

- Moisture readings must not exceed 5 lbs/1,000 sq. ft. over 24 hours per ASTM F1869.
- Regardless of moisture reading a test patch is always recommended to:
 - Confirm proper adhesion.
 - Determine if a moisture mitigation primer (420) is necessary.

1.4 MOCKUP

Establish a 100-200 sq/ft mockup area completed with the intended materials. The mockup should be approved by a project representative for functionality, slope, slip resistance, adhesion and aesthetics. Once the mockup is approved, it shall become the benchmark for the installation and finish on all the decks to be coated.

SECTION 2 – Typical Preparation

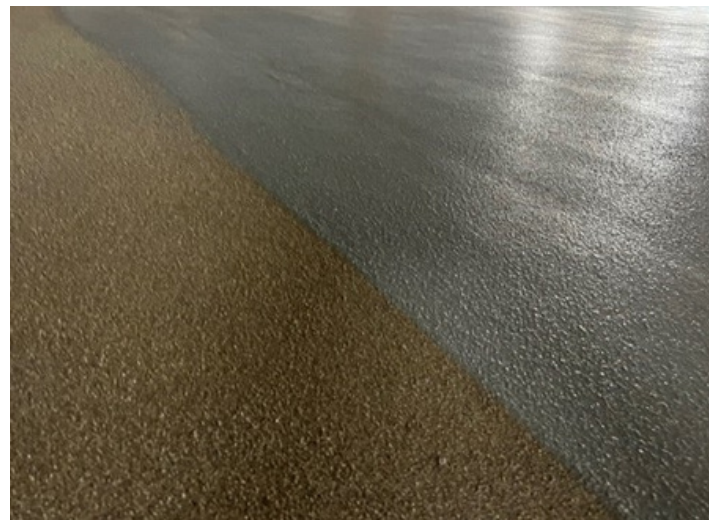
2.1 CONCRETE SUBSTRATE PREPARATION & REQUIREMENTS

1. **Curing & Strength:** Concrete must be a profile CSP3 per ICRI specifications with a minimum compressive strength of 3,000 psi.
2. **Surface Preparation:** All surface residues must be removed from the substrate. This may be achieved by shot-blasting, bead-blasting or mechanically grinding the surface.
 - Concrete substrate shall be a profile of CSP-3 per ICRI specifications
 - The surface must be clean and free of all contaminants, including mold, paint, sealers, existing coatings, or curing agents that may interfere with adhesion.
 - AVM Epoxy Primer may be required depending on substrate conditions.
3. **Surface Defects:**
 - Spalled areas/voids must be repaired using AVM Crete 6400 or polymer modified exterior grout.
 - All surface imperfections such as ridges, fins, or other defects must be ground down to prevent telegraphing through.
4. **Drains**
 - Must be clean, operational, and recessed below the deck surface. As per standard industry practice, all deck surfaces shall be sloped at a minimum of 1/4" per foot to drain to ensure proper water runoff.
 - Drain types vary by location, substrate and waterproofing membrane type. Contact AVM for appropriate drains to be used.

2.2 DETAILING REQUIREMENTS

1. **Horizontal-to- Vertical Transitions:** Install a sealant cant at all horizontal-to-vertical junctions using Aussie Seal or an AVM-approved sealant. Follow with a 25-mil detail coat of Aussie Membrane 520.
2. **Crack Treatment - Pending system method install (<1/16"):** All non-moving cracks less than 1/16" wide shall be sealed using Aussie Seal or an AVM-approved sealant prior to installation of the full waterproofing system.
 - Shrinkage cracks greater than 1/16" in width must be ground out to a minimum of 1/4" wide by 1/2" depth filled with AVM approved sealant and reinforced with 6" AVM mat 800 polyester followed by a detail coat of 15 mils 520/620 pending method of application of Aussie Membrane 520

- For cracks larger than 1/4" wide, moving cracks or expansion joints contact your AVM Representative
- 3. **Expansion/Movement Joints:** All expansion or moving joints must be honored using appropriate backer rod and sealed with an AVM-approved sealant for specific recommendations contact your local AVM Representative.
- 4. **Cure Time:** Approx 1 hour pending temperatures and site conditions
- 5. **Metal Flashing Specification:** A minimum 26-gauge bonderized (preferred) L-metal flashing shall be installed at all deck-to-wall transitions when applying the AVM 620P System from a concrete deck to sheathing.
 - Over concrete L Metal flashing shall be wet set in urethane sealant and fastened as needed to lie flat
 - Over Plywood L metal flashing shall be wet set in urethane sealant and fastened every 4-6" staggered to lie flat
- 6. **Surface Preparation for Non-Bonderized Metal:**
 - If bonderized metal is not used, all metal surfaces shall be properly abraded to fully remove oils, coatings, and any paint to ensure proper adhesion of the waterproofing system.
 - A 6" wide strip of AVM mat 800 may be installed at flashing edge to help transition and prevent metal from telegraphing through coating.



SECTION 2 – Typical Preparation

2.3 SLOPE PREPARATION

1. Concrete Substrates: If an additional slope is required over concrete substrate, use AVM Crete 6400 as needed to create the necessary pitch for proper drainage.
2. Plywood Substrates: When sloping is required over plywood, install a 1/4" thick layer of AVM Crete 6400 reinforced over 2.5 lb galvanized metal lath prior to the application of the AVM 620P system.

2.4 PARGE COAT

Where the concrete substrate is uneven or contains surface imperfections such as divots, a parge coat of Crete 6200/6400 shall be applied to achieve a smooth and level surface suitable for subsequent installation

2.5 TEST PATCH APPLICATION

Before the application of any seamless coating system, a test patch area must be completed under site conditions.

The test patch should be used to:

- Evaluate adhesion to the prepared substrate
- Verify compatibility of system components
- Assess appearance (color, gloss, and texture)
- Confirm cure time and workability
- Identify potential substrate or environmental issues

SECTION 3 – Typical Installation

3.1 APPLICATION

Mixing –

1. Using a mechanical mixer, premix Part-A & Part-B of 620AL separately for 1-2 minutes to obtain a uniform color, making sure to scrape the solids from the bottom and sides of both containers.
2. Pour Part-B into Part-A slowly and while mixing, scrape the sides of the bucket.
3. Mix the combined Part-A and Part-B for 2-3 minutes from bottom to top until a uniform color is obtained.

3.2 The Methods for Installation

Method 1 – 620AL/620AL (5 year warranty)

1. Base Coat Application

- Apply AVM 620AL mixed material in a continuous stream along the short side of the podium/deck/parking structure using a notched squeegee, spread the material evenly at a rate of 80sf per gallon at a minimum of 20 dry mils (approx. 22 wet mils)

2. Aggregate Layer/Intermediate Layer

- Once basecoat is firm enough to prevent the sand from sinking- typically 10-15 minutes after initial application -broadcast 12/20 silica sand to refusal (approx. 15-20lbs per 100sf) evenly into the basecoat. Ensure no wet spots are visible
- Allow the base coat to cure approx. 60 minutes (pending temperatures and jobsite conditions) prior to the installation of the topcoat sweep/vacuum all loose or unbound sand. Do not allow coating to begin setting prior to broadcasting sand. It may initiate within 15 min

3. Topcoat Application

- Apply a second coat of 620AL over the previous layer at a rate of 60-80sf per gallon (coverage may vary based on jobsite conditions). Ensure a minimum thickness of 20 dry mils (approximately 22 wet mils.)

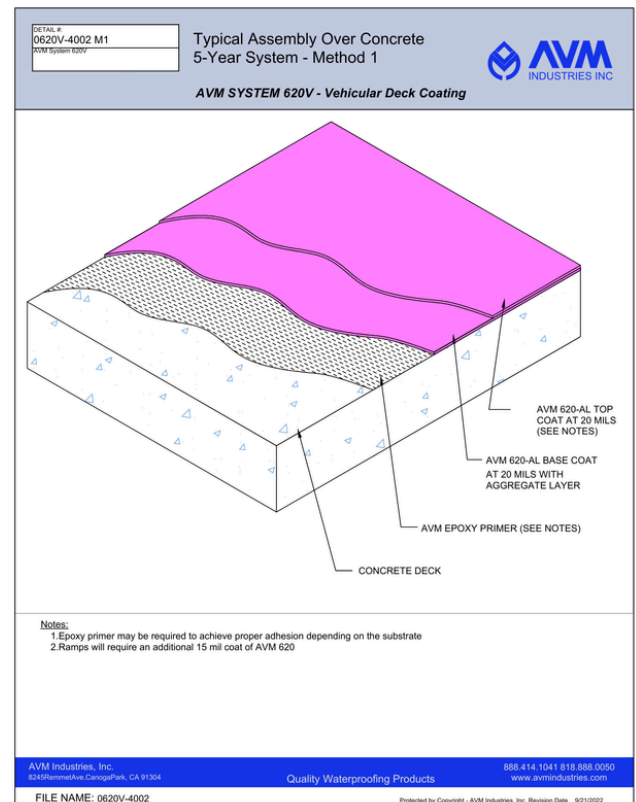
Broadcast additional sand at turn radii and ramps at approx. 10-15lbs per 100 SF. Avoid over encapsulation of aggregate.

Turn radii and ramps:

At all turn radii and ramps a 3rd coat of 620AL is required.

After 2nd coat has completely cured install a 3rd coat in these areas at a rate of 105 sf per gallon and a minimum 15 dry mils (approx. 17 wet mils)

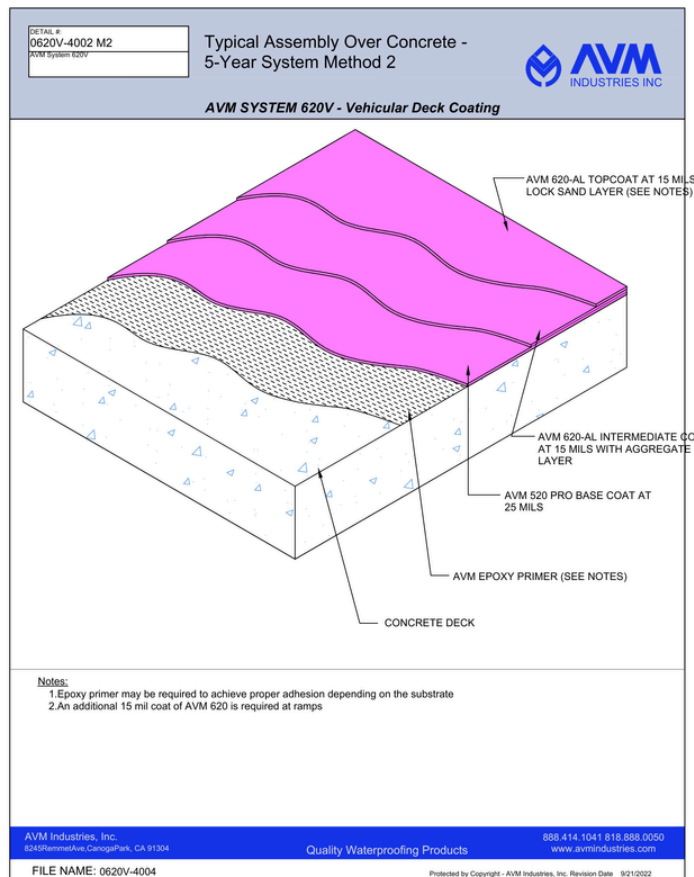
- Take care to avoid puddling and ensure even coverage throughout.
- Grid area to ensure the adequate amount of material is applied in designated sections



SECTION 3 – Typical Installation

Method 2 – 520 Pro/620AL/620AL (5 year warranty)

1. Base Coat Application.
 - Apply AVM Aussie Membrane 520 at 25 dry mils (approx. 27 wet mils)
 - Allow a minimum of 12 hours, or until fully cured, before proceeding.
2. Intermediate aggregate broadcast
 - Apply AVM 620-AL Coat using a trowel, or notched squeegee (**for best results**) at 15 dry mils (approx. 17 wet mils) Apply uniformly at a rate of 90 sq. ft. per gallon
 - While the 620-AL is still wet, broadcast 12/20 mesh sand to refusal (approximately 15–20 lbs per 100 sq. ft.) across the entire surface. Ensure full coverage, leaving no wet spots.
 - Do not allow the coating to begin setting prior to broadcasting. Curing may initiate in as little as 15 minutes, depending on temperature and environmental conditions. Allow the broadcast layer to be cured for a minimum of 30 minutes, depending on weather conditions.
3. Clean Up Loose Aggregate
 - Once the coating has cured, sweep and/or vacuum all loose or unbound aggregate.
4. Topcoat Application
 - Apply AVM Top Coat 620-AL using a trowel, or notched squeegee (**a phenolic core roller may be used but extra care should be taken to prevent air bubbles**). Apply in a uniform coat at a minimum rate of 15 dry mils (17 wet mils)
 - **Broadcast additional sand at turn radii and ramps at approx. 10-15lbs per 100 SF**
5. Turn radii and ramps
 - At all turn radii and ramps a 4th coat of 620AL is required.
 - After 3rd coat has completely cured install a 4th coat in these areas at a rate of 105 sf per gallon and a minimum 15 dry mils (approx. 17 wet mils)
 - Ensure even coverage, avoiding puddling.
 - Avoid over encapsulation of aggregate.



SECTION 3 – Typical Installation

Method 3 – 620AL/620AL/620AL (10 year Warranty)

1. Base Coat Application

- Apply AVM 620AL mixed material in a continuous stream along the short side of the podium/deck/parking structure using a notched squeegee, spread the material evenly at a rate of 80sf per gallon at a minimum of 30 dry mils (approx. 32 wet mils)

2. Intermediate aggregate broadcast

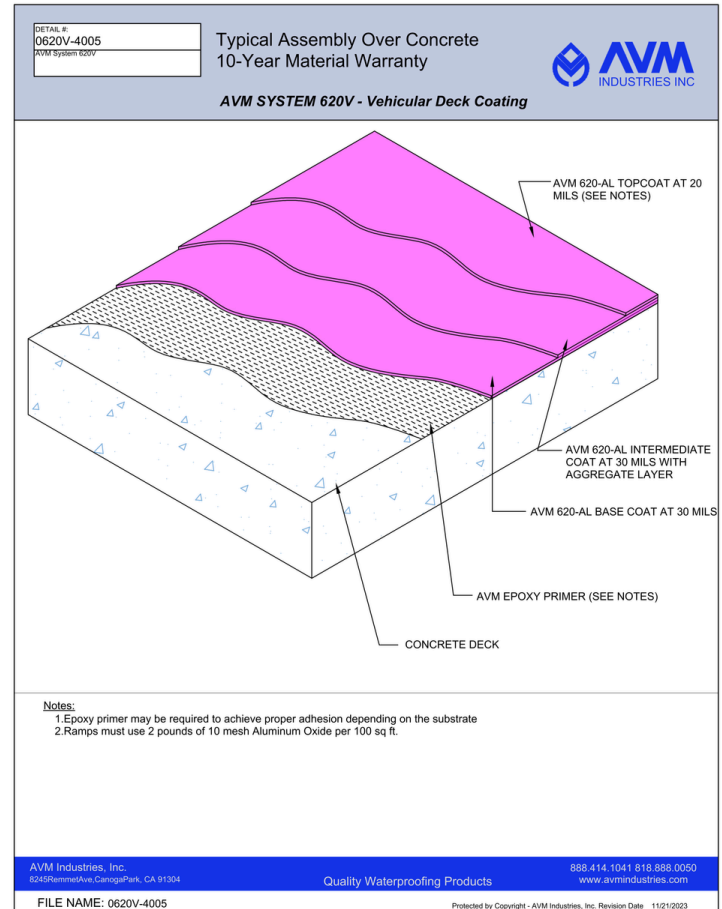
- Apply AVM 620-AL Coat 30 dry mils (approx 32 wet mils) using a trowel, or notched squeegee (for best results) at 30 dry mils (approx 32 wet, apply uniformly at a rate of 50 Sq. ft per gallon)
- While the 620-AL is still wet, broadcast 12/20 mesh sand to refusal (approximately 15–20 lbs per 100 sq. ft. but can suspend aggregate) across the entire surface. Ensure full coverage, leaving no wet spots.
- **All ramps require 10-12 mesh aluminum oxide (The use of Aluminum Oxide is recommended in all freeze/thaw regions)**
- Do not allow the coating to begin setting prior to broadcasting or where more coarse aggregate is required. Curing may initiate in as little as 15 minutes, depending on temperature and environmental conditions. Allow the broadcast layer to be cured for a minimum of 60 minutes, depending on weather conditions.

3. Clean up loose aggregate

- Once coating has cured, sweep and/or vacuum all loose or unbound aggregate

4. Topcoat Application

- Apply AVM Top Coat 620-AL using a trowel, or notched squeegee (a phenolic core roller may be used but extra care should be taken to prevent air bubbles). Apply in a uniform coat at a minimum rate of 20 dry mils (22 wet mils) approx 80 sf per gallon
- Avoid over encapsulation of aggregate.



Aussie Coat 620V Technical Information

Property	Results	Test Method
Specific Gravity	Side A: 1.05 ± 0.1 Side B: 0.99 ± 0.1	
Hardness	80 ± 3	ASTM D-2240 Shore A
Pot Life (min @ 75°F [24°C], 50% RH)	15 ± 5 minutes	
Tack Free Time	3-4 Hours	
Tensile Strength	2500 ± 100 pli (17.2 ± 0.7 kN/m)	ASTM D-412
Elongation	800 ± 100%	ASTM D-412
Tear	300 ± 25 pli (52.5 ± 4.4 kN/m)	ASTM D-624
Viscosity, at 75°F (24°C)	Side A: 1500-2500 cps Side B: 50-150 cps	
Total Solids by Volume	97%	ASTM D-2697
Volatile Organic Compounds	<0.49 lbs/gallon (59 gm/liter)	ASTM D-2369-81

Packaging

Item	Packaging	Approx Shipping Weights	No. of Kits per Pallet	Pallet Weights	VOC
520 5-Gal Bucket	5 Gallons	60 Lbs	36 Buckets/Pallet	4050 Lbs	75 g/l
620-AL 1 Gal Kit Part-A	0.8 Gallon	9 Lbs	180 Part-A on Pallet 1	1,680 Lbs	0.00 lb/gal
620-AL 1-Gal Kit Part-B	0.2 Gallon	21 Lbs	180 Part-B on Pallet 2	465 Lbs	0.00 lb/gal
620-AL 5-Gal Kit Part-A	4 Gallons	45 Lbs	48 Part-A on Pallet 1	2,220 Lbs	0.00 lb/gal
620-AL 5-Gal Kit Part-B	1 Gallon	11 Lbs	48 Part-B on Pallet 2 (12 Boxes)	598 Lbs	0.00 lb/gal

Coverages

Item	Coverage Rate
AVM 520 - Applied as a Base Coat Layer at 24 Dry Mil Thickness	67 sqft/gal
AVM 620-AL Aliphatic @ 30 Mils	55 sqft/gal
AVM 620-AL Aliphatic @ 20 Mils	80 sqft/gal
AVM 620-AL Aliphatic @ 15 Mils	105 sqft/gal

Note: These are theoretical coverage rates and may vary depending on substrate types or if used as a topcoat over sand.

AVM Epoxy Primer 401 Technical Information

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

Material	Over Concrete or Metal Surfaces	Over wood, sealed or textured surfaces	Over Porous Surfaces (CMU)
AVM Epoxy Primer 401	300 sq. ft./gal.	250 sq. ft./gal	150 sq.ft./gal

Packaging:

Item / Component	Packaging	Approx Shipping Weights	VOC
2 Gal Kit (Epoxy Primer 401)			
AVM Primer 401 Part A	1 gal.	11.0 lbs.	90 Grams/Liter
AVM Primer 401 Part B	1 gal.	16 lbs.	90 Grams/Liter

Technical Properties:

Physical property	Results	Test Method
Pot Life 75° @50% RH	60-90 minutes dry film	
Dry Film Thickness Per Coat	4±1 mil A-Side: 1.27±0.1	
Specific Gravity	B-Side: 1.85±0.1 90% ±2% 84%±2%	
Total Solids by Weight	0.75 lbs/gal (90 g/L)	ASTM D-2369
Total Solids by Volume		ASTM D-2697
Volatile Organic Compounds		ASTM D-2369-81

AVM System 520 Technical Information

Technical Information	Test Method	Test Results
Color		Gray
Solid Content		≥ 95%
VOC Content		75 g/L
Low Temperature Flexibility		No Cracking at -40° (-40°C)
Tensile Strength		2.79 MPa (405 psi)
Elongation at break		726%
Tearing Strength		15 N/mm
Water Impermeability (at .03 MPa, 30 mins)		Impermeable
Resistance to Water	ASTM D 2939	PASS
Low Temperature Crack Bridging	ASTM C836	PASS
Extensibility After Heat Aging	ASTM C836	PASS
Adhesion Strength	ASTM C836	17 lbf/in
Remains in Place During Application	ASTM C 836	PASS (2 coats vertical @ 30 mils wet)
Resistance to Decay (Requirement: ≤ 10%)	ASTM E154-99	5% change
Water Vapor Transmission (Requirement: ≤ 1)	ASTM E96-13	.67 perms
Hydrostatic pressure over 1/8" crack	ASTM 1306-95	17.5 psi
Service Temperature		-25°F to 177° F (-31°C to 80°C)
Application Temperature		40° to 100° F (4°C to 38°C)
Tack Free Time (hours) ¹		≤ 10 hrs.
Curing Time (hours) ²		≤ 20 hrs.

1. Based on controlled tests. Tack free times vary based on thickness, temperature, humidity, and other job conditions.

2. Based on controlled tests. Cure times vary based on thickness, temperature, humidity, and other job conditions.

AVM's Aussie Membrane 520 material was evaluated for compliance with ICC-ES AC29:

Acceptance Criteria for Cold, Liquid-Applied, Below-Grade, Exterior Dampproofing and Waterproofing Materials.

Coverages (Varies depending on substrate)	Thickness
125 sq/ft per 5gal pail	60 mils

Item/Component	Packaging	Approx. Shipping Weights	Qty / Pallet	Weight / Pallet	Pallets/ Truck	VOC
Aussie Membrane 520	5-Gal Pail	60 lbs.	36	2260 lbs	20	75 g/L

of pallets per truck varies if shipped to or in USA or to or in Canada and/or if shipped in a shipping container or standard truck. Qty/Truck listed above shows maximum pallets per 40 GP shipping container shipped in or to the USA. Call AVM for details.



Aliphatic Top Coat Colors

Standard Color (Stocked Item) : Medium Gray
All other colors are special order



Dark Gray



Medium Gray



Light Gray



Chocolate



Ash Brown



Brick Red



Dark Tan



Tan

Note: Colors shown are as accurate as possible. Applied color appearance may vary due to surface texture, lighting, size, shape, method of application and adjacent colors. AVM Industries, Inc. reserves the right of reasonable variation. Colors might vary from batch to batch. Custom colors and color matching are available subject to extra charge and minimum order quantities.