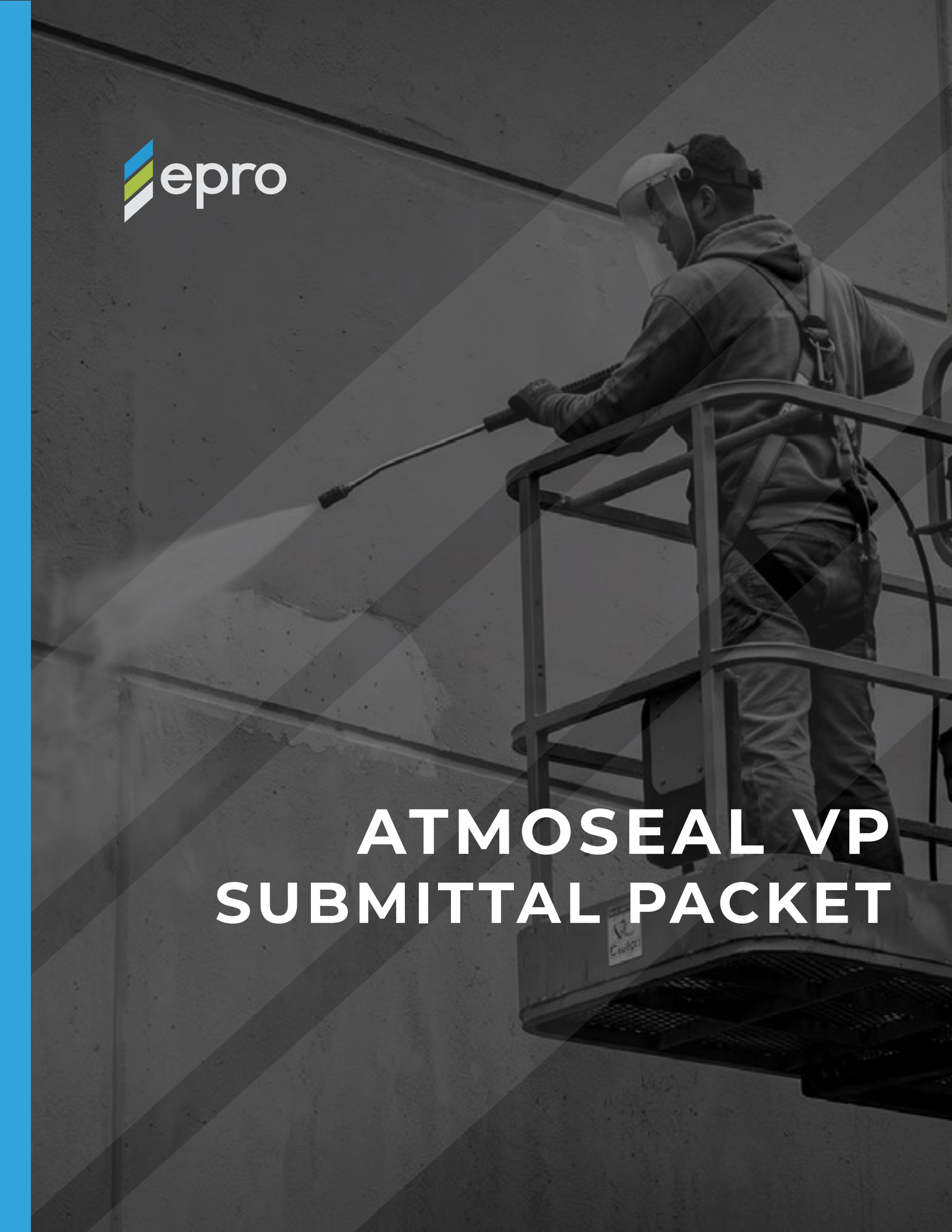
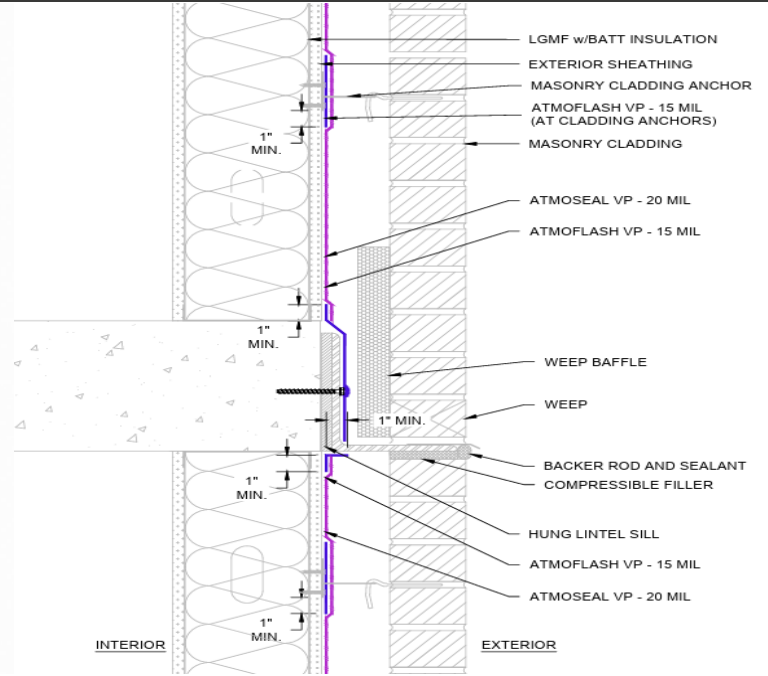
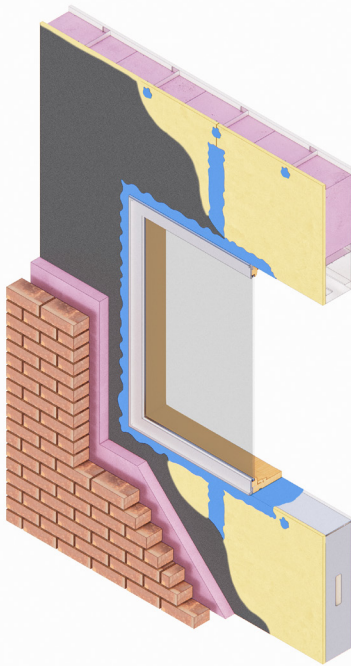


A black and white photograph of a worker in a full-body protective suit and a clear face shield. The worker is standing on a metal scissor lift, holding a high-pressure spray wand and directing a powerful stream of white spray onto a light-colored wall. The background is a plain, textured wall. The entire image is overlaid with a semi-transparent dark grey geometric pattern consisting of several diagonal lines.

ATMOSEAL VP SUBMITTAL PACKET



System: AtmoSeal VP

Application: STPE Permeable Liquid-Applied Air and Water Barrier | Minimum System Thickness: 20 mils

SYSTEM AT A GLANCE

Product	Description	Application	Unit Volume	Application Thickness and Coverage
AtmoSeal VP	Single-component, vapor-permeable, silyl-terminated polyether (STPE), fluid-applied air barrier membrane.	Field membrane	5 gallon pail 55 gallon drum	20-25 mils (WFT=DFT) 64-80 ft ² per gallon depending on substrate porosity
AtmoFlash VP	Single-component, vapor-permeable, silyl-terminated polyether (STPE), flashing and detailing compound for air barrier applications.	Detailing	20 oz. sausages	12-15 mils (WFT=DFT) Sheathing joints, 1" extension each side: 100-125 lf Fastener heads (2-3/8" dia. spot): 450-500 Transitions/corners, 4" band: 50-63 lf Detail surface: 17-21 ft ²

DESCRIPTION

The AtmoSeal VP System is a solvent-free fluid-applied, vapor-permeable air and water barrier for above-grade wall assemblies, consisting of AtmoSeal VP spray or roller-applied STPE membrane and AtmoFlash VP gun-applied STPE flashing and detailing compound. AtmoSeal VP cures to a seamless, flexible membrane that resists air leakage and bulk water intrusion while permitting outward drying, bonds to most common construction substrates including damp surfaces without priming, and may remain exposed to UV for up to 12 months. AtmoFlash VP maintains barrier continuity at rough openings, joints, transitions, penetrations, and terminations.

BENEFITS

- Field membrane exceeds 20 perms at 20 mil thickness (DFT) allows the wall assembly to breathe, limiting the potential for trapped moisture.
- Adheres to and cures on damp substrates and can be applied in wet weather, reducing construction delays.
- Meets the most demanding commercial code requirements. ASTM E84 Class A, AAMA 714-19, and compatible with NFPA 285 wall assemblies.
- Wet mil thickness is dry mil thickness, no loss of material during cure.
- Solvent and isocyanate free. Contains less than 21g/L VOC.
- UV exposure limit of up to 12 months in any climate.

LIMITATIONS

- Not for use below-grade or in locations that may be continuously immersed in water.
- Not recommended for application to insulated concrete forms (ICF).
- Adhesion testing recommended for application with asphaltic and butyl sealants and adhesives.

SPECIFICATIONS, DRAWINGS, AND TECHNICAL ASSISTANCE

The most current specifications and drawings can be found on www.eproinc.com. For project specific details contact EPRO directly, or the local EPRO representative.

Site conditions, performance goals, and budget determine which system is more appropriate for a given project. For more information regarding product performance, testing, plan review, or general technical assistance, please contact EPRO.

WARRANTY

EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this system to be free from defects. EPRO makes no other warranties with respect to this system, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO's liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

TYPICAL PHYSICAL PROPERTIES

Physical Property	Test Method	Value
Film Color (AtmoSeal VP)		Dark Gray
Solids Content		99%
Temperature Resistance		248 F (120 C)
Sag up to 60 mils WFT		Negligible
UV and Weather Resistance		Excellent
Skin Time		40–50 minutes ¹
Water Vapor Transmission	ASTM E 96	20.5 perms ²
Hardness, Shore A	ASTM C 661	21
Tensile Strength	ASTM D 412	180 psi (1.24 MPa)
Elongation at Break	ASTM D 412	230%

¹at 70°F (21°C) and 50% RH

²Water vapor transmission tested at 20 mil DFT film thickness.

ABAA S0008-2021: STANDARD FOR AIR AND WATER RESISTIVE BARRIERS – FLUID APPLIED MEMBRANE – MATERIAL SPECIFICATION

Physical Property	Test Method	Criteria	Results
Water Vapor Transmission	ASTM E 96 (Wet Cup)		20.5 perms
Water Vapor Transmission	ASTM E 96 (Dry Cup)		13.6 perms
Air Permeance	ASTM E 2178	≤0.004 cfm/ft ² at 1.57 psf	0.001 cfm/ft ² at 1.57
Alkali Resistance	ASTM D 543	No deleterious effects	Pass
Elongation at Break	ASTM D 412	≥200%	Pass
Tensile Strength	ASTM D 412		180 psi
Freeze Thaw Resistance	ASTM E 2485	No surface changes	Pass
Fungi Resistance	ASTM C 1338	No growth	Pass
Gap Bridging	ABAA T0004	No surface changes	Pass
Low Temperature Flexibility	ASTM D 522	No surface changes	Pass
Peel Adhesion to Concrete	ASTM C 794	≥5 pli	Pass
Pull Adhesion	ABAA T0002	≥16 psi	Pass
Water Absorption by Diffusion	ASTM C1498		1.2%
Water Resistance	ASTM D2247	No surface changes	Pass

ASTM E84: SURFACE BURNING CHARACTERISTICS (CLASS A)

Physical Property	Test Method	Criteria	Results
Flame Spread	ASTM E 84.....	≤25	Pass
Smoke Developed	ASTM E 84.....	≤450	Pass

NFPA 285 COMPLIANCE

The AtmoSeal VP system is compliant with multiple wall assemblies. Consult the AtmoSeal VP NFPA Reference Sheet for additional information.

AAMA 714-19: Voluntary Specification for Liquid-Applied Flashing used to Create a Water-Resistive Seal around Exterior Wall Openings in Buildings - AtmoSeal VP

Physical Property	Test Method	Criteria	Results
Adhesive Strength to Substrates.....	ASTM C 794.....	≥5 pli	Pass
Water Penetration Around Nails.....	ASTM D1970	1.2 in (31 mm) of water.....	Pass
Water Vapor Permeability.....	ASTM E 96.....	≥10 perms at application thk	Pass
Elevated Temperature.....	AAMA 711, ASTM C794.....	≥5 pli	Pass
Thermal Cycling.....	AAMA 711, ASTM C794.....	≥5 pli	Pass
Water Immersion	AAMA 711, ASTM C794.....	≥5 pli	Pass
Accelerated UV Aging	ASTM G154, ASTM C794.....	≥5 pli	Pass
Crack Bridging.....	ASTM C1305	550mm 24hr with 1/16" crack	Pass

ASTM E2357: Standard Test Method for Determining Air Leakage of Air Barrier Assemblies

Physical Property	Test Method	Criteria	Results
System Air Leakage	ASTM E 2357	≤ 0.2 L/s.m ² at 75 Pa	Pass
System Air Leakage	ASTM E 2357	≤ 0.04 cfm/ft ² at 1.57 psf.....	Pass



AtmoSeal VP

Product Description

Basic Use: AtmoSeal VP is a single-component, vapor-permeable, silyl-terminated polyether (STPE), fluid-applied air barrier membrane. Spray or roller-applied, AtmoSeal VP prevents penetration of unwanted water and air through the building envelope while permitting outward drying of the wall assembly.

AtmoSeal VP bonds to most common building materials without priming, including damp substrates to form a seamless, flexible membrane. Environmentally adaptable, AtmoSeal VP can be applied in wet weather and be left exposed to UV up to 12 months.

Composition: AtmoSeal VP is a single-component, silyl-terminated polyether (STPE) based fluid-applied membrane. It is solvent free and isocyanate free. The formulation cures via moisture-activated condensation of silyl end groups, cross-linking to form a flexible elastomeric matrix. Contains less than 21g/L VOC.

Benefits

- Exceeds 20 perms at 20 mil thickness allows the wall assembly to breathe, limiting the potential for trapped moisture.
- Adheres to and cures on damp substrates and can be applied in wet weather, reducing construction delays.
- Meets the most demanding commercial code requirements. ASTM E84 Class A, AAMA 714-19, and compatible with NFPA 285 wall assemblies by engineering evaluation.
- Wet mil thickness is dry mil thickness, no loss of material during cure.
- Compatible with all EPRO below-grade waterproofing systems for complete warrantable building envelope protection from the ground up.
- Easily conforms to irregular substrates and penetrations to form a seamless, elastomeric air barrier membrane.
- Solvent and isocyanate free.
- Single component, spray or roller applied - no mixing multiple components.
- UV exposure limit of up to 12 months in any climate.

Limitations

- Not for use below-grade or in locations that may be continuously immersed in water.
- Not recommended for application to insulated concrete forms (ICF).
- Adhesion testing recommended for application with asphaltic and butyl sealants and adhesives.

Technical Data

Properties: See Typical Physical Properties table.

Storage and Handling: Store in a cool, dry place with containers

tightly sealed when not in use. Keep away from open flames and sources of ignition. Do not freeze. Do not alter or mix with other materials.

Shelf Life: AtmoSeal VP may be stored for 18 months in a closed, unopened container at temperatures between 41–86°F (5–30°C).
Packaging: 5-gallon pails and 55-gallon drums.

Specification Writer: Contact EPRO before writing specifications for this product. System selection should be reviewed in order to meet project-specific site conditions.

Installation

Preparation: Review all substrate conditions and manufacturer specifications before beginning work. Address any deficiencies prior to application.

Substrate Preparation: All surfaces must be structurally sound, clean, and free of contaminants that may inhibit adhesion, including dust, debris, oils, waxes, form release agents, and surface coatings. When adhesion to asphaltic or butyl-based materials is required, compatibility testing is recommended prior to application.

Exterior Sheathing (Gypsum, OSB, Plywood): Inspect and replace any damaged or improperly fastened sheathing before proceeding. All joints, seams, and fastener heads must be treated with AtmoFlash VP prior to field application of AtmoSeal VP.

Concrete: Allow a minimum 7 day cure before application. Surfaces must be free of curing compounds and form release agents. Fill bug holes, honeycombing, and surface voids with appropriate cementitious filler and allow to cure fully before proceeding.

CMU: Allow mortar joints a minimum 3-day cure before application.

Wood: Where wood framing is exposed at sheathing interfaces, surface residues from chemical treatment in pressure-treated and fire-retardant lumber can interfere with adhesion. Wipe affected surfaces with isopropyl alcohol and allow to fully evaporate before application.

Coverage: Yield will vary with substrate porosity, surface condition, and application method. At the recommended thickness of 20–25 wet mils, estimated coverage is 64–80 ft² per gallon with no waste allowance. Highly porous substrates will reduce yield. Establish actual coverage rates through project mock-up prior to full application.

Air Temperature: Optimal application range is 40°F (4.4°C) and rising to 95°F (35°C). Application is possible from 20°F (–7°C) to 110°F (43°C) with appropriate precautions. Contact EPRO for project-specific guidance below 20°F (–7°C). Refer to the AtmoSeal VP Application Guidelines for cold and hot weather procedures.

Substrate Temperature: Optimal substrate temperature is



AtmoSeal VP

40°F (4.4°C) and rising. Application is possible at substrate temperatures below 40°F (4.4°C) and up to 110°F (43°C) with appropriate precautions. Never apply to frozen or frost-covered substrates. Substrates exceeding 95°F (35°C) may be cooled with a light mist of clean water immediately before application. Refer to AtmoSeal VP Application Guidelines for detailed temperature recommendations.

Application: AtmoSeal VP may be spray applied using a commercial direct immersion airless sprayer capable of maintaining a minimum of 3,500 psi at the tip, or roller applied using a standard 3/4-inch nap roller. Contact EPRO for spray equipment recommendations. For hose runs exceeding 200 ft, use a minimum 1/2" ID hose rated at 4,000 psi or greater.

Complete all AtmoFlash VP detailing at joints, seams, fastener heads, rough openings, penetrations, and transitions before beginning field application. Allow AtmoFlash VP to skin over before applying AtmoSeal VP. Maintain a minimum 2-inch overlap of AtmoSeal VP onto all AtmoFlash VP-treated areas.

Apply at 20–25 wet mils using consistent, overlapping passes to achieve a uniform, continuous film. Following application, examine the membrane carefully for pinholes, voids, or discontinuities and address immediately. Highly porous substrates may require additional passes to achieve a continuous, uniform film. Inspect the completed membrane for full coverage and film continuity before covering with cladding or other wall assembly components. Repair deficiencies with AtmoFlash VP or AtmoSeal VP in accordance with the Application Guidelines.

Curing: Cure rate is dependent on ambient temperature and relative humidity. Warmer, more humid conditions accelerate cure while cold or dry conditions extend it. Skin time is 40–50 minutes at 70°F (21°C) and 50% relative humidity. If faster cure is needed, lightly mist the applied surface with clean water to activate additional moisture cure. Full cure is 12–24 hours.

Availability and Packaging

Contact EPRO sales representative for local distributors or

Typical Physical Properties

Physical Property	Test Method	Value
Film Color.....		Dark Gray
Solids Content.....		99%
Temperature Resistance		248 F (120 C)
Sag up to 60 mils WFT.....		Negligible
UV and Weather Resistance		Excellent
Skin Time		40–50 minutes ¹
Water Vapor Transmission (Wet Cup).....	ASTM E 96.....	20.5 perms ²
Hardness, Shore A	ASTM C 661	21
Tensile Strength	ASTM D 412	180 psi (1.24 MPa)
Elongation at Break	ASTM D 412	230%

¹at 70°F (21°C) and 50% RH

²Water vapor transmission tested at 20 mil DFT film thickness.

authorized applicators (www.eproinc.com).

Container Size: Pail 5 gallons (50 lbs), Drum 55 gallons (575 lbs)

Warranty

Limited Warranty: EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this product to be free from defects. EPRO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO's liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

Equipment

Spray Application: AtmoSeal VP requires a commercial direct immersion airless sprayer capable of maintaining a minimum of 3,500 psi at the spray tip. For hose lengths longer than 200 ft, a minimum 1/2" ID hose rated at 4,000 psi or greater is required. Contact EPRO for specific spray equipment recommendations.

Roller Application: Recommended standard 3/4-inch nap roller with phenolic core and 1 to 1-1/4 in. nap for CMU/split-face.

Cleanup: Flush all spray equipment, hoses, and tips thoroughly with mineral spirits or equivalent solvent immediately following each use. Never leave AtmoSeal VP standing idle in spray equipment — material left for more than 15 minutes may begin to cure in the pump and lines. Never flush equipment with water as contact with moisture will initiate cure.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.



AtmoSeal VP

ABAA S0008-2021: Standard for Air and Water Resistive Barriers – Fluid Applied Membrane – Material Specification

Physical Property	Test Method	Criteria	Results
Water Vapor Transmission	ASTM E 96 (Wet Cup).....		20.5 perms
Water Vapor Transmission	ASTM E 96 (Dry Cup).....		13.6 perms
Air Permeance	ASTM E 2178	≤0.004 cfm/ft ² at 1.57 psf.....	0.001 cfm/ft ²
Alkali Resistance	ASTM D 543.....	No deleterious effects	Pass
Elongation at Break	ASTM D 412.....	≥200%	Pass
Tensile Strength	ASTM D 412.....		180 psi
Freeze Thaw Resistance	ASTM E 2485	No surface changes	Pass
Fungi Resistance.....	ASTM C 1338.....	No growth	Pass
Gap Bridging	ABAA T0004.....	No surface changes	Pass
Low Temperature Flexibility.....	ASTM D 522.....	No surface changes	Pass
Peel Adhesion to Concrete	ASTM C 794.....	≥5 pli	Pass
Pull Adhesion	ABAA T0002.....	≥16 psi.....	Pass
Water Absorption by Diffusion.....	ASTM C1498.....		1.2%
Water Resistance.....	ASTM D2247	No surface changes	Pass

AAMA 714-19: Voluntary Specification for Liquid-Applied Flashing used to Create a Water-Resistive Seal around Exterior Wall Openings in Buildings

Physical Property	Test Method	Criteria	Results
Adhesive Strength to Substrates.....	ASTM C 794.....	≥5 pli	Pass
Water Penetration Around Nails.....	ASTM D1970.....	1.2 in (31 mm) of water.....	Pass
Water Vapor Permeability.....	ASTM E 96.....	≥10 perms at application thk.....	Pass
Elevated Temperature.....	AAMA 711, ASTM C794.....	≥5 pli	Pass
Thermal Cycling.....	AAMA 711, ASTM C794.....	≥5 pli	Pass
Water Immersion	AAMA 711, ASTM C794.....	≥5 pli	Pass
Accelerated UV Aging	ASTM G154, ASTM C794.....	≥5 pli	Pass
Crack Bridging.....	ASTM C1305.....	550mm 24hr with 1/16" crack	Pass

ASTM E2357: Standard Test Method for Determining Air Leakage of Air Barrier Assemblies

Physical Property	Test Method	Criteria	Results
System Air Leakage	ASTM E 2357	≤ 0.2 L/s.m ² at 75 Pa	Pass
System Air Leakage	ASTM E 2357	≤ 0.04 cfm/ft ² at 1.57 psf.....	Pass



AtmoSeal VP

ASTM E84: Surface Burning Characteristics (Class A)

Physical Property	Test Method	Criteria	Results
Flame Spread	ASTM E 84.....	≤25	Pass
Smoke Developed	ASTM E 84.....	≤450	Pass

NFPA 285 Compliance

The AtmoSeal VP system is compliant with multiple wall assemblies. Consult the AtmoSeal VP NFPA Reference Sheet for additional information.



AtmoFlash VP

Product Description

Basic Use: AtmoFlash VP is a single-component, vapor-permeable, silyl-terminated polyether (STPE) sealant intended for use as a gunnable flashing and detailing compound for air barrier applications. A component to the AtmoSeal VP permeable air barrier system, AtmoFlash VP prevents penetration of unwanted water and air at rough openings, joints, seams, fastener heads, penetrations, and transitions while permitting outward drying of the wall assembly.

AtmoFlash VP bonds to most common building materials without priming, including damp substrates, to form a seamless, flexible membrane. Environmentally adaptable, AtmoFlash VP can be applied in wet weather and be left exposed to UV for up to 12 months.

Composition: AtmoFlash VP is a single-component, silyl-terminated polyether (STPE) based sealant. It is solvent free and isocyanate free. The formulation cures via moisture-activated condensation of silyl end groups, cross-linking to form a flexible elastomeric matrix. Contains less than 21g/L VOC.

Benefits

- Vapor permeable — allows outward drying of the wall assembly.
- Productive, single-component gunnable application eliminates the need for adhesive flashing and joint reinforcement tapes.
- Adheres to and cures on damp substrates and can be applied in wet weather, reducing construction delays.
- Easily conforms to complex geometries, irregular substrates, and penetrations to form a seamless, elastomeric flashing air barrier membrane.
- Bridges cracks and fills gaps up to 1/2 inch to maintain continuity of the air and water barrier.
- Compatible with AtmoSeal VP and EPRO below-grade waterproofing systems for complete warrantable building envelope protection from the ground up.
- Solvent free and isocyanate free.
- UV exposure limit of up to 12 months in any climate.

Limitations

- Not for use as a primary air barrier field membrane. Use AtmoSeal VP for field application.
- Not for use in locations designed to be continuously immersed in water.
- Not recommended for application to insulated concrete forms (ICF).
- Not for use as a structural sealant.
- Adhesion testing is recommended prior to application over asphaltic and butyl sealants and adhesives.

Technical Data

Properties: See Typical Physical Properties table.

Storage and Handling: Store in a cool, dry place with containers tightly sealed when not in use. Keep away from open flames and sources of ignition. Do not freeze. Do not alter or mix with other materials.

Shelf Life: AtmoFlash VP may be stored for 18 months in a closed, unopened container at temperatures between 41–86°F (5–30°C).

Packaging: 20 oz sausages (2.1 lbs./unit).

Specification Writer: Contact EPRO before writing specifications for this product. System selection should be reviewed in order to meet project-specific site conditions.

Installation

Preparation: Review all substrate conditions and manufacturer specifications before beginning work. Address any deficiencies prior to application. AtmoFlash VP detailing must be completed before field application of AtmoSeal VP.

Substrate Preparation: All surfaces must be structurally sound, clean, and free of contaminants that may inhibit adhesion, including dust, debris, oils, waxes, form release agents, and surface coatings. Gaps, voids, and openings greater than 1 inch must be structurally repaired before application. When adhesion to asphaltic or butyl-based materials is required, compatibility testing is recommended prior to full application.

Exterior Sheathing (Gypsum, OSB, Plywood): Inspect and replace any damaged or improperly fastened sheathing before proceeding. Sheathing surfaces must be free of contaminants.

Concrete: Allow a minimum 7 day cure before application. Surfaces must be free of curing compounds and form release agents. Fill bug holes, honeycombing, and surface voids with appropriate cementitious filler and allow to cure fully before proceeding.

CMU: Allow mortar joints a minimum 3-day cure before application.

Wood: Where wood framing is exposed at sheathing interfaces, surface residues from chemical treatment in pressure-treated and fire-retardant lumber can interfere with adhesion. Wipe affected surfaces with isopropyl alcohol and allow to fully evaporate before application.

Coverage: Per unit yield will vary with substrate porosity, surface condition, and application thickness. The following estimates are based on application at the recommended thickness of 12–15 mils with no waste allowance. Establish actual coverage rates through project mock-up prior to application.

- Sheathing joints, 1" extension each side: 100–125 lf
- Fastener heads (2-3/8" dia. spot): 450–500
- Transitions/corners, 4" band: 50–63 lf
- Detail surface: 17–21 ft²
- 1/2" × 1/2" deep gap fill bead: 12 lf



AtmoFlash VP

Air Temperature: Optimal application range is 40°F (4.4°C) and rising to 95°F (35°C). Application is possible from 20°F (-7°C) to 110°F (43°C) with appropriate precautions. Contact EPRO for project-specific guidance below 20°F (-7°C). Refer to the AtmoSeal VP Application Guidelines for cold and hot weather procedures.

Substrate Temperature: Optimal substrate temperature is 40°F (4.4°C) and rising. Application is possible at substrate temperatures below 40°F (4.4°C) and up to 110°F (43°C) with appropriate precautions. Never apply to frozen or frost-covered substrates. Substrates exceeding 95°F (35°C) may be cooled with a light mist of clean water immediately before application. Refer to AtmoSeal VP Application Guidelines for detailed temperature recommendations.

Application: Gun AtmoFlash VP using a heavy-duty sausage-style caulking gun (18:1 thrust ratio minimum). The recommended application thickness is 12–15 mils. AtmoFlash VP is a detailing product; use AtmoSeal VP for all primary field air barrier application.

Tooling and Verification: Tool AtmoFlash VP immediately after application using a clean, dry joint knife, trowel, or spatula. Keep all tools dry, solvent or water contamination can inhibit cure and compromise adhesion. Work the material to a uniform 12–15 mil film across the full treated area, adjusting nozzle opening and pattern spacing as necessary to achieve the specified thickness. Verify thickness with a wet film gauge during mock-up and at intervals during production. Completed surfaces must be continuous and free of pinholes, voids, and starved edges.

Gap and Void Treatment: Fill gaps in a separate pass before the AtmoFlash VP surface application. Treat gaps according to width, measured at the widest point. Gaps up to 1/2 inch wide may be filled directly with AtmoFlash VP without non-gassing backer rod. For gaps over 1/2 inch and up to 1 inch, install closed-cell polyethylene non-gassing backer rod before application, sized approximately 25 percent larger than the gap width and set to a uniform depth so the AtmoFlash VP film above the rod is continuous and fully supported. Gaps exceeding 1 inch require structural repair before proceeding. This applies to all conditions described below.

Sequencing with AtmoSeal VP: Allow AtmoFlash VP to skin over before applying AtmoSeal VP — approximately 40–50 minutes at 70°F (21°C) and 50% relative humidity, longer in cold or dry conditions. Maintain a minimum 2-inch overlap of AtmoSeal VP onto all AtmoFlash VP-treated areas, measured from the outer edge of the treated area.

Joints, Seams, and Fastener Heads: Gun AtmoFlash VP in a continuous zigzag pattern along the joint. Tool immediately, spreading outward to a uniform 12–15 mil film extending a minimum of 1 inch beyond the sheathing board edge on each side. Treat fastener heads with a short zigzag or spiral pass, spread to a continuous, pinhole-free spot approximately 2-3/8 inches in diameter.

Rough Openings: Gun AtmoFlash VP into each corner of the

rough opening and along the sheathing-to-framing interface, then apply in a zigzag pattern along the interior faces of the opening and onto the exterior wall surface. Extend the material a minimum of 2 inches onto the exterior face on all sides. Work the material fully into inside corners and at the sheathing-to-framing interface. Allow to skin over before installing windows, doors, or other wall assembly components.

Penetrations: At all pipe, conduit, and mechanical penetrations, gun AtmoFlash VP to create a 1-inch cant at the junction of the penetrating element and the sheathing. Tool the cant to a continuous, uniform fillet with no voids at either interface.

Transitions: At all transitions between dissimilar materials and air barrier system components — including sheathing-to-concrete, sheathing-to-CMU, and below-grade waterproofing-to-above-grade air barrier interfaces — gun AtmoFlash VP in a zigzag pattern along the transition and spread to extend a minimum of 2 inches onto each substrate. Where the two substrates are not flush, work the material fully into the change in plane; do not bridge across an unsupported void. Greater extensions may be required depending on project conditions; consult EPRO details and application guidelines.

Curing: Cure rate is dependent on ambient temperature and relative humidity. Warmer, more humid conditions accelerate cure while cold or dry conditions extend it. Skin time is 40–50 minutes at 70°F (21°C) and 50% relative humidity. If faster cure is needed, lightly mist the applied surface with clean water to activate additional moisture cure. Full cure is 12–24 hours.

Cleanup: Clean all tools and equipment with mineral spirits or equivalent solvent immediately after use. Cured AtmoFlash VP must be removed mechanically using a sharp-edged tool.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Unit Size: 20 oz sausages (2.1 lbs./unit)

Warranty

Limited Warranty: EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this product to be free from defects. EPRO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO's liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

Equipment

Gun Application: Apply AtmoFlash VP using a heavy-duty



AtmoFlash VP

sausage-style caulking gun (18:1 thrust ratio minimum). Tool and spread with a dry joint knife, trowel, or spatula. Do not use soapy water or solvent to assist with tooling or to slick the surface profile.

Cleanup and Maintenance: Clean tools and equipment with mineral spirits or solvent immediately after use. Remove cured AtmoFlash VP mechanically using a sharp-edged tool.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

Typical Physical Properties

Physical Property	Test Method	Value
Film Color		Blue
UV and Weather Resistance		Excellent
Skin Time		40–50 minutes ¹
Water Vapor Transmission (Wet Cup).....	ASTM E 96	13.6 perms ²
Hardness, Shore A	ASTM C 661	25-35
Tensile Strength	ASTM D 412	>120 psi (0.83 MPa)
Elongation at Break	ASTM D 412	>300%

¹at 70°F (21°C) and 50% RH

²Water vapor transmission tested at 15 mil dry film thickness.

AAMA 714-19: Voluntary Specification for Liquid-Applied Flashing used to Create a Water-Resistive Seal around Exterior Wall Openings in Buildings

Physical Property	Test Method	Criteria	Results
Adhesive Strength to Substrates	ASTM C 794	≥5 pli	Pass
Water Penetration Around Nails.....	ASTM D 1970	1.2 in (31 mm) of water.....	Pass
Water Vapor Permeability.....	ASTM E 96.....	≥10 perms at application thk	Pass
Elevated Temperature.....	AAMA 711, ASTM C 794	≥5 pli	Pass
Thermal Cycling.....	AAMA 711, ASTM C 794	≥5 pli	Pass
Water Immersion.....	AAMA 711, ASTM C 794	≥5 pli	Pass
Accelerated UV Aging	ASTM G 154, ASTM C 794	≥5 pli	Pass
Crack Bridging.....	ASTM C 1305.....	550mm 24hr with 1/16" crack	Pass

ASTM E84: Surface Burning Characteristics (Class A)

Physical Property	Test Method	Criteria	Results
Flame Spread	ASTM E 84.....	≤25	Pass
Smoke Developed	ASTM E 84.....	≤450	Pass



4/28/26

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): AtmoSeal VP

Synonyms: N/A

CAS No: N/A

Supplier:

EPRO Services, Inc.

PO Box 347

Derby, KS 67037

800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

Classification of the substance or mixture: Not a dangerous substance or mixture according to OSHA 29 CFR 1910.1200

Hazards not otherwise classified (HNOC): Not Applicable.

Other Information

Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and release upon curing.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances: Not applicable

Mixture

Chemical name	CAS No.	Weight-%
Limestone	1317-65-3	30 - 60
Carbonic acid, calcium salt (1:1)	471-34-1	1 - <5
Titanium dioxide	13463-67-7	1 - <5
1-Propanamine, 3-(trimethoxysilyl)-	13822-56-5	1 - <5
Trimethoxyvinylsilane	2768-02-7	1 - <5

**The exact percentage (concentration) of composition has been withheld as a trade secret*

4. FIRST-AID MEASURES

Description of first aid measures

Inhalation: Remove to fresh air. If symptoms persist, call a physician.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove

contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact: Wash with soap and plenty of water. In the case of skin irritation or allergic reactions see a physician.

Ingestion: Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Small amounts of toxic methanol are released by hydrolysis. Call a physician immediately or poison control center immediately. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed

Symptoms: No information available.

Effects of Exposure: No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians: Treat symptomatically. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media – Large Fire: Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam. Caution: Use of water spray when fighting fire may be inefficient.

Unsuitable Extinguishing Media: Full water jet.

Special hazards arising from the chemical

Special hazards arising from the chemical: Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous combustion products: Carbon oxides. Carbon monoxide. Carbon dioxide (CO₂). Nitrogen oxides (NO_x). Silicon oxides. Silicon dioxide.

Explosion data

Sensitivity to mechanical impact: None.

Sensitivity to static discharge: None.

Advice for firefighters

Special protective equipment and precautions for fire-fighters: As in any fire, wear self-contained breathing apparatus pressured-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Personal precautions: Use personal protective equipment as required. Ensure adequate ventilation. Avoid contact with skin, eyes, or clothing. Wash thoroughly after handling.

Other information: Refer to protective measures listed in Sections 7 and 8.

Environmental precautions: See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment: Prevent further leakage or spillage if safe to do so.

Methods for cleaning up: Use personal protective equipment as required. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

Reference to other sections: See Section 8 for more information. See Section 13 for more information.

7. HANDLING AND STORAGE

Precautions for safe handling: Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, or smoke when using this product. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes, or clothing. Wash thoroughly after handling. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions: Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture. Keep away from food, drink, and animal feeding stuffs.

Recommended storage temperature: Keep at temperatures between 50 and 95°F / 10 and 35°C.

References to other sections: Section 10: Stability and Reactivity. Section 13: Disposal Considerations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits: This product contains substances which in their raw state are powder form, however in this product they are in a non-respirable form. Inhalation of powder/dust particles is unlikely to occur from exposure to this product. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Carbonic acid, calcium salt (1:1) 471-34-1	-	-	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Titanium dioxide 13463-67-7	TWA: 0.2 mg/m ³ nanoscale respirable particulate matter TWA: 2.5 mg/m ³ finescale respirable particulate matter	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale

Chemical name	Argentina	Brazil	Chile	Colombia
Limestone 1317-65-3	TWA: 10 mg/m ³	-	LPP: 7 mg/m ³ LPP: 5 mg/m ³	-
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 0.2 mg/m ³ TWA: 2.5 mg/m ³	-	TWA: 0.2mg/m ³ TWA: 2.5mg/m ³

Chemical name	Costa Rica	Peru	Uruguay	Venezuela
Carbonic acid, calcium salt (1:1) 471-34-1	-	TWA: 10mg/m ³	-	TWA: 10 mg/m ³
Titanium dioxide 13463-67-7	TWA: 10mg/m ³	TWA: 10mg/m ³	0.2 mg/m ³ TWA (nanoscale, respirable particulate matter); 2.5 mg/m ³ TWA (finescale, respirable particulate matter)	TWA: 10 mg/m ³

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Methyl Alcohol 67-56-1	TWA: 200 ppm STEL: 250 ppm S*	TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) S*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³

Chemical name	Argentina	Brazil	Chile	Colombia
Methyl alcohol 67-56-1	TWA: 200 ppm STEL: 250 ppm	TWA: 156 ppm TWA: 200 mg/m ³ STEL: 250 ppm Skin	LPP: 175 ppm LPP: 229 mg/m ³ S* LPT: 250 ppm LPT: 328 mg/m ³	STEL: 250ppm TWA: 200ppm

Chemical name	Costa Rica	Peru	Uruguay	Venezuela
Methyl alcohol 67-56-1	STEL: 250ppm TWA: 200ppm	STEL: 250ppm STEL: 328mg/m ³ TWA: 200ppm TWA: 262mg/m ³	250 ppm STEL 200 ppm TWA	Skin STEL: 250 ppm TWA: 200 ppm

Exposure controls

Appropriate engineering controls: Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection: Wear safety glasses with side shields (or goggles).

Hand protection: Wear suitable gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality and various manufacturers.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations: Wear suitable gloves and eye/face protection. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, or smoke when using this product. Avoid contact with skin, eyes, or clothing. Wash hands before breaks and after work. Take off contaminated clothing and wash it before reusing. Regular cleaning of equipment, work area, and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid

Color: White

Odor threshold: No information available

pH (as aqueous solution): No data available

Flash point: No data available

Evaporation rate: No data available

Vapor pressure: No data available

Relative vapor density: No data available

Relative density: No data available

Solubility(ies): No data available

Appearance: No information available

Odor: No information available

pH: No data available

Melting point/freezing point: No data available

Initial boiling point and boiling range: No data available

Flammability: No data available

Upper flammability or explosive limits: No data available

Lower flammability or explosive limits: No data available

Water solubility: No data available

Partition coefficient: No data available

Autoignition temperature: No data available

Kinematic viscosity: No data available

Decomposition temperature: No data available

Dynamic viscosity: No data available

Explosive properties: No information available

Solvent content (%): No information available

Softening point: No information available

VOC content: No information available

Bulk density: No information available

Oxidizing properties: No information available

Solid content (%): No information available

Molecular weight: No information available

Density: 12 lb/gal

10. STABILITY AND REACTIVITY

Reactivity: Product cures with moisture.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Non under normal processing.

Conditions to avoid: Protect from moisture. Exposure to air or moisture over prolonged periods. Do not freeze.

Keep away from open flames, hot surfaces, and sources of ignition.

Incompatible materials: None known based on information supplied.

Hazardous decomposition products: Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhalation: Based on available data, the classification criteria are not met.

Eye contact: Based on available data, the classification criteria are not met.

Skin contact: Based on available data, the classification criteria are not met.

Ingestion: Based on available data, the classification criteria are not met.

Symptoms related to the physical, chemical, and toxicological characteristics: No information available.

Acute toxicity – numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral): >5000 mg/kg

ATEmix (dermal): 272,562.00 mg/kg

ATEmix (inhalation-gas): >20000 ppm

ATEmix (inhalation-dust/mist): >5 mg/l

ATEmix (inhalation-vapor): 846.90 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Limestone 1317-65-3	>5000 mg/kg (Rattus)	-	-
Carbonic acid, calcium salt (1:1) 471-34-1	LD50 > 2000 mg/kg (Rattus) OECD 420	LD50 >2000 mg/kg (Rattus) OECD 402	LC50 (4h) >3mg/ml (Rattus)
Titanium dioxide 13463-67-7	>10000 mg/kg (Rattus)	LD50 > 5000 mg/Kg	= 5.09 mg/L (Rattus) 4 h
1-Propanamine,	LD50 (Rattus) > 2000 mg/ kg	LD50 (Oryctolagus cuniculus) >	-
3-(trimethoxysilyl)-13822-56-5	(2,97 ml/kg) (OECD 401)	2000 mg/kg 11,3 ml/kg) OECD 402	
Trimethoxyvinylsilane 2768-02-7	LD50 = 7120 -7236	= 3540 mg/kg (Oryctolagus	LC50 (4hr) 16.8 mg/l (Rattus)

	mg/kg (Rattus) OECD 401	cuniculus)	OECD TG 403
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal	0.5 mL	24 hours	Non-irritant

Titanium dioxide (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal			Non-irritant

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met. By analogy to another tested similar product: No irritation after contact to the eyes (H319 is void).

Titanium dioxide (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	Eye			Non-irritant

1-Propanamine, 3-(trimethoxysilyl)- (13822-56-5)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye		72 hours	irritant

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye		24 hours	Non-irritant

Respiratory or skin sensitization: Based on available data, the classification criteria are not met.

Classification based on data available for ingredients.

Titanium dioxide (13463-67-7)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitization	Guinea pig	Dermal	Not a skin sensitizer
OECD Test No. 429: Skin Sensitisation: Local Lymph Node Assay	Mouse	Dermal	Not a skin sensitizer

1-Propanamine, 3-(trimethoxysilyl)- (13822-56-5)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitization	Guinea pig	Dermal	Did not cause sensitization on laboratory animals

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitization, Buehler test	Guinea pig	Dermal	sensitizing

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Results
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OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro	Not mutagenic
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Carcinogenicity: Based on available data, the classification criteria are not met. This product contains substances which in their raw state are powder form, however, in this product they are in a non-respirable form. Inhalation of powder/dust particles is unlikely to occur from exposure to this product.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Titanium dioxide 13463-67-7	A3	Group 2B	-	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Occupational Safety and Health Administration of the US Department of Labor

X – Present

Reproductive toxicity: Based on available data, the classification criteria are not met.

1-Propanamine, 3-(trimethoxysilyl)- (13822-56-5)

Method	Species	Results
OECD Test No. 408: Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	Not Classifiable

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Results
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat	Not Classifiable

STOT – single exposure: Based on available date, the classification criteria are not met.

STOT – repeated exposure: Based on available data, the classification criteria are not met.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 413: Subchronic Inhalation Toxicity: 90-day Study	Rat	Inhalation vapor		90 days	0.058 NOAEL

Aspiration hazard: Based on available data, the classification criteria are not met.

Other adverse effects: No information available.

Interactive effects: No information available.

12. ECOLOGICAL INFORMATION (non-mandatory)

Toxicity

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Limestone 1317-65-3	CE50 (72h) >200mg/L Algae (Desmodesmus subspicatus)	CL50 (96h) >10000mg/L (Oncorhynchus mykiss)	-	CE50 (48h) >1000 mg/L Daphnia Magna
Carbonic acid, calcium salt (1:1) 471-34-1	IC50 72H Algae >1000 mg/l	CL50 96H >1000 mg/l	-	EC50 48H Daphnia >1000 mg/l
Titanium dioxide 13463-67-7	LC50 (96h) >10000 mg/l (Cyprinodon variegatus) OECD 203	-	-	-
1-Propanamine, 3-(trimethoxysilyl)- 13822-56-5	EC50 (72h) > 1000 mg/l (Desmodesmus subspicatus) EU Method C.3 (Algal Inhibition test)	LC50 (96h) > >934 mg/L (Danio rerio) OECD 203	-	EC50 (48h) = 331 mg/L (Daphnia magna) OECD 202
Trimethoxyvinylsilane 2768-02-7	EC 50 (72h) > 957 mg/l (Desmodesmus subspicatus) EU Method C.3	LC50 (96h) = 191 mg/l (Oncorhynchus mykiss)	-	EC50(48hr) 168.7mg/l (Daphnia magna)

Persistence and degradability: No information available.

Bioaccumulative potential

Bioaccumuation: There is no data for this product.

Component Information

Chemical name	Partition coefficient
Limestone 1317-65-3	0.9
Trimethoxyvinylsilane 2768-02-7	1.1

Mobility in soil: No information available.

Other adverse effects: No information available.

13. DISPOSAL CONSIDERATIONS (non-mandatory)

Waste treatment methods

Waste from residues/unused products: Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Contaminated packaging: Handle contaminated packages in the same way as the product itself.

14. TRANSPORT INFORMATION (non-mandatory)

DOT: Not regulated

IATA: Not regulated
IMDG: Not regulated

15. REGULATORY INFORMATION (non-mandatory)

International Inventories

TSCA	Listed
DSL	Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL - Canadian Domestic Substances List

Listed - The components of this product are either listed or exempt from listing on inventory.

Not Listed - One or more components of this product are not listed on inventory.

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

Europe

Restrictions of Use of Hazardous Substances (RoHS) Directive 2011/65/EU

This product does not contain Lead, Cadmium, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-Ethylhexyl) phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) above the regulated limit mentioned in this regulation. This document is based on the information given to us by our own suppliers at the date of this document.

SVHC: Substances of Very High Concern for Authorization: This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

16. OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA: TWA (time-weighted average)

STEL: STEL (Short Term Exposure Limit)

Ceiling: Maximum limit value

Sk*: Skin designation

Disclaimer

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

4/28/26

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): AtmoFlash VP

Synonyms: N/A

CAS No: N/A

Supplier:

EPRO Services, Inc.

PO Box 347

Derby, KS 67037

800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

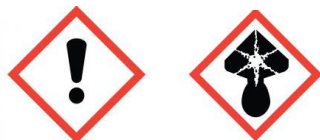
Classification of the substance or mixture

Serious eye damage/eye irritation: Category 2A

Reproductive toxicity: Category 1B

Hazards not otherwise classified (HNOC): Not Applicable.

Label elements



Hazard Statements

Causes serious eye irritation.

May damage fertility or the unborn child.

Precautionary Statements – Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Wash face, hands, and any exposed skin thoroughly after handling.

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention.

Precautionary Statements – Storage

Store locked up.

Precautionary Statements – Disposal

Dispose of contents/container to an approved waste disposal plant.

Other Information

Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and release upon curing.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances: Not applicable

Mixture

Chemical name	CAS No.	Weight-%
Trimethoxyvinylsilane	2768-02-7	1 - <5
Titanium dioxide	13463-67-7	1 - <5
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	0.1 - <1
Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)-	22673-19-4	0.1 - <1
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	52829-07-9	0.1 - <1

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST-AID MEASURES**Description of first aid measures**

General advice: Show this safety data sheet to the doctor in attendance. If medical advice is needed, have product container or label at hand.

Inhalation: Remove to fresh air. If symptoms persist, call a physician.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact: Wash off immediately with soap and plenty of water. Get medical attention if symptoms occur.

Ingestion: Small amounts of toxic methanol are released by hydrolysis. Call a physician immediately. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water.

Self-protection of the first aider: Avoid contact with skin, eyes, or clothing. Wear personal protective clothing (see Section 8).

Most important symptoms and effects, both acute and delayed

Symptoms: May cause redness and tearing of the eyes.

Effects of Exposure: No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians: Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing. Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Extinguishing media**

Suitable Extinguishing Media – Large Fire: Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam. Caution: Use of water spray when fighting fire may be inefficient.

Unsuitable Extinguishing Media: Full water jet.

Special hazards arising from the chemical

Special hazards arising from the chemical: Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous combustion products: Carbon oxides. Carbon monoxide. Carbon dioxide (CO₂). Nitrogen oxides (NO_x). Silicon oxides. Silicon dioxide.

Explosion data

Sensitivity to mechanical impact: None.

Sensitivity to static discharge: None.

Advice for firefighters

Special protective equipment and precautions for fire-fighters: As in any fire, wear self-contained breathing apparatus pressured-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment, and emergency procedures**

Personal precautions: Use personal protective equipment as required. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes, or clothing. Wash thoroughly after handling.

Other information: Refer to protective measures listed in Sections 7 and 8.

Environmental precautions: See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment: Do not scatter spilled material with high pressure water streams.

Methods for cleaning up: Pick up and transfer to properly labeled containers.

Reference to other sections: See Section 8 for more information. See Section 13 for more information.

7. HANDLING AND STORAGE

Precautions for safe handling: Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes, or clothing. Wash thoroughly after handling. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions: Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture. Keep away from food, drink, and animal feeding stuffs.

Recommended storage temperature: Keep at temperatures between 50 and 95°F / 10 and 35°C.

References to other sections: Section 10: Stability and Reactivity. Section 13: Disposal Considerations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

Exposure Limits: This product contains substances which in their raw state are powder form, however in this product they are in a non-respirable form. Inhalation of powder/dust particles is unlikely to occur from exposure to this product. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and

released upon curing. This product contains titanium dioxide in a non-respirable form. Inhalation of titanium dioxide is unlikely to occur from exposure to this product.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Titanium dioxide 13463-67-7	TWA: 0.2 mg/m ³ nanoscale respirable particulate matter TWA: 2.5 mg/m ³ finescale respirable particulate matter	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
Tin, dibutylbis(2,4-pentanedionato-O ,O')-, (OC-6-11)- 22673-19-4	TWA: 0.1 mg/m ³ Sn STEL: 0.2 mg/m ³ Sn Sk*	TWA: 0.1 mg/m ³ Sn (vacated) TWA: 0.1 mg/m ³ Sn (vacated) S*	IDLH: 25 mg/m ³ Sn TWA: 0.1 mg/m ³ except Cyhexatin Sn

Chemical name	Argentina	Brazil	S.D. 594/1999	Colombia
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 0.2 mg/m ³ TWA: 2.5 mg/m ³	-	TWA: 0.2mg/m ³ TWA: 2.5mg/m ³
Tin, dibutylbis(2,4-pentanedionato-O ,O')-, (OC-6-11)- 22673-19-4	TWA: 0.1 mg/m ³ STEL: 0.2 mg/m ³ Sk*	TWA: 0.1 mg/m ³ STEL: 0.2 mg/m ³	LPP: 0.09 mg/m ³ Sk*	STEL: 0.2mg/m ³ TWA: 0.1mg/m ³

Chemical name	Costa Rica	Peru	Uruguay	Venezuela
Titanium dioxide 13463-67-7	TWA: 10mg/m ³	TWA: 10mg/m ³	0.2 mg/m ³ TWA (nanoscale, respirable particulate matter); 2.5 mg/m ³ TWA (finescale, respirable particulate matter)	TWA: 10 mg/m ³
Tin, dibutylbis(2,4-pentanedionato-O ,O')-, (OC-6-11)- 22673-19-4	STEL: 0.2mg/m ³	STEL: 0.2mg/m ³ TWA: 0.1mg/m ³	0.2 mg/m ³ STEL (as Sn) 0.1 mg/m ³ TWA (as Sn)	Skin STEL: 0.2 mg/m ³ TWA: 0.1 mg/m ³

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Methyl Alcohol 67-56-1	TWA: 200 ppm STEL: 250 ppm Sk*	TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) S*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³

Chemical name	Argentina	Brazil	S.D. 594/1999	Colombia
Methyl alcohol 67-56-1	TWA: 200 ppm STEL: 250 ppm Sk*	TWA: 156 ppm TWA: 200 mg/m ³ STEL: 250 ppm Skin	LPP: 175 ppm LPP: 229 mg/m ³ LPT: 250 ppm LPT: 328 mg/m ³ Sk*	STEL: 250ppm TWA: 200ppm

Chemical name	Costa Rica	Peru	Uruguay	Venezuela
Methyl alcohol 67-56-1	STEL: 250ppm TWA: 200ppm	STEL: 250ppm STEL: 328mg/m ³ TWA: 200ppm TWA: 262mg/m ³	250 ppm STEL 200 ppm TWA	Skin STEL: 250 ppm TWA: 200 ppm

Exposure controls

Appropriate engineering controls: Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection: Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Hand protection: Wear suitable gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality and various manufacturers.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Use appropriate respiratory protection. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations: Wear suitable gloves and eye/face protection. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes, or clothing. Wash thoroughly after handling. Take off contaminated clothing and wash it before reusing. Regular cleaning of equipment, work area, and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid

Color: Off-white

Odor threshold: No information available

pH (as aqueous solution): No data available

Flash point: No data available

Evaporation rate: No data available

Vapor pressure: No data available

Relative vapor density: No data available

Relative density: No data available

Solubility(ies): No data available

Autoignition temperature: No data available

Kinematic viscosity: No data available

Explosive properties: No information available

Solvent content (%): No information available

Softening point: No information available

VOC content: No information available

Bulk density: No information available

Appearance: Paste

Odor: No information available

pH: No data available

Melting point/freezing point: No data available

Initial boiling point and boiling range: No data available

Flammability: No data available

Upper flammability or explosive limits: No data available

Lower flammability or explosive limits: No data available

Water solubility: No data available

Partition coefficient: No data available

Decomposition temperature: No data available

Dynamic viscosity: No data available

Oxidizing properties: No information available

Solid content (%): No information available

Molecular weight: No information available

Density: No information available

10. STABILITY AND REACTIVITY

Reactivity: Product cures with moisture.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Non under normal processing.

Conditions to avoid: Protect from moisture. Exposure to air or moisture over prolonged periods. Do not freeze. Keep away from open flames, hot surfaces, and sources of ignition.

Incompatible materials: None known based on information supplied.

Hazardous decomposition products: Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhalation: Based on available data, the classification criteria are not met.

Eye contact: Causes serious eye irritation. May cause redness, itching, and pain.

Skin contact: Based on available data, the classification criteria are not met. May cause sensitization in susceptible persons.

Ingestion: Based on available data, the classification criteria are not met.

Symptoms related to the physical, chemical, and toxicological characteristics: May cause redness and tearing of the eyes.

Acute toxicity – numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral): >5000 mg/kg

ATEmix (dermal): 222,357.90 mg/kg

ATEmix (inhalation-gas): >20000 ppm

ATEmix (inhalation-dust/mist): >5 mg/l

ATEmix (inhalation-vapor): 690.90 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Trimethoxyvinylsilane 2768-02-7	LD50 = 7120 -7236 mg/kg (Rattus) OECD 401	= 3540 mg/kg (Oryctolagus cuniculus)	LC50 (4hr) 16.8 mg/l (Rattus) OECD TG 403
Titanium dioxide 13463-67-7	>10000 mg/kg (Rattus)	LD50 > 5000 mg/Kg	= 5.09 mg/L (Rattus) 4 h
N-(3-(trimethoxysilyl)propyl)ethy- lenediamine 1760-24-3	=2295 mg/kg (Rattus)	>2000 mg/Kg (Rattus)	LC50 4H (Aerosol)1.5 - 2.44 mg/L air
Tin, dibutylbis(2,4-pentanedionato-O ,O')-, (OC-6-11)- 22673-19-4	LD50 = 1864 mg/kg (Rattus) OECD 401	LD50 > 2000 mg/kg (Rattus) OECD 402	LC50 4hr: 16.8 mg/l (Rattus) (OECD TG 403)
Bis(2,2,6,6-tetramethyl-4-piperid yl) sebacate 52829-07-9	LD50 (Rattus)> 2000 mg/kg OECD 423	LD50 (Rattus) > 3 170 mg/kg OECD 402	=500 mg/m ³ (Rattus) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal	0.5 mL	24 hours	Non-irritant

Titanium dioxide (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal			Non-irritant

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute	Rabbit				Mild skin irritant

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal			Non-irritant

Serious eye damage/eye irritation: Causes serious eye irritation.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye		24 hours	Non-irritant

Titanium dioxide (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	Eye			Non-irritant

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye			Eye Damage

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye			Eye Damage

Respiratory or skin sensitization: OECD Test No. 406: Skin Sensitization. No sensitization responses were observed. No classification is proposed, based on conclusive negative data. May cause sensitization in susceptible persons.

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitization	Guinea pig	Dermal	No sensitization responses were observed

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Results
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro	Not mutagenic

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)

Method	Species	Results
OECD Test No. 471: Bacterial Reverse Mutation Test	Mammalian cells in vitro	Negative
OECD Test No. 476: In Vitro Mammalian Cell Gene Mutation Tests using the Hprt and xprt genes	Mammalian cells in vitro	Negative

Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)- (22673-19-4)

Method	Species	Results
OECD Test No. 476: In Vitro Mammalian Cell Gene Mutation Tests using the Hprt and xprt genes	in vitro	Mutagenic

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)

Carcinogenicity: Based on available data, the classification criteria are not met. This product contains substances which in their raw state are powder form, however, in this product they are in a non-respirable form. Inhalation of powder/dust particles is unlikely to occur from exposure to this product.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Titanium dioxide 13463-67-7	A3	Group 2B	-	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Occupational Safety and Health Administration of the US Department of Labor

X – Present

Reproductive toxicity: Contains a known or suspected reproductive toxin. Classification based on data Available for ingredients. May damage fertility or the unborn child.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Results
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat	Not Classifiable

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)

Method	Species	Results
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat Oral	NOAEL >500 mg/Kg

Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)- (22673-19-4)

Method	Species	Results
OECD Test No. 414: Prenatal Development Toxicity Study	Rat Oral in vivo	Read-across. Reproductive toxicant. NOAEL: 1 mg/kg bw/day
OECD Test No. 421: Reproduction/Developmental Toxicity Screening Test	Rat Oral in vivo	Read-across Reproductive toxicant NOAEL 1.9-2.3 mg/kg bw/day

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)

Method	Species	Results
OECD Test No. 414: Prenatal Development Toxicity Study	Rat, Rabbit	Reproductive toxicant

STOT – single exposure: Based on available data, the classification criteria are not met.

STOT – repeated exposure: Based on available data, the classification criteria are not met.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time
OECD Test No. 413: Subchronic Inhalation Toxicity: 90-day Study	Rat	Inhalation vapor		90 days

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat	Subacute oral toxicity gavage		28 days	NOAEL >500 mg/kg

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)

Aspiration hazard: Based on available data, the classification criteria are not met.

Other adverse effects: No information available.

Interactive effects: No information available.

12. ECOLOGICAL INFORMATION (non-mandatory)

Toxicity

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Trimethoxyvinylsilane 2768-02-7	EC 50 (72h) > 957 mg/l (Desmodesmus subspicatus) EU Method C.3	LC50 (96h) = 191 mg/l (Oncorhynchus mykiss)	-	EC50(48hr) 168.7mg/l (Daphnia magna)
Titanium dioxide 13463-67-7	LC50 (96h) >10000 mg/l (Cyprinodon variegatus) OECD 203	-	-	-
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3	-	LC50 (96H) =597 mg/L (Danio rerio)Semi-static	-	EC50 (48h) =81mg/L Daphnia magna Static
Tin, dibutylbis(2,4-pentanedioato-O,O'), (OC-6-11)- 22673-19-4	>2.0 mg/l	>2.0 mg/l	-	EC50 0.0036 mg/l 48Hr (Daphnia magna)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	EC50 72Hr 0.705 mg/l (Pseudokirchnerella subcapitata)	LC50 (96h) = 5.29 mg/l (Oryzias latipes)	-	LC50 48Hr 8.58 mg/l (Daphnia magna)

Persistence and degradability: No information available.

Bioaccumulative potential

Bioaccumulation: There is no data for this product.

Component Information

Chemical name	Partition coefficient
Trimethoxyvinylsilane 2768-02-7	1.1
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3	-0.3
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	0.35

Mobility in soil: No information available.

Other adverse effects: No information available.

13. DISPOSAL CONSIDERATIONS (non-mandatory)

Waste treatment methods

Waste from residues/unused products: Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Contaminated packaging: Handle contaminated packages in the same way as the product itself.

14. TRANSPORT INFORMATION (non-mandatory)

Note: The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments made in non-bulk packages (see regulatory definition). The information shown here may not always agree with the bill of lading shipping description for the material.

DOT

UN number or ID number: UN3077

UN proper shipping name: Environmentally hazardous substance, solid, n.o.x. (Tin, dibutylbis (2,4-pentanedionato-O,O'), (OC-6-11)-, Bis (2,2,6,6-tetramethyl-4-piperidyl) sebacate)

TRANSPORT HAZARD CLASS: 9

Packing group: III

Special Provisions: 8, 146, 335, 384, 441, A112, B54, B120, IB8, IP3, N20, N91, T1, TP33

DOT Marine Pollutant: I

Marine pollutant: Tin, dibutylbis (2,4-pentanedionato-O,O'), (OC-6-11)-, Bis (2,2,6,6-tetramethyl-4-piperidyl) sebacate), 9, III, Marine pollutant

Description: UN3077, Environmentally hazardous substance, solid, n.o.s. (Tin, dibutylbis (2,4-pentanedionato-O,O'), (OC-6-11)-, Bis (2,2,6,6-tetramethyl-4-piperidyl) sebacate), 9, III, Marine pollutant

Emergency Response Guide Number: 171

Note: 49 CFR (171.4(c) "Exceptions. Except when all or part of the transportation is by vessel, the requirements of this subchapter specific to marine pollutants do not apply to non-bulk packaging transported by motor vehicle, rail car, or aircraft."

IATA

UN number or ID number: UN3077

UN proper shipping name: Environmentally hazardous substance, solid, n.o.x. (Tin, dibutylbis (2,4-pentanedionato-O,O'), (OC-6-11)-, Bis (2,2,6,6-tetramethyl-4-piperidyl) sebacate)

TRANSPORT HAZARD CLASS: 9

Packing group: III

Special Provisions: A97, A158, A179, A197, A215

Description: UN3077, Environmentally hazardous substance, solid, n.o.s. (Tin, dibutylbis (2,4-pentanedionato-O,O'), (OC-6-11)-, Bis (2,2,6,6-tetramethyl-4-piperidyl) sebacate), 9, III

IMDG

UN number or ID number: UN3077

UN proper shipping name: Environmentally hazardous substance, solid, n.o.x. (Tin, dibutylbis (2,4-pentanedionato-O,O'), (OC-6-11)-, Bis (2,2,6,6-tetramethyl-4-piperidyl) sebacate)

TRANSPORT HAZARD CLASS: 9

Packing group: III

EmS-No.: F-A, S-F

Special Provisions: 274, 335, 966, 967, 969

IMDG Marine Pollutant Name: Tin, dibutylbis (2.4-pentanedionato-O,O')-, (OC-6-11)-, Bis (2,2,6,6-tetramethyl-4-piperidyl) sebacate

Description: UN3077, Environmentally hazardous substance, solid, n.o.s. (Tin, dibutylbis (2.4-pentanedionato-O,O')-, (OC-6-11)-, Bis (2,2,6,6-tetramethyl-4-piperidyl) sebacate), 9, III, Marine pollutant

15. REGULATORY INFORMATION (non-mandatory)

International Inventories

TSCA	Complies
DSL	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL - Canadian Domestic Substances List

Complies - The components of this product are either listed or exempt from listing on inventory. Active

Not Listed - One or more components of this product are not listed on inventory.

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

16. OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

SVHC: Substances of Very High Concern for Authorization:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances STOT: Specific Target Organ Toxicity

ATE: Acute Toxicity Estimate LC50: 50% Lethal Concentration LD50: 50% Lethal Dose

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA: TWA (time-weighted average)

STEL: STEL (Short Term Exposure Limit)

Ceiling: Maximum limit value

Sk*: Skin designation

Disclaimer

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.



Applications: Permeable air and water barrier membrane applications over exterior sheathing substrates and above-grade concrete and CMU substrates.
Spec Version: EPROAtmoSealVP.AB.v1.04.26gs
Date issued: August, 2026
Note: This specification may be superseded at any time. Check eproinc.com for the most up to date version of this specification.

SECTION 07 27 26 FLUID-APPLIED MEMBRANE AIR BARRIERS

AtmoSeal VP Guide Specification

AtmoSeal VP is a single-component, vapor-permeable, silyl-terminated polyether (STPE), fluid-applied air barrier membrane. Spray or roller-applied, AtmoSeal VP prevents penetration of unwanted water and air through the building envelope while permitting outward drying of the wall assembly.

This guide specification has been prepared according to the principles established in the Manual of Practice published by the Construction Specifications Institute.

Sections highlighted in **red** throughout this guide specification are specifier notes intended to provide information about certain optional text or additional information relevant to that section. For additional questions, your local EPRO technical representative can be contacted through: EPRO Services, Inc., Wichita KS; 1.800.882.1896; www.eproinc.com.

ATMOSEAL VP LIQUID-APPLIED AIR AND WATER BARRIER SYSTEM SPECIFICATION

SECTION 07 27 26 – FLUID-APPLIED MEMBRANE AIR BARRIERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including general and supplementary conditions, and Division 1 specification section, apply to this section.

1.2 SECTION INCLUDES

- A. The Work of this Section includes, but is not limited to, **AtmoSeal VP** a single-component, vapor-permeable, silyl-terminated polyether (STPE), fluid-applied air barrier membrane for the following construction applications:
 - 1. Fluid-applied air and water barrier membrane over exterior sheathing substrates including gypsum sheathing, OSB, and plywood.
 - 2. Fluid-applied air and water barrier membrane over above-grade concrete and CMU substrates.
- B. Related Sections:
 - 1. Section 03 30 00: Cast-in-Place Concrete
 - 2. Section 04 20 00: Unit Masonry
 - 3. Section 06 16 00: Sheathing
 - 4. Section 07 13 00: Sheet Waterproofing (below-grade)
 - 5. Section 07 25 00: Weather Barriers
 - 6. Section 07 62 00: Sheet Metal Flashing and Trim
 - 7. Section 07 90 00: Joint Protection
 - 8. Section 08 11 00: Metal Doors and Frames
 - 9. Section 08 50 00: Windows

1.3 REFERENCE STANDARDS

- A. The following standards and publications are applicable to the extent referenced in the text.
- B. Air Barrier Association of America (ABAA):
 - S0008-2021 Standard for Air and Water-Resistive Barriers — Fluid Applied Membrane — Material Specification

C. American Architectural Manufacturers Association (AAMA):

714-19 Voluntary Specification for Liquid-Applied Flashing used to Create a Water-Resistive Seal around Exterior Wall Openings in Buildings

D. National Fire Protection Association (NFPA):

285 Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components

E. ASTM International (ASTM):

C 661 Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer

C 1498 Standard Test Method for Hygroscopic Sorption Isotherms of Building Materials

D 412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers — Tension

E 84 Standard Test Method for Surface Burning Characteristics of Building Materials

E 96 Standard Test Methods for Water Vapor Transmission of Materials

E 1354 Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter

E 2178 Standard Test Method for Air Permeance of Building Materials

E 2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies

1.4 PERFORMANCE REQUIREMENTS

A. General: Provide a fully adhered, fluid-applied air and water barrier system that:

1. Achieves air permeance $\leq 0.02 \text{ L/s} \cdot \text{m}^2$ at 75 Pa per ASTM E2178.
2. Achieves system air leakage $\leq 0.2 \text{ L/s} \cdot \text{m}^2$ at 75 Pa per ASTM E2357.
3. Maintains continuity across all substrate types, transitions, penetrations, and rough openings.
4. Complies with ABAA S0008-2021 material specification requirements.
5. Complies with AAMA 714-19 requirements for liquid-applied flashing at all rough openings.
6. Achieves ASTM E84 Class A surface burning characteristics (Flame Spread ≤ 25 , Smoke Developed ≤ 450).

7. Is qualified for use in wall assemblies complying with NFPA 285 where required by the applicable building code for exterior wall assemblies in Type I, II, III, or IV construction. Compliance shall be established by full-scale NFPA 285 testing of the complete assembly, or by written engineering evaluation from a qualified fire protection engineer referencing existing NFPA 285-tested assemblies and supporting ASTM E1354 cone calorimeter data for the proposed water-resistive barrier. The air barrier membrane shall be applied at the thickness identified in the referenced NFPA 285 approval or engineering evaluation. Assemblies shall be constructed as complete approval sets; substitution of individual components between separate approvals is not permitted.

Specifier Note: AtmoSeal VP is qualified for use in NFPA 285-compliant wall assemblies through Priest & Associates Consulting Engineering Evaluation Project No. 11480, issued May 7, 2026 and valid through May 7, 2029. The evaluation covers four assembly pathways: Atlas ThermalStar EPS (referencing UL ER16529-01), Atlas EnergyShield Polyiso (referencing DrJ Engineering TER 1306-03), noncombustible mineral wool from any manufacturer, and bare WRB with no exterior insulation. Each pathway carries its own approved cladding list, insulation thickness limits, and window opening detail requirements. Review the AtmoSeal VP NFPA 285 Compliance Sheet and confirm the project assembly against a single pathway before specifying. For assemblies outside these pathways, including alternate foam insulation manufacturers, contact EPRO. Additional engineering evaluations can be developed from the existing ASTM E1354 data.

8. Provides vapor permeability ≥ 10 perms at recommended application thickness, permitting outward drying of the wall assembly.

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's printed technical data, tested physical and performance properties, instructions for evaluating, preparing, and treating substrates, and installation instructions.
- B. Fire Performance Documentation: Where NFPA 285 compliance is required, submit the following:
 1. One of the following for the specific wall assembly proposed: a. NFPA 285 test report for the complete assembly, issued by an accredited testing laboratory; or b. Written engineering evaluation prepared by a qualified fire protection engineer identifying the referenced NFPA 285 approval, each assembly component, applicable thickness limits, and any required window opening or flashing details.
 2. ASTM E84 surface burning characteristics test report for each combustible component of the air barrier system.
 3. Assembly Compliance Statement identifying each component of the proposed exterior wall assembly (base wall, firestopping, cavity insulation, exterior sheathing, water-resistive barrier, exterior insulation, girts or attachment, and cladding) confirming that all components fall within a single referenced approval.
- C. Shop Drawings: Project specific drawings showing locations and extent of air barrier system, details for substrate joints and cracks, sheet flashing, penetrations, transitions, and termination conditions.
- D. Samples: Submit two standard size samples of the following:
 1. Individual components of the specified air barrier system.
- E. Applicator Certification: Submit written confirmation at the time of bid that applicator is currently approved by the membrane manufacturer.

- F. Manufacturer's Warranty Requirements: Submit complete documentation of manufacturer's warranty requirements and sample warranty.

1.6 QUALITY ASSURANCE

- A. Applicator Qualifications: Air barrier applicator shall be an EPRO Authorized Applicator who is trained and approved for **AtmoSeal VP** application in accordance with EPRO standards and policies.
- B. Pre-Construction Meeting: A meeting shall be held prior to application of the air barrier system to assure proper substrate preparation, confirm installation conditions and any additional project specific requirements. Attendees of the meeting shall include, but are not limited to the following:
 - 1. EPRO representative
 - 2. EPRO certified applicator
 - 3. Third-party inspector (as required).
 - 4. General contractor
 - 5. Framing/sheathing contractor
 - 6. Owner's representative
 - 7. Project design team
 - 8. All appropriate related trades
- C. Field Sample: Apply air barrier system field sample to 100 ft² (9.3 m²) of each assembly to demonstrate proper application techniques and standard of workmanship.
 - 1. Notify air barrier system manufacturer representative, architect, and other appropriate parties one week in advance of the dates and times when field sample will be prepared.
 - 2. If architect and certified inspector determine that field sample does not meet requirements; reapply air barrier until field sample is approved.
 - 3. Retain and maintain approved field sample during construction in an undisturbed condition as a standard for judging the completed composite membrane system. An undamaged field sample may become part of the completed work.
- D. Materials: Air barrier system and auxiliary materials shall be single sourced from the waterproofing manufacturer.

1.7 MATERIAL DELIVERY, STORAGE AND DISPOSAL

- A. Delivery: Deliver materials to site labeled with manufacturer's name, product brand name, material type, and date of manufacture. Upon the arrival of materials to the jobsite, inspect materials to confirm material has not been damaged during transit.
- B. Storage: Store materials in a cool, dry location protected from the elements, direct sunlight, and freezing temperatures. Maintain storage temperatures between 41°F and 86°F (5°C and 30°C). Keep containers tightly sealed when not in use. Storage is the responsibility of the approved applicator.
- C. Disposal: Dispose of unused and unusable materials in accordance with local regulations and Section 01 74 19.

1.8 PROJECT CONDITIONS

- A. Substrate Review: Substrates shall be reviewed by the certified applicator and accepted by the certified applicator prior to application.
- B. Penetrations: All plumbing, electrical, mechanical, and structural items to be passing through the air barrier system shall be properly spaced, positively secured in their proper positions, and appropriately protected prior to system application and throughout the construction phase.
- C. Weather Limitations: Perform work only when existing and forecast weather conditions are within manufacturer's recommendations.
- D. Continuity: The air barrier system must be continuous and connected to all adjacent assemblies including the roof air barrier, below-grade waterproofing, and fenestration systems to form a complete, uninterrupted building envelope.

1.9 WARRANTY

- A. General Warranty: The special warranty specified in this section shall not deprive the owner of other rights the owner may have under other provisions of the contract documents, and shall be in addition to, and run concurrent with, other warranties made by the contractor under requirements of the contract documents.
- B. Special Warranty: Submit a written warranty signed by air barrier manufacturer agreeing to replace system materials that do not conform with manufacturer's published specifications or are deemed to be defective.
 - 1. Warranty Period: 5 years after date of substantial completion.

Specifier Note: Longer warranty periods are available.
 - 2. Coverage: Manufacturer will guarantee that the material provided is free of defect for the warranty period.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design: EPRO Services, Inc. (EPRO), Wichita, KS 67037; Tel: (800) 882-1896; Email: info@eproinc.com; Web: www.euproinc.com
- B. Acceptable Manufacturers:
 - 1. EPRO Services, Inc., **AtmoSeal VP**

2.2 MATERIALS

- A. Fluid-applied vapor permeable air and water barrier: **AtmoSeal VP** is a single-component, vapor-permeable, silyl-terminated polyether (STPE) liquid-applied air and water barrier membrane with the following physical properties:

PROPERTIES	TEST METHOD	VALUE
Color		Dark Gray
Basic Composition		Silyl-Terminated Polyether (STPE)
Application Thickness		20–25 mils (WFT=DFT)
Temperature Resistance		248°F (120°C)

UV and Weather Resistance		Excellent
Hardness, Shore A	ASTM C661	21
Tensile Strength	ASTM D412	180 psi (1.24 MPa)
Elongation at Break	ASTM D412	230%
Water Vapor Transmission (wet cup)	ASTM E96	20.5 perms at 20 mil DFT
Water Vapor Transmission (dry cup)	ASTM E96	13.6 perms at 20 mil DFT
Water Absorption	ASTM C1498	1.2%
Flame Spread	ASTM E84	(Class A — Pass)
Smoke Developed	ASTM E84	(Class A — Pass)

B. Product performance shall exceed the following testing standards:

1. ABAA S0008-2021: Standard for Air and Water-Resistive Barriers — Fluid Applied Membrane — Material Specification.
2. AAMA 714-19: Voluntary Specification for Liquid Applied Flashing used to Create a Water-Resistive Seal around Exterior Wall Openings in Buildings.
3. ASTM E2357: Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.
4. ASTM E84: Surface Burning Characteristics, Class A.
5. NFPA 285: qualified by engineering evaluation for defined wall assemblies — see Article 1.4.

C. Vapor permeable air and water barrier flashing and detailing compound: **AtmoFlash VP** is a single-component, vapor-permeable, silyl-terminated polyether (STPE) gunnable sealant for use as a liquid-applied flashing and detailing compound with the following physical properties:

PROPERTIES	TEST METHOD	VALUE
Color		Blue
Basic Composition		Silyl-Terminated Polyether (STPE)
Application Thickness		12–15 mils (WFT=DFT)
UV and Weather Resistance		Excellent
Hardness, Shore A	ASTM C661	25–35
Tensile Strength	ASTM D412	>120 psi (0.83 MPa)
Elongation at Break	ASTM D412	>300%
Water Vapor Transmission (wet cup)	ASTM E96	13.6 perms at 15 mil DFT
Flame Spread	ASTM E84	(Class A — Pass)
Smoke Developed	ASTM E84	(Class A — Pass)

D. Product performance shall exceed the following testing standards:

1. AAMA 714-19: Voluntary Specification for Liquid-Applied Flashing used to Create a Water-Resistive Seal around Exterior Wall Openings in Buildings

2.3 AUXILIARY MATERIALS

- A. General: All auxiliary materials shall be provided by the specified waterproofing manufacturer. Auxiliary materials used in lieu of, or in addition to, the manufacturer's materials must be approved in writing by EPRO prior to installation.

1. Non-gassing backer Rod: Closed cell polyethylene foam
2. Below-Grade Waterproofing: EPRO below-grade waterproofing system for complete, compatible building envelope continuity at grade-level transitions.

PART 3 - EXECUTION

3.1 EXAMINATION

Comply with project documents, manufacturer's product data, installation guidelines, and pre-job requirements. Do not proceed with installation until unsatisfactory conditions have been corrected. If conditions are encountered not addressed in this Section, contact EPRO for guidance. The approved applicator and inspector shall jointly examine all substrates, areas, and conditions under which the air barrier system will be installed prior to beginning work.

3.2 SUBSTRATE PREPARATION

- A. The general contractor shall engage the approved air barrier contractor and inspector to ensure surfaces are prepared in accordance with manufacturer's instructions. Unless explicitly stated in the contract documents, the air barrier contractor is not responsible for surface preparation.
- B. All surfaces must be structurally sound, clean, and free of contaminants that may inhibit adhesion, including dust, debris, oils, waxes, form release agents, and surface coatings. When adhesion over asphaltic or butyl-based materials is required, compatibility testing is recommended prior to full installation.
- C. Exterior Sheathing (Gypsum, OSB, Plywood): Inspect and replace damaged or improperly fastened sheathing. Ensure sheathing is properly fastened per manufacturer and code requirements. Treat all joints, seams, and fastener heads with **AtmoFlash VP** prior to field application of **AtmoSeal VP**.
- D. Concrete: Allow a minimum 7 day cure. Surfaces must be free of curing compounds and form release agents. Fill bug holes, honeycombing, and surface voids with appropriate cementitious filler and allow to cure fully before proceeding.
- E. CMU: Allow mortar joints a minimum 3-day cure before application.
- F. Wood: Where wood framing is exposed at sheathing interfaces, surface residues from chemical treatment in pressure-treated and fire-retardant lumber can interfere with adhesion. Wipe affected surfaces with isopropyl alcohol and allow to fully evaporate before application.

3.3 ATMOFLASH VP APPLICATION – DETAILING AND FLASHING

- A. Complete all **AtmoFlash VP** detailing before beginning **AtmoSeal VP** field application. **AtmoFlash VP** is a detailing and flashing product only. Use **AtmoSeal VP** for all primary field air barrier application.
- B. Apply **AtmoFlash VP** using a heavy-duty sausage-style caulking gun with a minimum 18:1 thrust ratio. Apply at 12–15 mils.
- C. Tooling and Verification: Tool **AtmoFlash VP** immediately after application using a clean, dry joint knife, trowel, or spatula. Keep all tools dry; solvent or water contamination of tools can inhibit cure and compromise adhesion. Work the material to a uniform 12–15 mil film across the full treated area, adjusting nozzle opening and pattern spacing as necessary to achieve the specified thickness. Verify thickness with a wet film gauge at the field sample and at intervals during production. Completed surfaces shall be continuous and free of pinholes, voids, and starved edges.

- D. Gap and Void Treatment: Fill gaps in a separate operation before the **AtmoFlash VP** surface application. Treat gaps according to width, measured at the widest point. Gaps up to 1/2 inch wide may be filled directly with **AtmoFlash VP** without non-gassing backer rod. For gaps over 1/2 inch and up to 1 inch, install closed-cell polyethylene non-gassing backer rod sized approximately 25 percent larger than the gap width, set to a uniform depth so the **AtmoFlash VP** film above the rod is continuous and fully supported. Gaps exceeding 1 inch shall be structurally repaired before proceeding. This requirement applies to all conditions described below.
- E. Sequencing with **AtmoSeal VP**: Allow **AtmoFlash VP** to skin over before applying **AtmoSeal VP** — approximately 40–50 minutes at 70°F (21°C) and 50 percent relative humidity, longer in cold or dry conditions. Maintain a minimum 2-inch overlap of **AtmoSeal VP** onto all **AtmoFlash VP**-treated areas, measured from the outer edge of the treated area.
- F. Joints, Seams, and Fastener Heads: Apply **AtmoFlash VP** in a continuous zigzag pattern along the joint. Tool immediately, spreading outward to a uniform 12–15 mil film extending a minimum of 1 inch beyond the sheathing board edge on each side. Treat fastener heads with a short zigzag or spiral pass producing a treated spot approximately 2-3/8 inches in diameter.
- G. Rough Openings: Apply **AtmoFlash VP** into each corner of the rough opening and along the sheathing-to-framing interface, then apply in a zigzag pattern along the interior faces of the opening and onto the exterior wall surface, spreading to extend a minimum of 2 inches onto the exterior face on all sides.
- H. Penetrations: At all pipe, conduit, and mechanical penetrations, apply **AtmoFlash VP** to form a 1-inch cant at the junction of the penetrating element and the sheathing. Tool the cant to a continuous, uniform fillet with no voids at either interface.
- I. Transitions: At all transitions between dissimilar materials and air barrier system components — including sheathing-to-concrete, sheathing-to-CMU, and below-grade waterproofing-to-above-grade air barrier interfaces — apply **AtmoFlash VP** in a zigzag pattern along the transition and spread to extend a minimum of 2 inches onto each substrate. Where the two substrates are not flush, work the material fully into the change in plane; do not bridge across an unsupported void. Greater extensions may be required depending on project conditions; consult EPRO details and application guidelines.

3.4 ATMOSEAL VP APPLICATION – FIELD MEMBRANE

- A. Mixing: **AtmoSeal VP** is single-component — no mixing of multiple components is required. If product separation is observed, mix container contents thoroughly using a low-speed drill and Jiffy mixer, working from top to bottom and side to side. Mix until uniform. Avoid introducing air into the material. Apply directly from the container. Do not dilute or alter.
- B. Equipment: Apply by commercial direct immersion airless sprayer capable of maintaining a minimum of 3,500 psi at the spray tip, or by standard 3/4-inch nap roller with phenolic core. Contact EPRO for specific spray equipment recommendations.
- C. Air Temperature: Optimal application range is 40°F (4.4°C) and rising to 95°F (35°C). Application within the extended range of 20°F (–7°C) to 110°F (43°C) is permitted with the precautions described in the manufacturer's Application Guidelines. Do not apply at air temperatures below 20°F (–7°C) without written guidance from EPRO.
- D. Substrate Temperature: Optimal substrate temperature is 40°F (4.4°C) and rising. Do not apply to frozen or frost-covered substrates. Substrates exceeding 95°F (35°C) may be cooled with a light mist of clean water before application. Refer to **AtmoSeal VP** Application Guidelines for detailed recommendations.

- E. Application: Confirm all **AtmoFlash VP** detailing is complete and skinned over before beginning field application. Apply **AtmoSeal VP** at 20–25 mils using consistent, overlapping passes to achieve a uniform, continuous film. Maintain a minimum 2-inch overlap onto all **AtmoFlash VP**-treated areas. Following application, examine the membrane for pinholes, voids, or discontinuities and address immediately. Highly porous substrates may require additional passes to achieve a continuous, uniform film.
- F. Curing: Cure rate depends on temperature and relative humidity. Warmer, more humid conditions accelerate cure; cold or dry conditions extend it. Skin time is 40–50 minutes at 70°F (21°C) and 50% relative humidity. If faster cure is needed, lightly mist the applied surface with clean water to activate additional moisture cure. Full cure within 12-24 hours.

3.5 FIELD QUALITY CONTROL

- A. Strictly comply with installation guidelines in manufacturer's published literature, including but not limited to, the following:
 - 1. Verify that the membrane is continuous and uniform with no pinholes, voids, gaps, or discontinuities.
 - 2. Confirm minimum 2-inch overlap of **AtmoSeal VP** onto all **AtmoFlash VP**-treated areas.
 - 3. Inspect all rough openings, penetrations, and transitions for complete **AtmoFlash VP** coverage and continuity.
 - 4. Verify that the air barrier system connects continuously to roof, below-grade, and fenestration assemblies.
 - 5. Mark and repair all deficiencies with **AtmoFlash VP** before covering.
 - 6. Where NFPA 285 compliance is required, verify that applied membrane thickness meets the thickness identified in the referenced approval or engineering evaluation, and that the installed assembly matches the submitted assembly compliance statement.
 - 7. Document field quality control inspections and make available to the Owner, architect, and EPRO upon request.

3.6 CLEANUP

- A. Flush all spray equipment, hoses, and tips thoroughly with mineral spirits or equivalent solvent immediately following each use. Never leave **AtmoSeal VP** standing idle in spray equipment — material left for more than 15 minutes may begin to cure in the pump and lines. Never flush equipment with water as contact with moisture will initiate cure.
- B. Clean **AtmoFlash VP** tools and equipment with mineral spirits or equivalent solvent immediately after use. Remove cured **AtmoFlash VP** mechanically using a sharp-edged tool.

3.7 PROTECTION

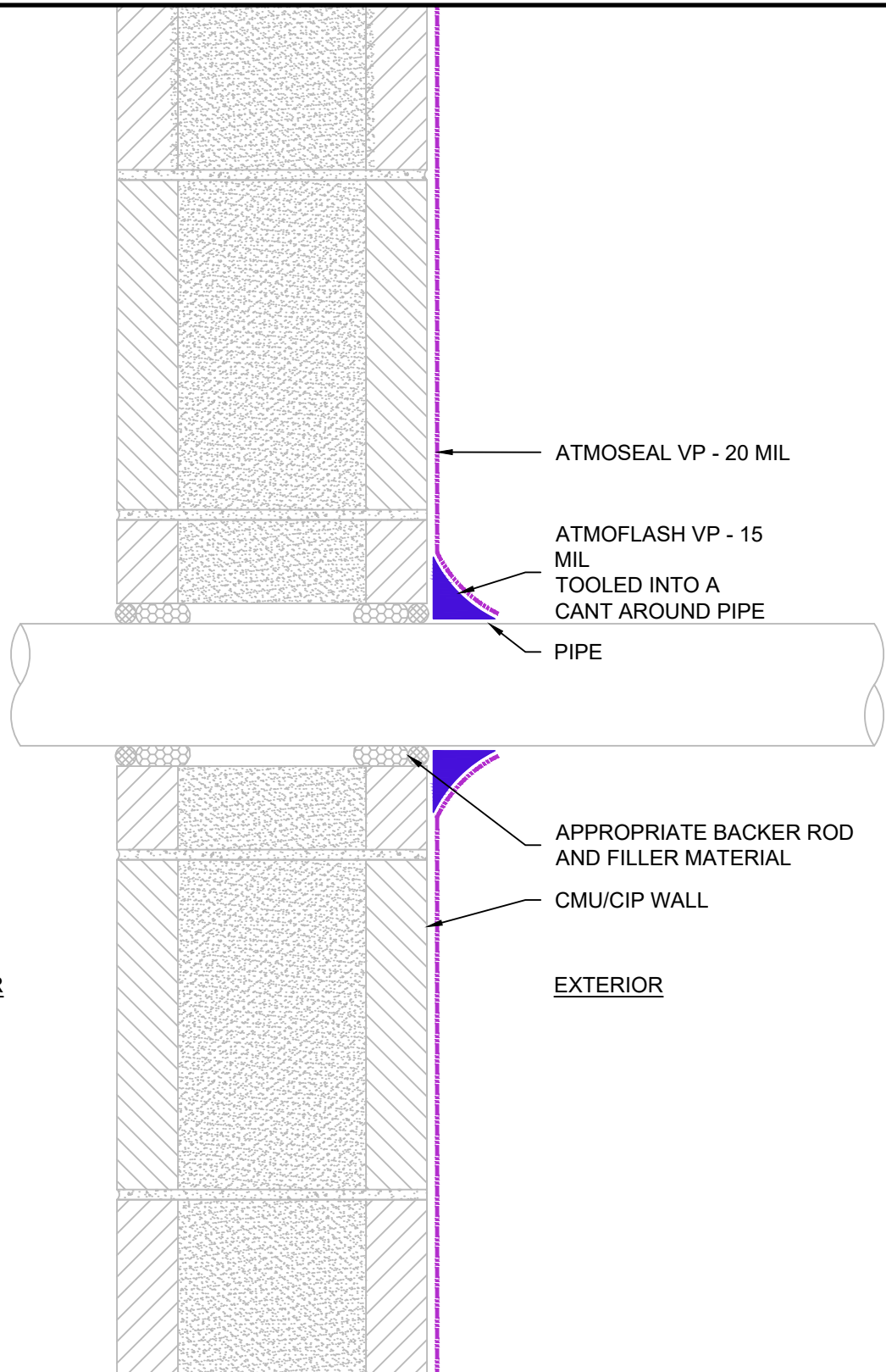
- A. Protect the completed air barrier system from damage by subsequent construction activity until covered by cladding or other protective materials.
- B. Do not permit construction loads to bear on or against the completed membrane, including scaffolding legs, shoring, ladders, staged materials, and heavy equipment.
- C. **AtmoSeal VP** may be exposed to UV and weather for up to 12 months. Inspect before covering if the exposure period approaches this limit.

- D. Coordinate with all trades whose work interfaces with the air barrier system. Inspect the membrane for damage prior to cover and repair all penetrations and damage in accordance with Article 3.8.

3.8 REPAIRS

- A. Follow manufacturer's written repair guidelines. Minor repairs (< 1 ft²) may be made using ***AtmoFlash VP*** or ***AtmoSeal VP***. For larger damaged areas, apply additional ***AtmoSeal VP*** extending a minimum of 2 inches beyond the defective area in all directions. Ensure repaired areas are continuous with the surrounding membrane and free of pinholes or voids.

End of Section



CMU/CIP - SUBSTRATE - PENETRATION - PIPE

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	DRAFTER	DATE	
	RJT	06/30/2026	

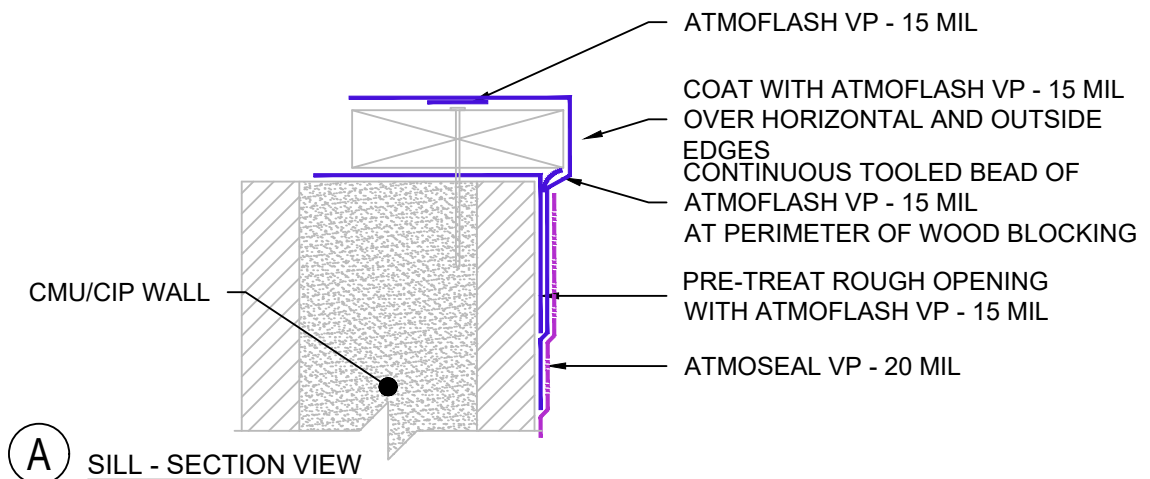
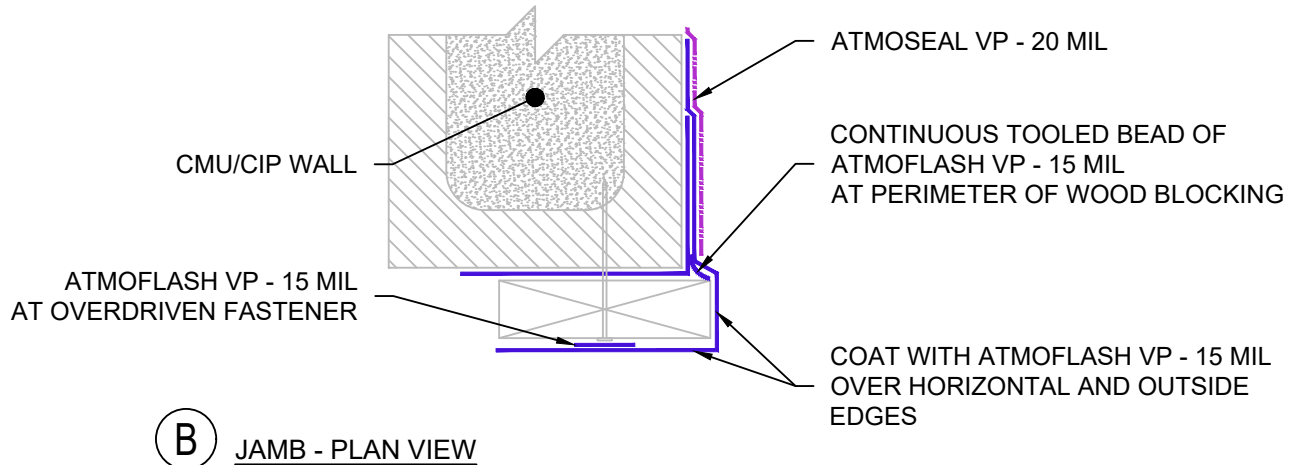
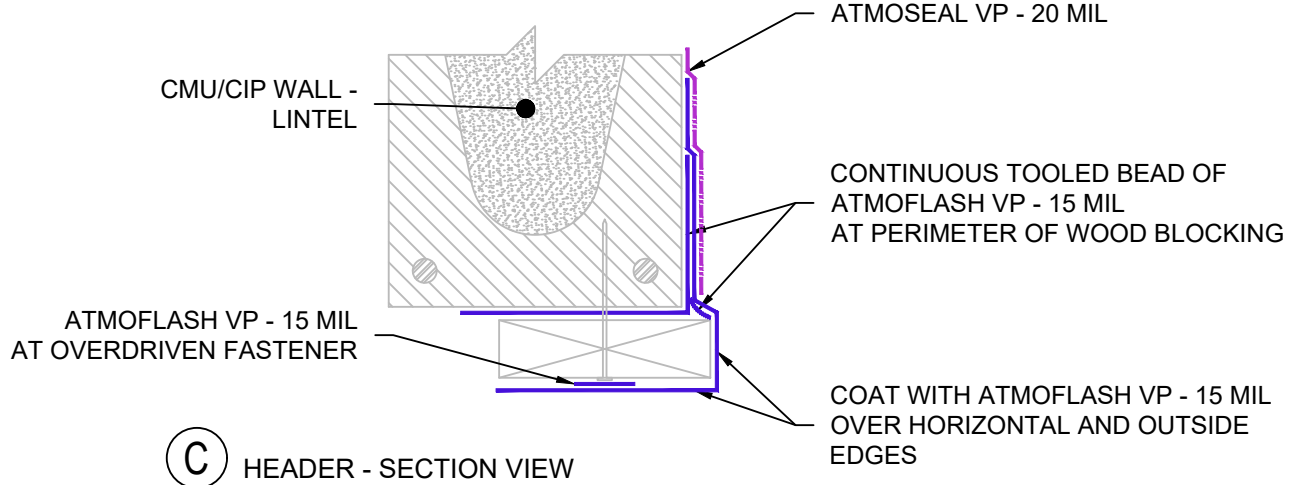
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INTERIOR

EXTERIOR



CMU/CIP - SUBSTRATE - WINDOW - ROUGH OPENING



SYSTEM NAME

ATMOSEAL VP

DRAFTER

RJT

DRAWING NUMBER

AAB-100400.1

DATE

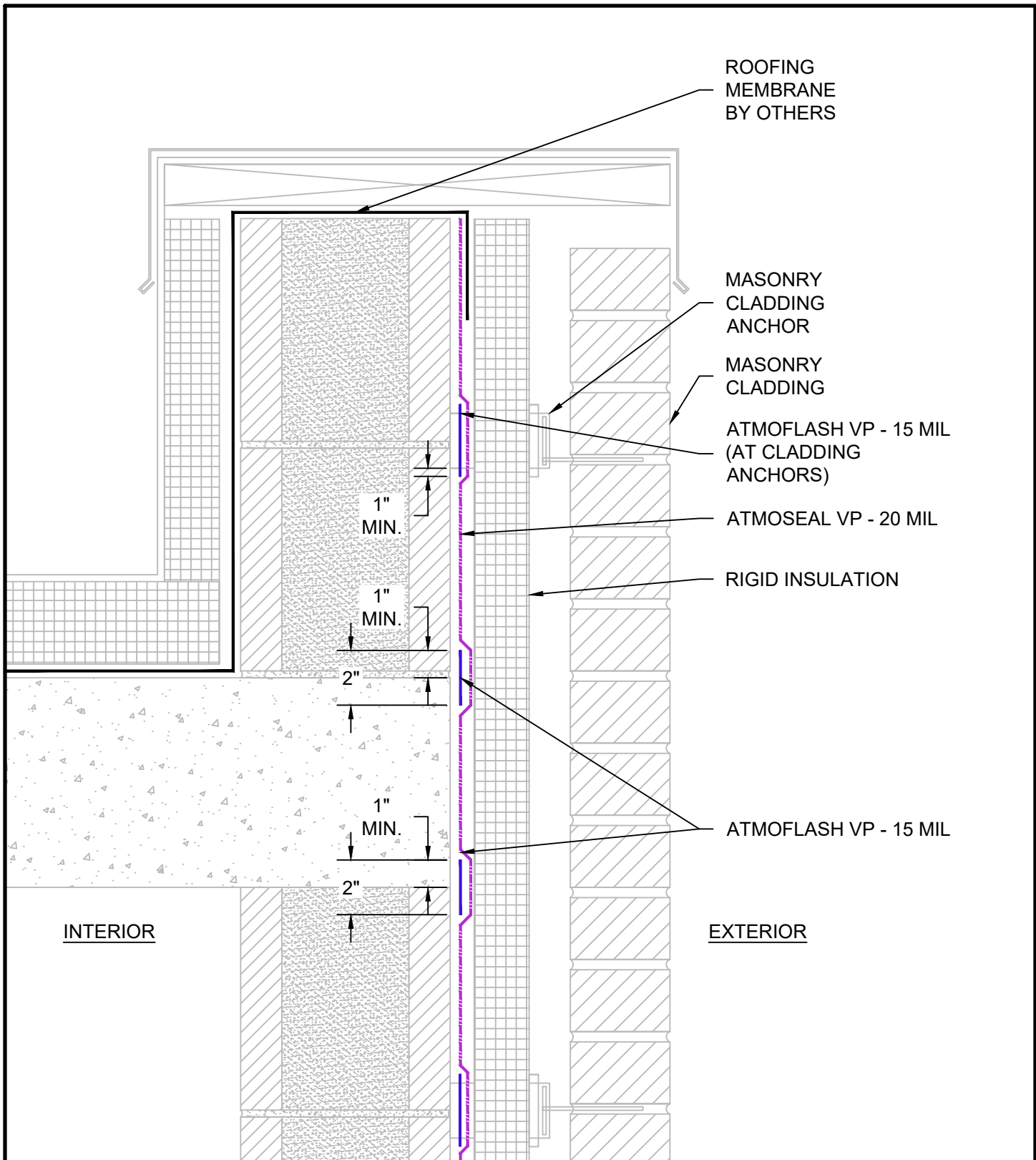
06/30/2026



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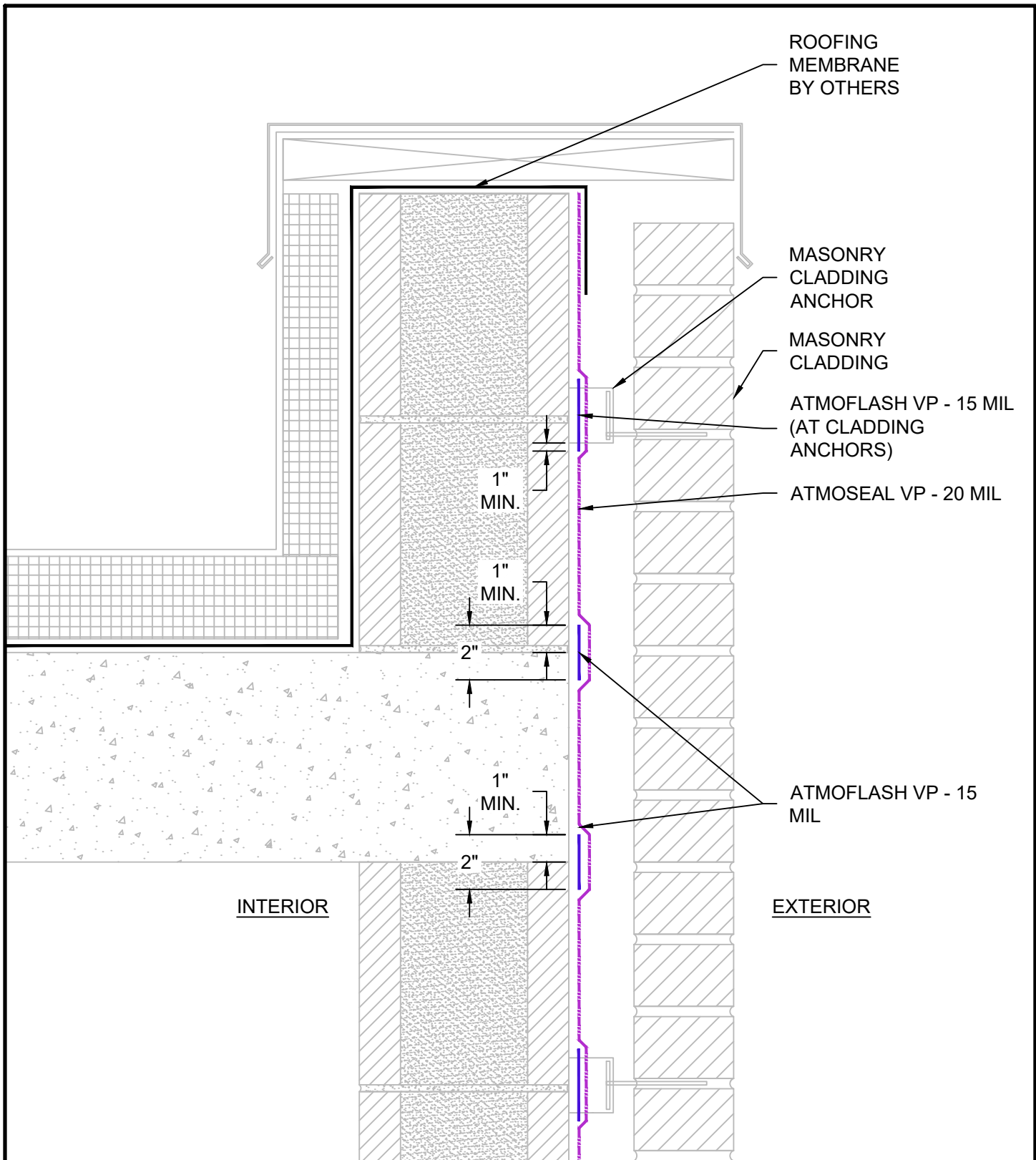
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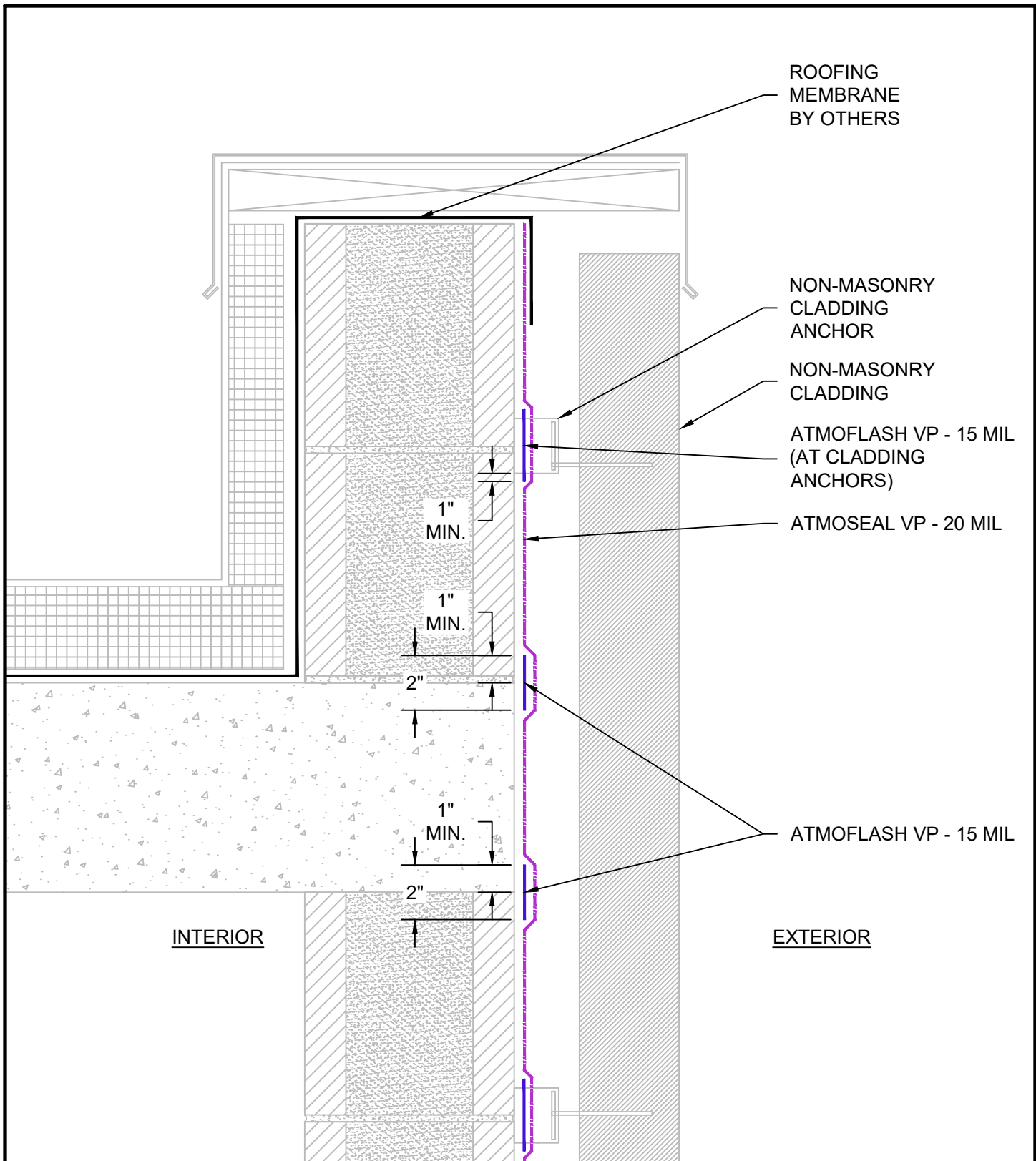
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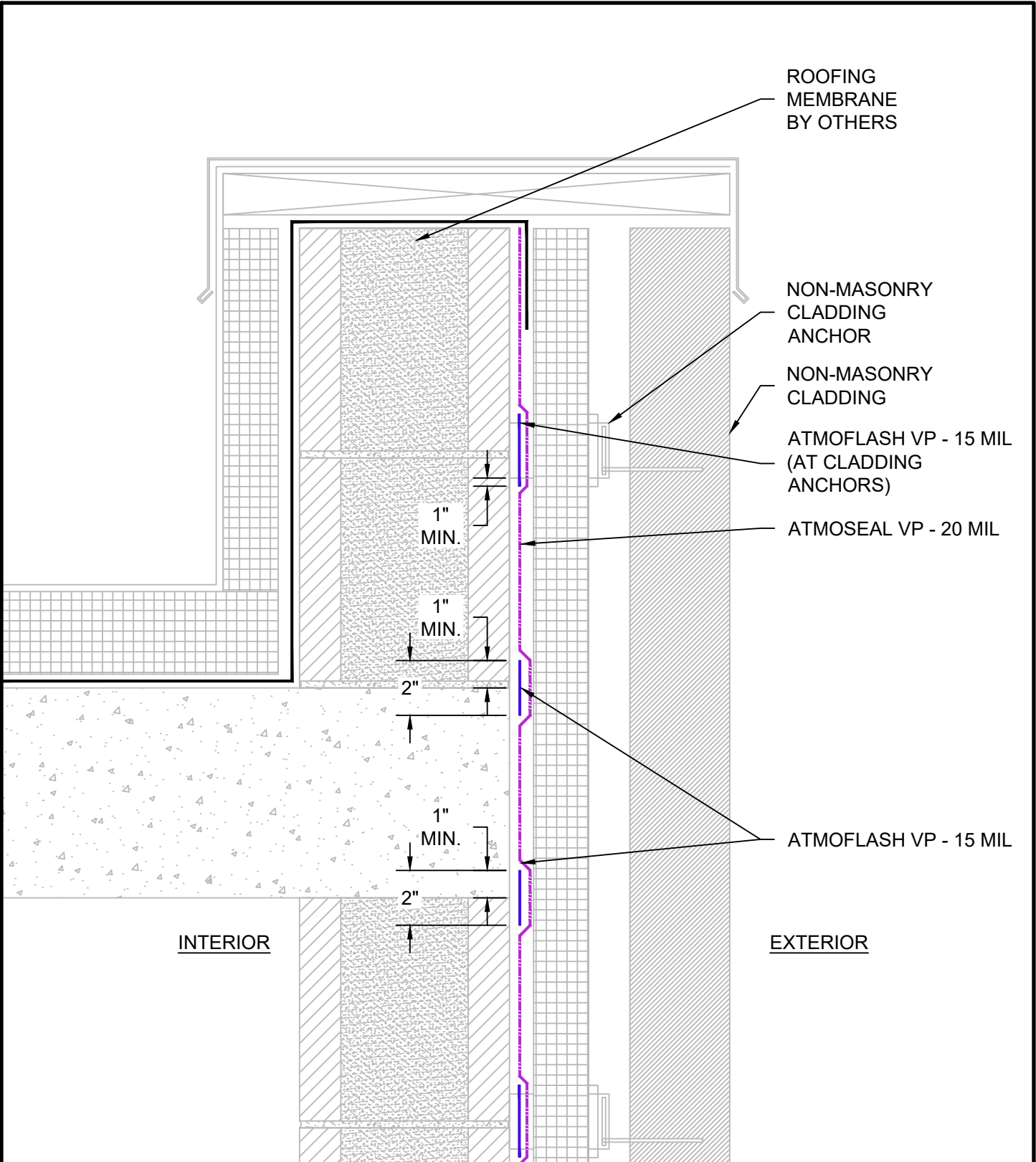
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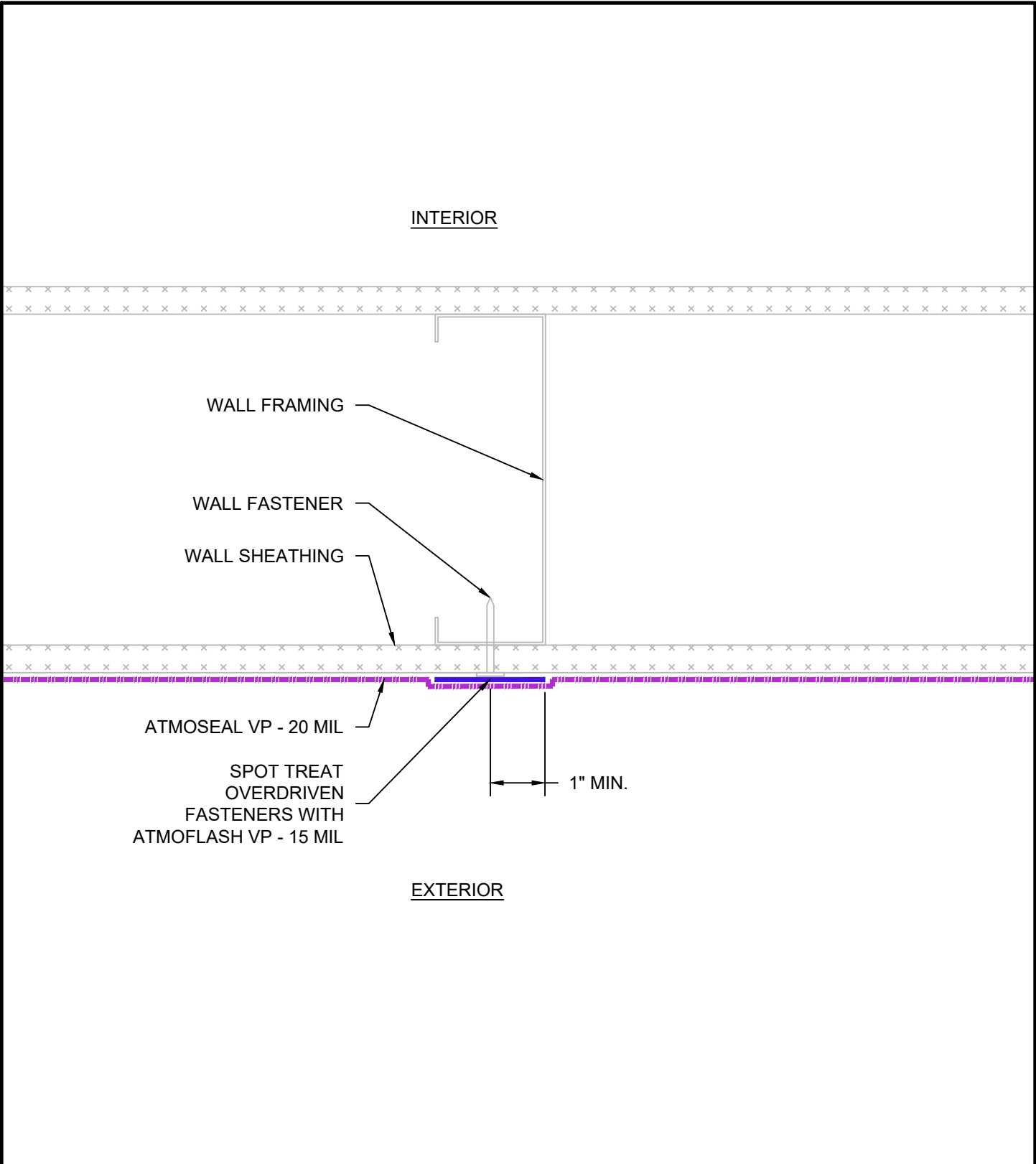
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CMUCIP - NON-MASONRY CLADDING - INSULATION - TIE IN AT PARAPET - RAISED PARAPET WITH FLAT COPING			
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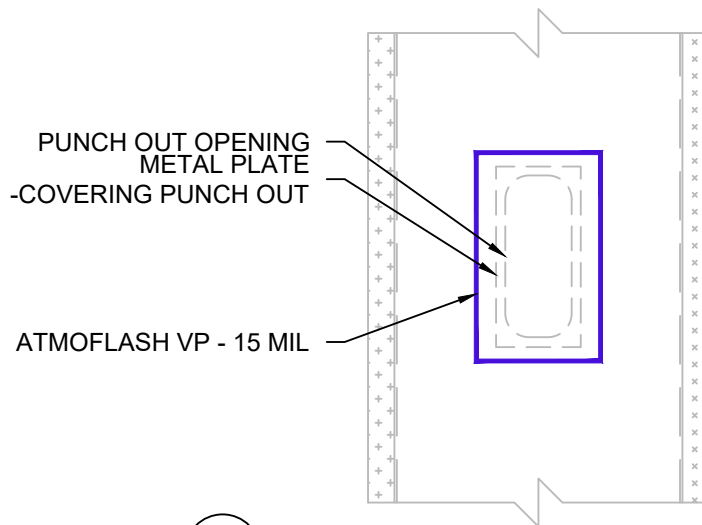
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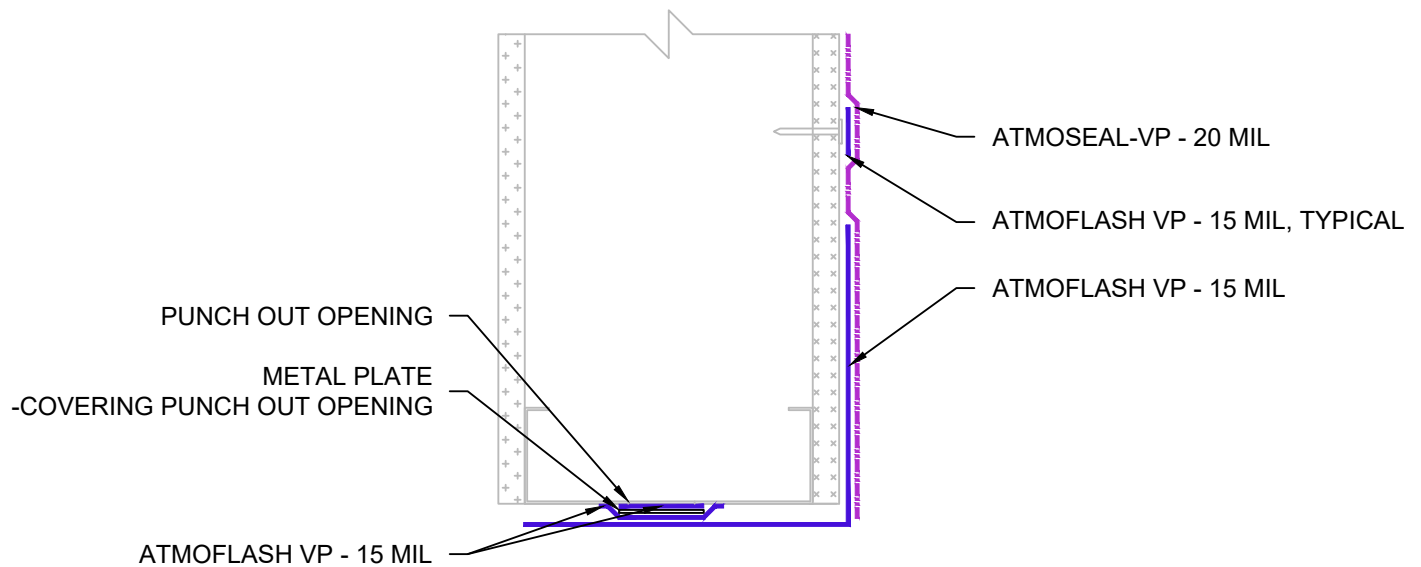
LGMF - SUBSTRATE - SHEATHING ANCHOR LOCATIONS

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	DRAFTER	DATE	
	RJT	06/30/2026	

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A JAMB -ELEVATION VIEW



B JAMB - PLAN VIEW

LGMF - SUBSTRATE - PRE APPLICATION - EXPOSED PUNCHOUT AT WINDOW JAMB



SYSTEM NAME
ATMOSEAL VP

DRAFTER

RJT

DRAWING NUMBER

AAB-V.200130.1

DATE

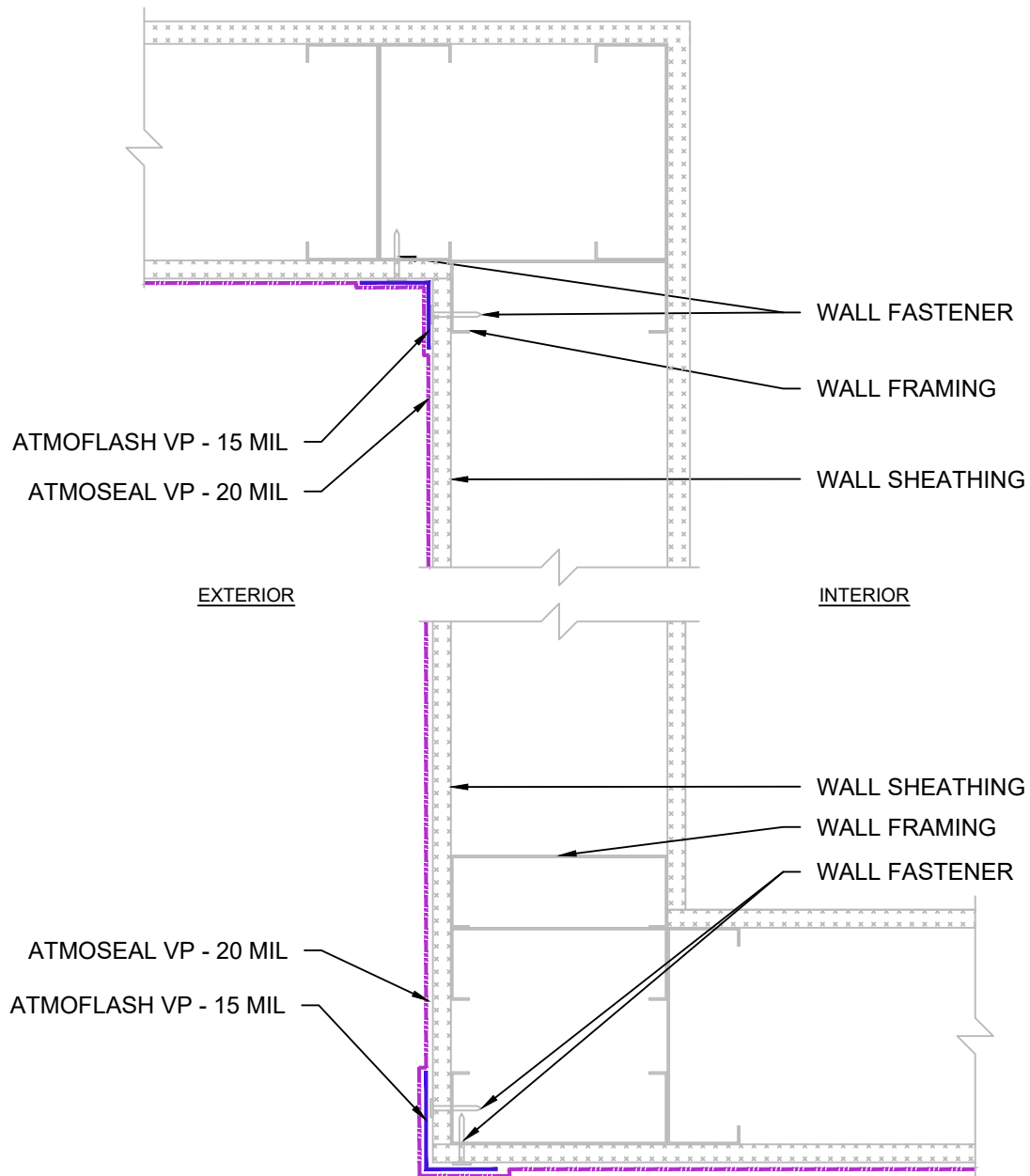
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LGMF - SUBSTRATE - PRE-APPLICATION - INSIDE OUTSIDE CORNERS - PLAN VIEW



SYSTEM NAME
ATMOSEAL VP

DRAFTER

RJT

DRAWING NUMBER

AAB-V. 200140.1

DATE

06/30/2026

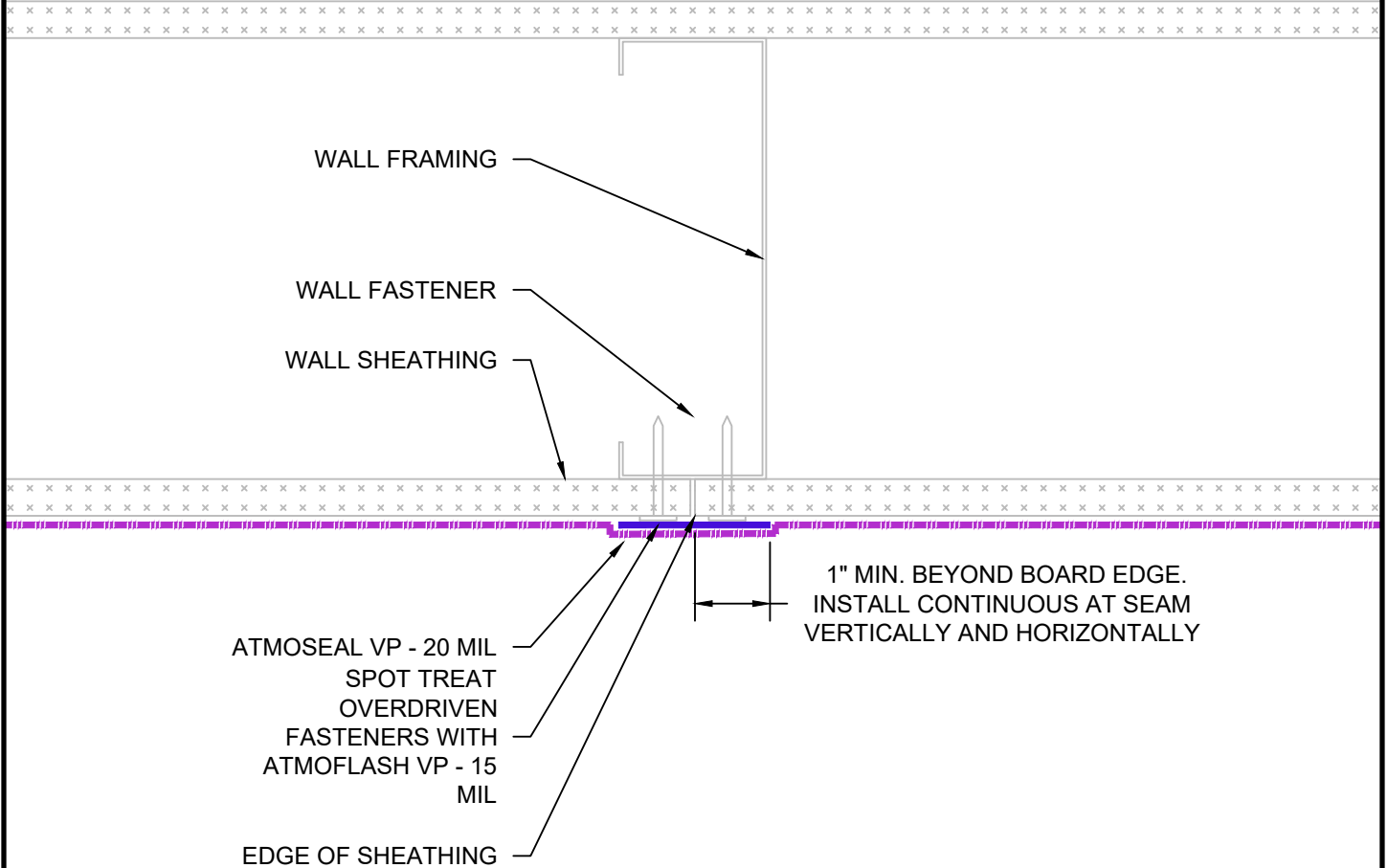


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INTERIOR



EXTERIOR

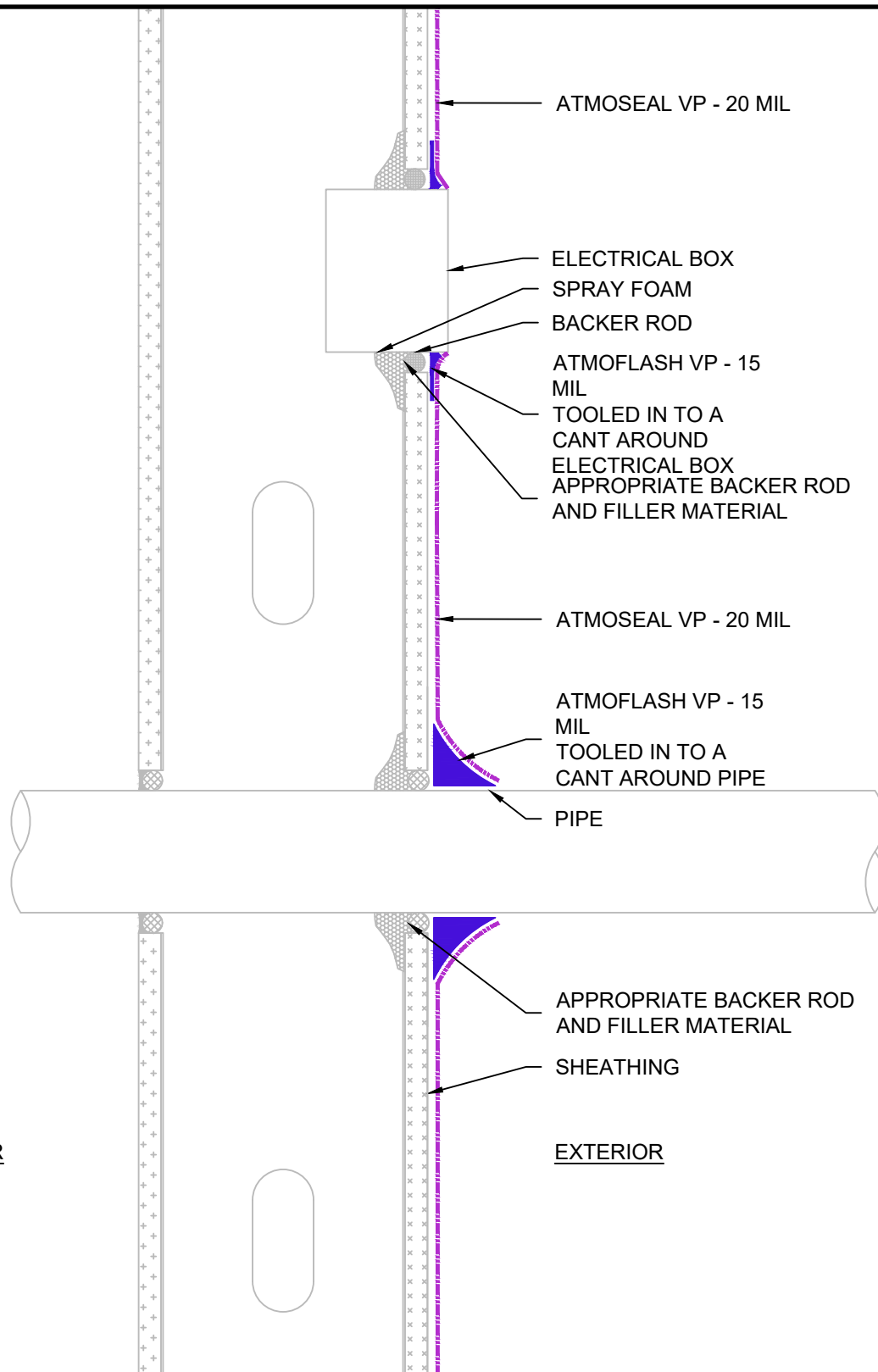
LGMP - SUBSTRATE -SHEATHING WALL SEAM LOCATIONS

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	DRAFTER	DATE	
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LGMF - SUBSTRATE - PIPE AND MECHANICAL PENETRATIONS



SYSTEM NAME

ATMOSEAL VP

DRAFTER

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DRAWING NUMBER

AAB-V.200320.1

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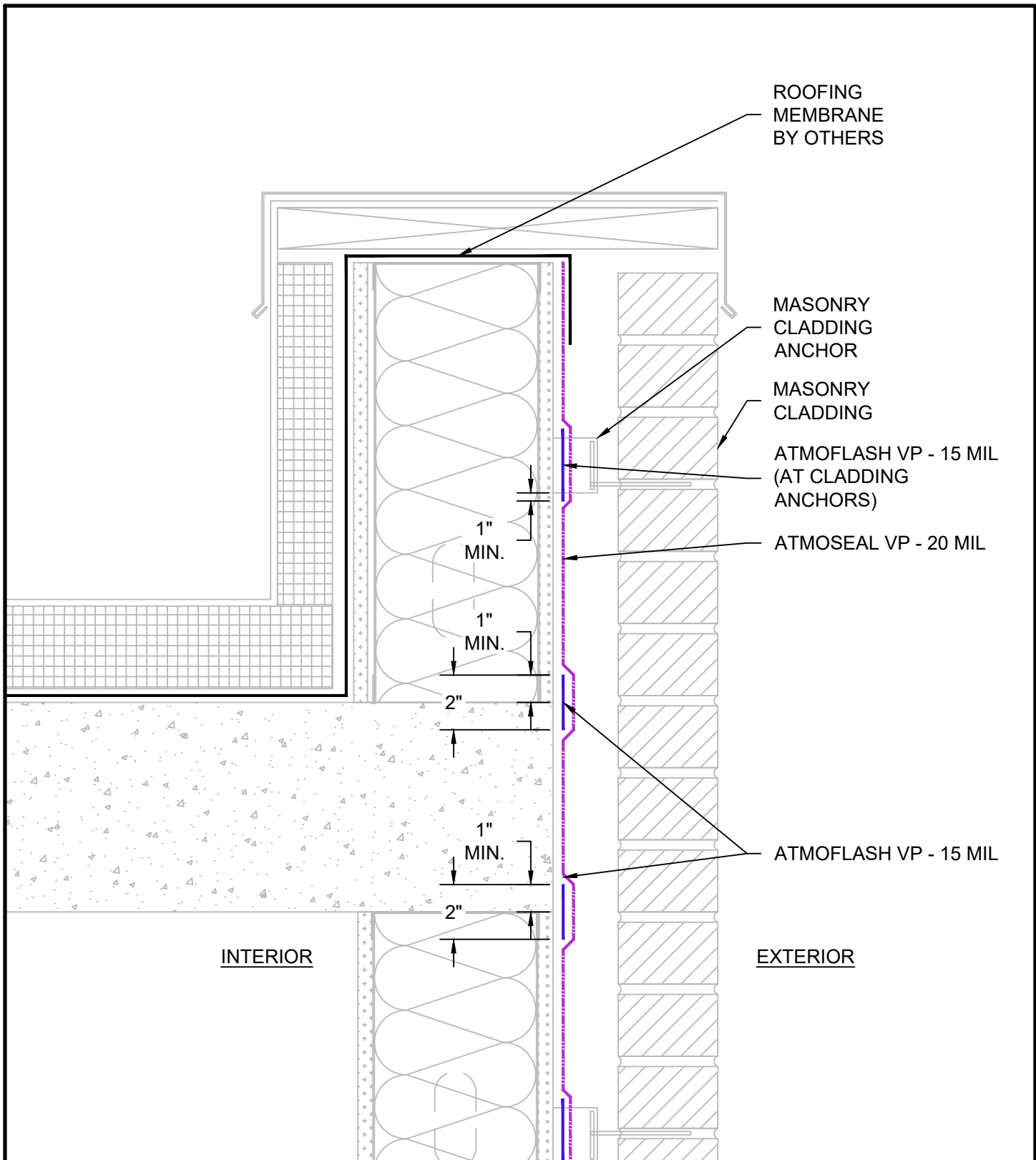
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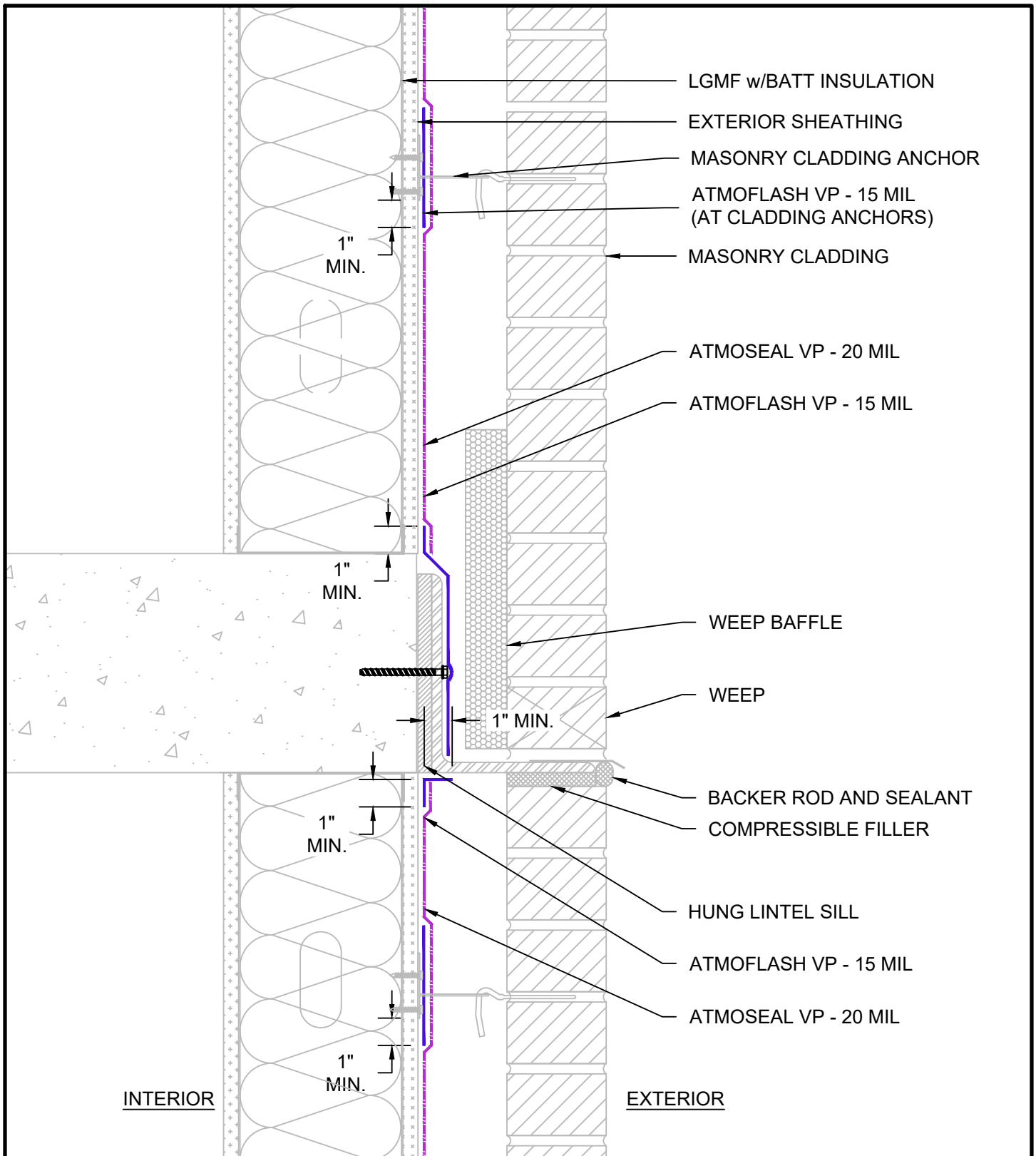
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	DRAFTER	DATE	
	RJT	06/30/2026	

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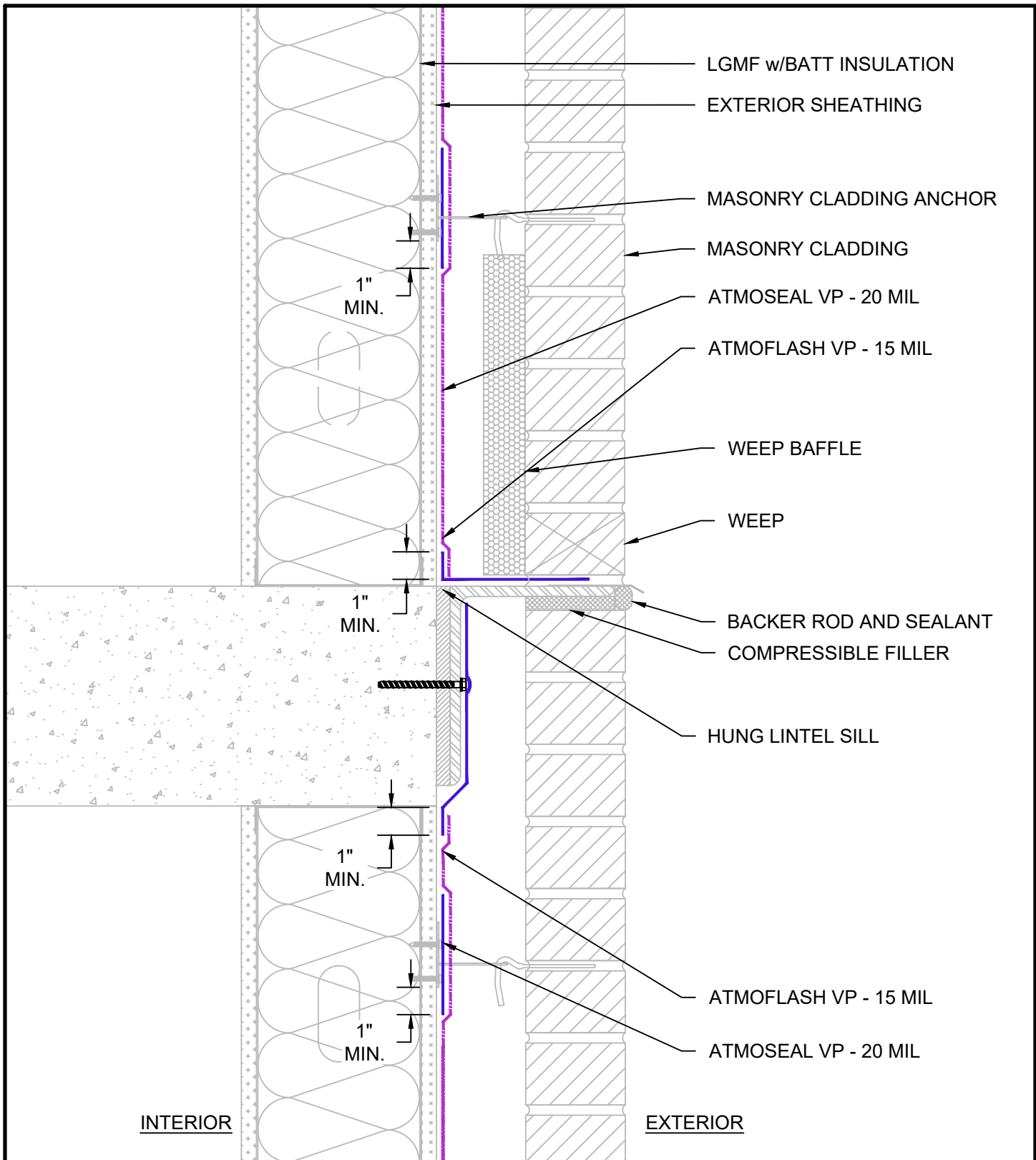
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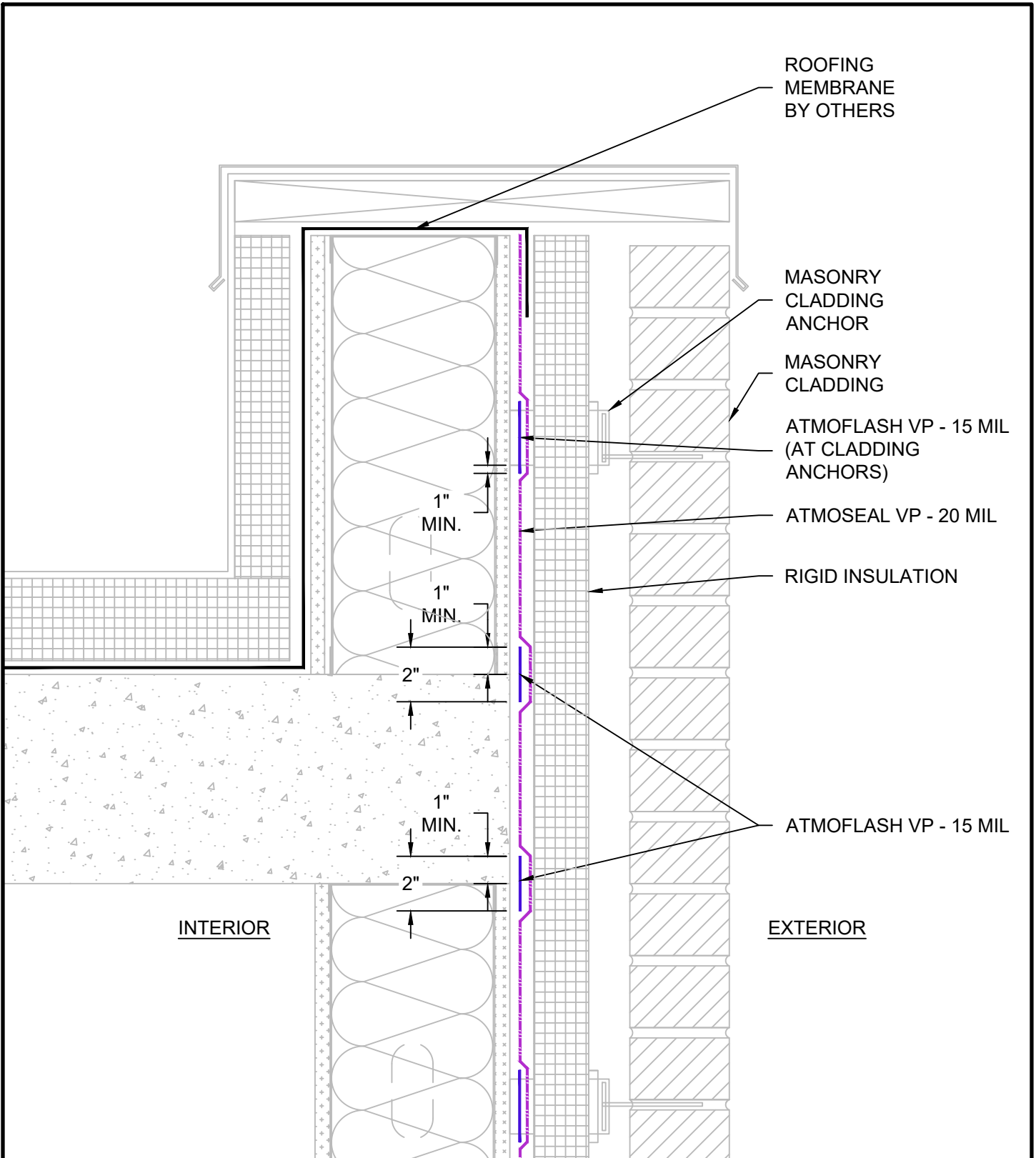
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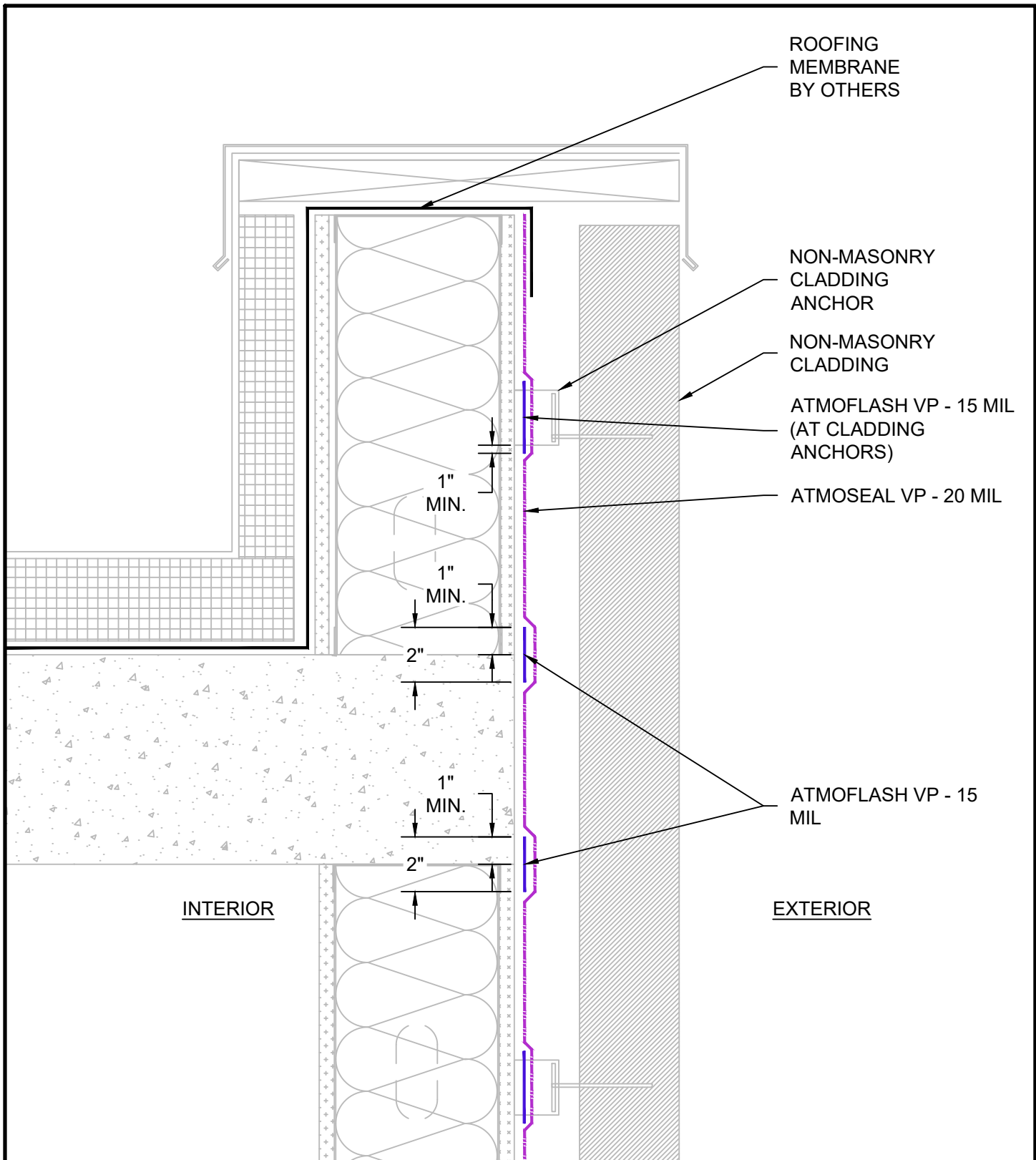
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LGMF - MASONRY CLADDING - INSULATION - TIE IN AT PARAPET - RAISED PARAPET WITH FLAT COPING

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	DRAFTER	DATE	
	RJT	06/30/2026	



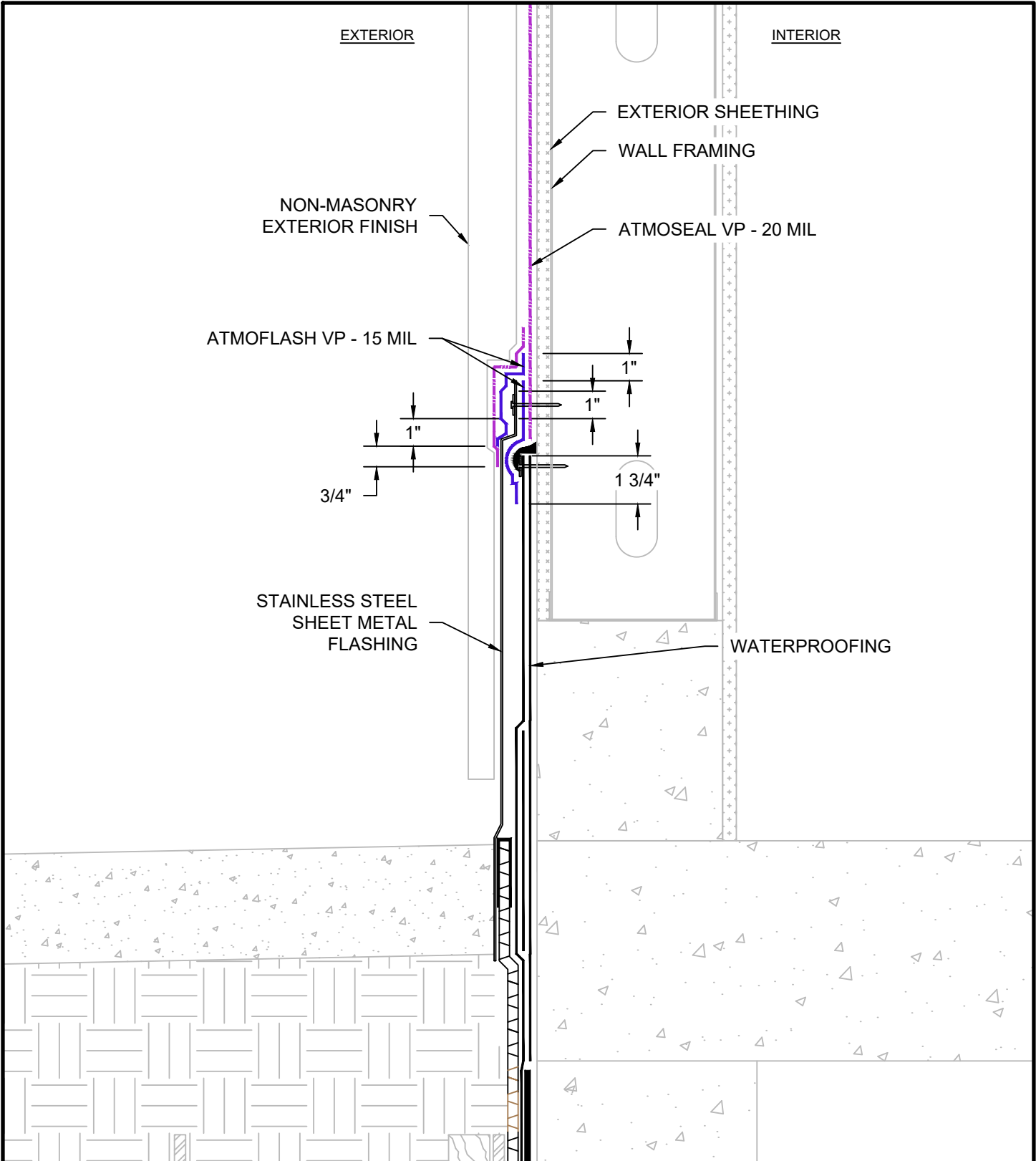
LGMF - NON-MASONRY CLADDING - NO INSULATION - TIE IN AT PARAPET - RAISED PARAPET WITH FLAT COPING

	SYSTEM NAME	DRAWING NUMBER	
	ATMOSEAL VP	AAB-V.220510.1	
	DRAFTER	DATE	
	RJT	06/30/2026	

AS A SUPPLIER OF FINISHED PRODUCTS ONLY, EPRO SERVICES, INC. DOES NOT ASSUME RESPONSIBILITY FOR ERRORS IN DESIGN, ENGINEERING OR DIMENSIONS. THE PROJECT TEAM MUST VERIFY ALL DIMENSIONS AND SUITABILITY OF DETAILS. THE PRODUCTS LISTED ARE TRADEMARKS OF EPRO SERVICES, INC.

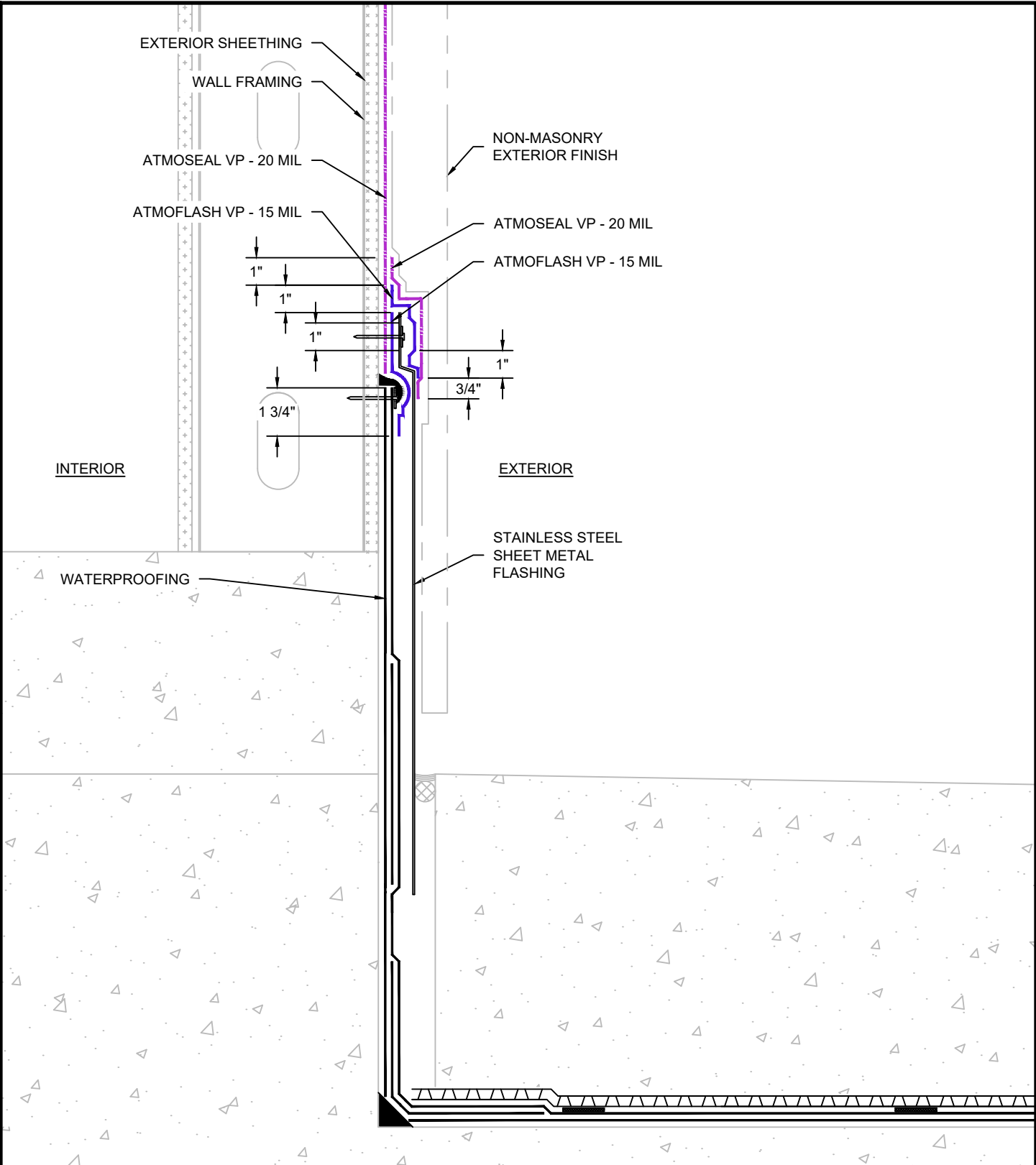
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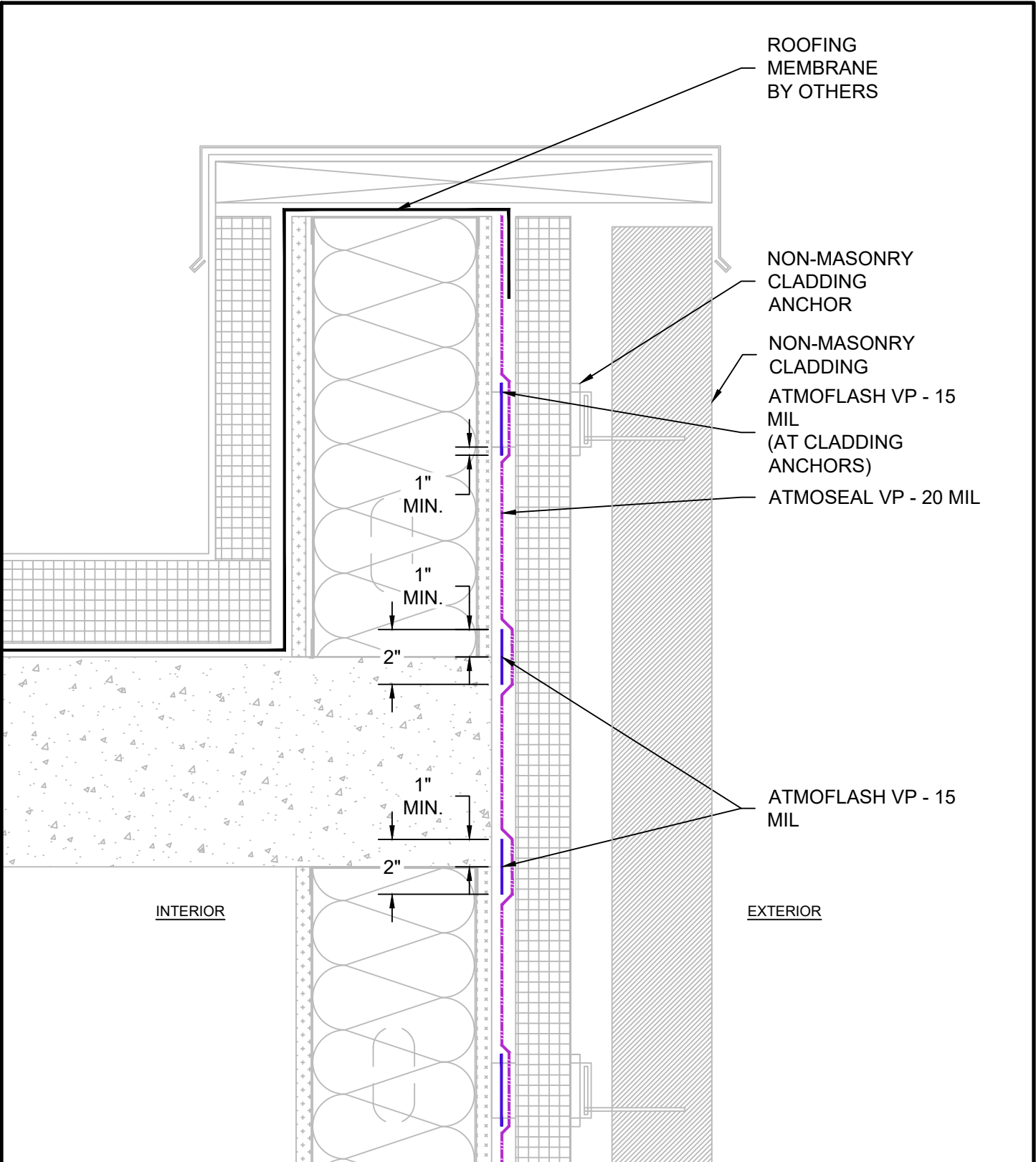
LGMF - WALL BASE - TERMINATION - BELOW GRADE WALL SYSTEM TIE IN - NON-MASONRY CLADDING - NO INSULATION

	SYSTEM NAME	DRAWING NUMBER	
	ATMOSEAL VP	AAB-V.27120.1	
	DRAFTER	DATE	
	RJT	06/30/2026	



LGMF - WALL BASE - TERMINATION - DECK SYSTEM TIE IN - NON-MASONRY CLADDING - NO INSULATION

	SYSTEM NAME	DRAWING NUMBER	
	ATMOSEAL VP	AAB-V.220720.1	
	DRAFTER	DATE	
	RJT	06/30/2026	



LGMF - NON-MASONRY CLADDING - INSULATION - TIE IN AT PARAPET - RAISED PARAPET WITH FLAT COPING			
	SYSTEM NAME	DRAWING NUMBER	
	ATMOSEAL VP	AAB-V.221510.1	
	DRAFTER	DATE	
	RJT	06/30/2026	

NFPA 285 COMPLIANCE

AtmoSeal VP System — Vapor-Permeable STPE Fluid-Applied Air and Water Barrier

Issued August 2026	Priest & Associates Consulting Engineering Evaluation Project No. 11480	Valid through May 7, 2029
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WHAT IS NFPA 285?

NFPA 285 is the Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components. It evaluates whether a complete exterior wall assembly will resist the vertical and lateral spread of flame when exposed to fire originating either inside the building or at the exterior face.

The International Building Code (IBC) requires NFPA 285 evaluation for exterior wall assemblies of Type I, II, III, or IV construction that contain combustible components — including fluid-applied water-resistive barriers, foam plastic insulation, and certain claddings. Triggering conditions differ by component: combustible water-resistive barriers are regulated where the building exceeds 40 feet in height above grade plane, while foam plastic insulation in exterior walls is regulated without a height threshold. Confirm the governing code edition and section for each project.

Key elements of the test

- Two-story wall assembly, minimum 18 feet tall by 13 feet 4 inches wide, with a window opening at the lower level.
- Interior burner and window burner produce a controlled 30-minute fire exposure.
- Thermocouples throughout the assembly monitor for flame propagation; pass/fail is determined by temperature thresholds and visual flame observation.
- Flames must not propagate more than 10 feet vertically above the window opening or 5 feet laterally from the centerline.
- Flames must not penetrate the wall cavity, reach the second story, or escape the assembly.

Because NFPA 285 tests the complete assembly — not individual products — compliance is established for specific combinations of base wall, sheathing, water-resistive barrier (WRB), insulation, and cladding. AtmoSeal VP is qualified for use in the assemblies listed in this document.

ATMOSEAL VP SYSTEM NFPA 285 COMPLIANCE

The AtmoSeal VP System has been independently evaluated by Priest & Associates Consulting, LLC (Engineering Evaluation Project No. 11480, issued May 7, 2026) for use in exterior wall assemblies complying with NFPA 285-19. The evaluation uses two NFPA 285 approvals as its base documents — UL ER16529-01 for Atlas ThermalStar EPS and DrJ Engineering TER 1306-03 for Atlas EnergyShield Polyiso — and concludes, based on ASTM E1354 cone calorimeter testing, that AtmoSeal VP is less flammable than at least one of the water-resistive barriers in those approvals. For bare water-resistive barrier use, the evaluation additionally cites UL NFPA 285 approval EWS0005.

AtmoSeal VP may therefore be substituted as the water-resistive barrier in the assemblies listed in the tables that follow. The evaluation is valid through May 7, 2029; confirm it remains current before submitting on a project.

Scope of the evaluation

NFPA 285 evaluates complete wall assemblies rather than individual products. Engineering Evaluation No. 11480 addresses AtmoSeal VP as the water-resistive barrier component within the assemblies listed in this document. AtmoFlash VP performs detailing and flashing at joints, seams, fastener heads, rough openings, penetrations, and transitions within these assemblies; the evaluation does not list detailing materials separately. For project-specific fire performance documentation, contact EPRO.

The scope of the evaluation is limited to flame propagation per NFPA 285. It makes no judgment on structural, sound transmission, or other performance criteria.

AtmoSeal VP also achieves ASTM E84 Class A surface burning characteristics (Flame Spread ≤ 25 , Smoke Developed ≤ 450), reported separately in the AtmoSeal VP Product Data Sheet.

APPROVED WALL ASSEMBLY OPTIONS

AtmoSeal VP is qualified for use in four distinct assembly pathways. Pathways A and B reference specific Atlas insulation products. Pathway C uses noncombustible mineral wool from any manufacturer. Pathway D permits AtmoSeal VP as a bare WRB with no exterior insulation. Components from one pathway cannot be mixed with another — each pathway must be used as a complete approval set.

WALL COMPONENT	APPROVED OPTIONS
Base Wall	20 GA min., 3-5/8 in. min. steel studs spaced 24 in. OC max., with 5/8 in. Type X gypsum wallboard interior — OR — base wall systems listed in the referenced approval, including cast concrete and CMU walls
Fire Stopping at Floor Lines	4 in. min., 4 pcf min. mineral wool installed friction-fit or with Z-clips — OR — firestopping listed in the referenced approval
Cavity Insulation	None; any noncombustible insulation per ASTM E136; mineral fiber (faced or unfaced); fiberglass (faced or unfaced); or any cavity insulation listed in the referenced approval
Exterior Sheathing	1/2 in. min. exterior gypsum sheathing — OR — sheathings listed in the referenced approval. Over stud base walls, sheathing is required as a substrate for AtmoSeal VP. Cast concrete and CMU base walls serve as the substrate directly and do not require sheathing.
Water-Resistive Barrier	AtmoSeal VP — applied at 20–25 mils (WFT = DFT), 20 mils minimum, directly to approved sheathing or to a cast concrete or CMU base wall. May be used bare (no exterior insulation) or under exterior insulation.

The tables in this document reproduce the component options of Engineering Evaluation No. 11480. Detailing at joints, openings, penetrations, and transitions is performed with AtmoFlash VP as described under Scope of the evaluation above.

PATHWAY A: ATLAS THERMALSTAR EPS

Reference: UL ER16529-01. Atlas EPS assemblies require the special window opening perimeter design shown in the engineering evaluation. The header treatment is mandatory; the mineral wool fire-safing at the jambs is a

Priest & Associates recommendation for added fire safety.

COMPONENT	APPROVED MATERIALS
Exterior Insulation	None; ThermalStar Type I up to 10.2 in.; Type II up to 7.2 in.; Type IX up to 5.4 in.; LWI 10 up to 10.2 in.; LWI 15 up to 7.2 in.; LWI 25 up to 5.4 in.; LCI 10 up to 10.2 in.; LCI 15 up to 7.2 in. — OR — 1 in. min., 4 pcf min. noncombustible mineral wool
Approved Claddings	Brick (nominal 4 in. clay brick or veneer, max. 2 in. air gap, ties/anchors 24 in. OC max.); concrete (min. 2 in. with max. 2 in. air gap); CMU (min. 4 in. with max. 2 in. air gap); limestone (min. 2 in.); natural stone veneer (min. 2 in.); precast artificial stone (min. 1-1/2 in., ICC-ES AC51); terra cotta (min. 1-1/4 in., solid); stucco (min. 3/4 in. exterior cement plaster and lath). Limestone, natural stone veneer, precast artificial stone, and terra cotta require a non-open joint installation technique such as shiplap.
Window Opening Detail	MANDATORY for all Atlas EPS assemblies. Header: 25 GA min. sheet metal (steel) flashing with 1 in. thick, 4 pcf mineral wool over the interior of the sheet metal — OR — any header design deemed more robust by analysis. Mineral wool fire-safing at the jambs is recommended by Priest & Associates for added fire safety; see the window opening drawing in the engineering evaluation.

PATHWAY B: ATLAS ENERGYSHIELD POLYISO

Reference: DrJ Engineering TER 1306-03. Polyiso assemblies offer the broadest range of approved cladding

options and do not require the special EPS window opening detail.

COMPONENT	APPROVED MATERIALS
Exterior Sheathing	1/2 in. or thicker exterior type gypsum sheathing; 2 in. thick precast concrete panels attached to structural elements; 7/16 in. min. FRT plywood panels per IBC Section 2303.2; NexGen Maxterra MgO 12, 16, or 20 mm. FRT plywood may only be used where insulation covers the membrane (Atlas polyiso or mineral wool), and is not permitted with EnergyShield XR. The “None” sheathing option is not available over stud base walls, where sheathing is required as a substrate for AtmoSeal VP; cast concrete and CMU base walls are themselves the substrate and need no sheathing.
Exterior Insulation	None; Atlas EnergyShield Pro up to 4 in.; EnergyShield CGF Pro up to 4 in.; EnergyShield Ply Pro up to 4-3/4 in. (with FRT plywood); Atlas EnergyShield XR up to 4 in. — OR — 1 in. min., 4 pcf min. noncombustible mineral wool. Multiple layers permitted.
Z-Girts (if required)	Metallic Z-girts; Horizontal Smart Ci-GreenGirt; Horizontal Armatherm FRR Z-girt; Knight Wall ThermaZee; Strongirt (horizontal only); SFS NH3 (horizontal only); Cascadia Clip (horizontal only). Strongirt carries additional limits: claddings must be 8 mm minimum thickness, and Strongirt may not be used with ACM, uninsulated sheet metal building panels, stone/aluminum honeycomb composite panels, or Reynobond ZCM zinc. Girt spacing must comply with wind load per the manufacturer’s instructions.
Approved Claddings	A maximum air gap of 2-1/4 in., measured from the inner face of the cladding to the insulation, applies across this entire cladding list. Brick or CMU veneer; stucco (3/4 in. min.); limestone (2 in. min.); natural stone (2 in. min.); cast artificial stone (1-1/2 in. min.); terra cotta (1-1/4 in. min.); any ACM that has passed NFPA 285; uninsulated sheet metal panels (aluminum, steel, copper, zinc); fiber-cement siding (1/4 in. min.); stone/aluminum honeycomb composite; AAC panels (1-1/2 in. min.); Reynobond ZCM zinc; Terreal Zephir Evolution terra cotta rainscreen (9/16 in. min.); CERACLAD; CUPACLAD slate; Glen-Gery Thin Tech and Tru-Brix; Telling Corium thin brick; thin brick or stone (3/4 in. min. clay brick, fully adhered); Telluride stone (1 in. min.); Nichiha cladding (5/16 in. per Intertek CCRR 0258); ceramic or porcelain tile; one-coat stucco (3/8–1/2 in.); noncombustible cement board with NFPA 285-approved EIFS lamina; SwissPearl fiber cement (8 mm min.); SpeedyMason thin brick rainscreen (9/16 in. min.). Individual claddings carry further conditions on joint treatment, mortar type, attachment, and substrate; see the referenced approval for the full conditions on each.

COMPONENT	APPROVED MATERIALS
Flashing of Openings	No flashing restrictions where the wall design references NFPA 285-12 and gypsum sheathing is used on the exterior of the studs, or with Base Wall option 1 or 2. Where the design references NFPA 285-23 or older editions under those same conditions, use a 24-gauge steel header with 0.040 aluminum surrounding the steel. The evaluation's third flashing case — polyiso direct-attached to studs with no exterior sheathing — does not apply to this system, because sheathing is required as a substrate for AtmoSeal VP over stud base walls.

PATHWAY C: MINERAL WOOL (ANY MANUFACTURER)

Noncombustible mineral wool may replace the foam insulation in any qualified assembly. Four pcf minimum density, one inch thick minimum, may replace polyiso because it is noncombustible. Mineral wool is not manufacturer-specific — products from any supplier (Rockwool, Owens Corning Thermafiber, Knauf, Johns Manville, etc.) are acceptable provided they meet the density and thickness requirements. This pathway also unlocks the combined cladding list from both Pathways A and B.

COMPONENT	APPROVED MATERIALS
Exterior Insulation	Unfaced noncombustible mineral wool meeting ASTM E136. Minimum 1 in. thick, minimum 4 pcf density. Any manufacturer. Multiple layers permitted.
Approved Claddings	Any cladding listed in Pathway A or Pathway B may be used. Where the mineral wool is 2 in. or thicker and 4 pcf or greater in density, the air gap from the mineral wool surface to the back of the cladding is unlimited, except for ACM that has passed NFPA 285 and Reynobond ZCM zinc, which remain restricted to 2-1/4 in. Where the mineral wool is less than 2 in. thick or less than 4 pcf density, the air gap is restricted to the figure listed for that individual cladding.
Z-Girts (if required)	Any Z-girt listed in Pathway B is acceptable, subject to the same limits — including the Strongirt cladding restrictions. Girt spacing must comply with wind load per the manufacturer's instructions.
Window Opening Detail	Mineral wool pathways do not require the special EPS window opening detail. Standard flashing per the referenced approval applies.

PATHWAY D: BARE WRB (NO EXTERIOR INSULATION)

AtmoSeal VP may be used with no exterior insulation on a noncombustible sheathing substrate. This pathway is qualified because AtmoSeal VP is less flammable (per ASTM E1354) than the WRB in UL NFPA 285 approval EWS0005, which permits ACM cladding directly over a bare WRB. Any cladding superior to ACM may replace

ACM in this pathway. This pathway does not apply to FRT plywood sheathing.

COMPONENT	APPROVED MATERIALS
Exterior Insulation	None.
Exterior Sheathing	Gypsum board or other noncombustible sheathings listed in the referenced approvals. This allowance does not apply to FRT plywood sheathing in the polyiso approval.
Approved Claddings	Any cladding listed in Pathway A or Pathway B. The evaluation states that the claddings in both referenced approvals meet the criterion of being equal or superior to ACM in NFPA 285 performance. Optionally, covering the membrane with mineral wool further reduces the combustibility of the wall.

IMPORTANT NOTES FOR SPECIFIERS

- Components from one pathway cannot be substituted into another. Materials in each approval table must be used together and not mixed with those of another approval.
- Pathway C (Mineral Wool) offers the broadest cladding flexibility — when mineral wool is used, claddings from both Pathway A and Pathway B may be specified.
- Pathway D (Bare WRB) is well-suited to renovation, low-rise commercial, and masonry-veneer projects where continuous exterior insulation is not required.
- AtmoSeal VP may only be used UNDER exterior insulation or with NO exterior insulation. It is not qualified as a water-resistive barrier applied over exterior insulation.
- Over stud base walls, exterior sheathing is REQUIRED as a substrate for AtmoSeal VP; the “no sheathing” option in the base Atlas approvals is not available in that condition. Cast concrete and CMU base walls serve as the substrate directly.
- This NFPA 285 qualification applies only to flame propagation per NFPA 285. It does not extend to structural, sound transmission, or other performance criteria.
- For submittal requirements — including the Assembly Compliance Statement identifying every component of the proposed wall assembly — see Guide Specification Section 07 27 26, Article 1.5 B.

PROJECT-SPECIFIC ASSEMBLIES

For wall assemblies that fall outside the configurations listed above, including alternate insulation manufacturers, contact EPRO. Additional engineering evaluations and project-specific approvals can be developed using the existing ASTM E1354 cone calorimeter data for AtmoSeal VP.

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