



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Note: This specification may be superseded at any time.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.eproinc.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