

EFFECTIVE FEBRUARY 15, 2019 AND SUPERSEDES ALL PREVIOUS VERSIONS

SPEC NOTE: **Air-Bloc® 33MR UV-Resistant Fluid-Applied Vapor Permeable Air Barrier.** This specification is ideally suited for buildings installing a UV-resistant fluid-applied elastomeric mold-resistive air barrier in accordance with the weather resistive barrier (WRB) requirements of the International Building Code (IBC). Air-Bloc® 33MR is used in cavity wall construction to provide an air and watertight membrane that allows for the passage of water vapor.

SPEC NOTE: This guide specification is a reference for recommended installation procedures of the products/assembly described; formatted in accordance with the Construction Specifications Institute (CSI) Manual of Practice. It is the discretion of the project specification author to use the information within as a whole, or in part, to set a minimum standard of performance. Update “[project specific]” notes and coordinate as required. Use of General Contractor/installing Subcontractor identified accordingly; modify as required.

SPEC NOTE: This document includes Henry® Company notes to assist the architect/specification writer. A Henry® Company “SPEC NOTE” will always immediately precede the text to which it is referring. The section serves as a guideline; modify to meet specific project requirements.

SPEC NOTE: Delete “SPEC NOTE” sections in the final copy of the specification.

**SECTION 07 27 26
FLUID-APPLIED MEMBRANE AIR BARRIERS**

PART 1: GENERAL

1.01. GENERAL REQUIREMENTS

- A. The General Conditions, Supplementary Conditions, Instructions to Bidders, and Division 01-General Requirements shall be read in conjunction with and govern this section.
- B. Read this Specification as a whole by all parties concerned. Each Section may contain more or less than the complete Work of any trade. The Contractor is solely responsible to make clear to the installing Subcontractor the extent of their Work.

1.02. SUMMARY

- A. This Section includes requirements for supplying labor, materials, tools, and equipment to complete the Work as shown on the Drawings Architectural Division as specified herein including, but not limited to, the following:
 - 1. Adhesives/Primers
 - 2. Fluid-Applied, Vapor Permeable Air Barrier
 - 3. Flashings
 - 4. Sealant
 - 5. Thru-wall Flashing
 - 6. Insulation Adhesive (optional)

SPEC NOTE: Coordination of terminations, transitions, and penetrations are pertinent to ensure chemical compatibility and adhesion of adjacent products. Edit the following related sections as required to specify a continuous air and watertight building envelope. Contact manufacturer(s) where products transition from one assembly to another to confirm minimum installation requirements for warranty issuance.

1.03. RELATED REQUIREMENTS

- A. DIVISION 03 – Concrete Section [project specific]

- B. DIVISION 04 – Masonry Section 04 20 00 – Unit Masonry
- C. DIVISION 06 – Wood, Plastics, and Composites Section 06 16 00 Sheathing
- D. DIVISION 07 – Thermal and Moisture Protection Section 07 10 00 - Dampproofing and Waterproofing

SPEC NOTE: Inclusion of plastic thermal insulation may require NFPA 285 compliance. Contact product manufacturers to confirm compliant assemblies.

- E. DIVISION 07 – Thermal and Moisture Protection Section 07 21 00 - Thermal Insulation

SPEC NOTE: Climate zones 4 and greater require a vapor retarder in accordance with the International Building Code (IBC) and the National Building Code of Canada (NBC). Coordinate and/or delete related Sections per project specific requirements.

- F. DIVISION 07 – Thermal and Moisture Protection Section 07 26 00 - Vapor Retarders
- G. DIVISION 07 – Thermal and Moisture Protection Section 07 62 00 - Sheet Metal Flashing and Trim

SPEC NOTE: 2012 IECC requires a continuous air barrier on building envelope systems. Contact product manufacturers and coordinate membrane roofing with this section to ensure compatibility.

- H. DIVISION 07 – Thermal and Moisture Protection 07 50 00 Membrane Roofing

SPEC NOTE: Confirm sealant and air barrier assembly compatibility:
 1. Contact product manufacturers and coordinate this section with joint sealant Section 07 92 00.
 2. Contact product manufacturers and coordinate this section glazing sealant Section 08 40 00.

- I. DIVISION 07 – Thermal and Moisture Protection Section 07 92 00 - Joint Sealants
- J. DIVISION 08 –Openings Section 08 40 00 - Entrances, Storefronts, and Curtain Walls

SPEC NOTE: Projects not referencing LEED delete Sections “1.3. K”, “1.4.C.7”, “1.5.D”, and “1.7.B.1.d” as stated below.

- K. DIVISION [project specific] - LEED Requirements Section [project specific] – [project specific].

1.04. ALTERNATES

- A. Submit requests for alternates in accordance with Section [project specific].
- B. Air barrier assemblies must meet the following standards:

1. UV resistance: Indefinite UV exposure
 2. Watertightness (CAN/CGSB-37.58-M86): Pass
 3. Primary membranes defined as Water Resistive Coatings are only considered acceptable substitutions when installed in conjunction with EIFS in accordance with ICC-ES AC 212 and are not considered acceptable substitutions for wall assemblies with alternate claddings.
- C. Alternate submission format to include:
1. Documentation from an independent testing laboratory certifying the performance of the system including auxiliary components meet requirements of this specification.
 2. Provide references indicating the Air Barrier Manufacturer has successfully completed projects of similar scope and nature on an annual basis for a minimum of ten (10) years.
 3. Air Barrier Manufacturer’s guide specification.
 4. Air Barrier Manufacturer’s technical data sheets.
 5. Air Barrier Manufacturer’s details.
 6. Product certification that the assembly components are supplied and warranted by single source Air Barrier Manufacturer.
 7. LEED HPD declaration
 8. Air Barrier Manufacturer statement that anticipated wall assembly complies with NFPA 285.
 9. Sample warranty as specified.
- D. Submit requests for alternates to this specification a minimum of ten (10) working days prior to bid date. Include a list of twenty-five (25) projects executed over the past five (5) years.
- E. Issued addendums confirm acceptable alternates. Do not submit substitute materials after tender closing.

1.05. REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
1. AMMA 2400-02, Standard Practice for Installation of Windows with a Mounting Flange in Stud Frame Construction
- B. American Society for Testing and Materials (ASTM):
1. ASTM D412, Standard Test Method for Vulcanized Rubber and Thermoplastic Elastomers - Tension
 2. ASTM D1970, Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
 3. ASTM D2243, Standard Test Method for Freeze-Thaw Resistance of Water-Borne Coatings
 4. ASTM D5590, Standard Test Method for Determining the Resistance of Paint Films and Related Coatings to Fungal Defacement by Accelerated Four-Week Agar Plate Assay
 5. ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials
 6. ASTM E96, Standard Test Methods for Water Vapor Transmission of Materials
 7. ASTM E1677, Standard Specification for Air Barrier (AB) Material or System for Low-Rise Framed Building Walls
 8. ASTM E2112, Standard Practice for Installation of Exterior Windows, Doors and Skylights
 9. ASTM E2178, Standard Test Method for Air Permeance of Building Materials
 10. ASTM E2357, Standard Test Method for Determining Air Leakage of Air Barrier Assemblies

SPEC NOTE: If wall assembly is not required to comply with NFPA 285 delete “1.4.C.8”, “1.5.C”, and “1.7.B.3” of this Section:

- C. National Fire and Protection Agency (NFPA):
 - 1. NFPA 285, Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components
- D. US Green Building Council (USGBC), Leadership in Energy and Environmental Design (LEED):
 - 1. LEED Reference Guide, Version 4.0, and USGBC Project Calculation Spreadsheet. Web Site <http://www.usgbc.org>.

1.06. ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the Work of this Section with the installation of exterior substrate. Sequence Work so that installation of air barrier coincides with installation of substrate preparation without causing delay to the Work.
- B. Pre-installation meetings:
 - 1. When required, and with prior notice, an Air Barrier Manufacturer representative will meet with the necessary parties at the jobsite to review and discuss project conditions as it relates to the integrity of the assembly.

1.07. SUBMITTALS

- A. Provide the following requested information in accordance with Section [project specific] Submittal Procedures.
- B. Action Submittals:
 - 1. Product Data:
 - a. Air Barrier Manufacturer's guide specification.
 - b. Air Barrier Manufacturer's technical data sheets.
 - c. Air Barrier Manufacturer's details.
 - d. LEED HPD declaration
 - 2. Certificates:
 - a. Product certification that the assembly components are supplied and warranted by single source Air Barrier Manufacturer.
 - 3. Tests and Evaluation Reports:
 - a. NFPA 285 wall assembly compliance:
 - 1. Air Barrier Manufacturer statement that anticipated wall assembly complies with NFPA 285.
 - 4. Warranty:
 - a. Sample warranty as specified.

1.08. QUALITY ASSURANCE

- A. Single Source Responsibility:
 - 1. Obtain air barrier, flashings, sealants, primers, mastics, and adhesives from a single Air Barrier Manufacturer regularly engaged in the manufacturing and supply of the specified products.
 - 2. Verify product compliance with federal, state, and local regulations.
- B. Manufacturer Qualifications:
 - 1. Air Barrier Manufacturer must not issue warranties for terms longer than they have been manufacturing and supplying specified products for similar scope of Work.
- C. Installer Qualifications:
 - 1. Perform Work in accordance with Air Barrier Manufacturer published literature and as specified in this section.

2. Maintain one (1) copy of Air Barrier Manufacturer's instructions on site.
3. Allow the Air Barrier Manufacturer representative site access during installation.
4. Contact the Air Barrier Manufacturer a minimum of two weeks prior to scheduling a meeting.

SPEC NOTE: Mock-ups establish quality of Work for the materials indicated in this Section. Delete the following paragraph if the scope of work in this Section is minimal and a mock-up is not required.

1.09. MOCK-UPS

- A. Mock-ups:
1. Where directed by [engineer] [architect] [consultant] construct mock-ups to verify selections made under submittals and to set quality standards for materials and execution in accordance with Section [project specific].

1.10. DELIVERY, STORAGE, AND HANDLING

- A. Delivery of Materials:
1. Deliver materials to the jobsite in undamaged and clearly marked containers and/or wrapping indicating the name of the Air Barrier Manufacturer and product.
- B. Storage of Materials:
1. Store materials as recommended by the Air Barrier Manufacturer and conform to applicable safety regulatory agencies. Refer to all applicable data including, but not limited to, Safety Data Sheets, Product Data sheets, product labels, and specific instructions for personal protection.
 2. Keep solvents away from open flame or excessive heat.
 3. Store rolled materials on end.
 4. Product requirements may vary. Refer to Air Barrier Manufacturer's published literature.
- C. Handling:
1. Product requirements may vary. Refer to Air Barrier Manufacturer's published literature.

1.11. SITE CONDITIONS

- A. Environmental Requirements:
1. Do not perform Work during rain or inclement weather.
 2. Do not perform Work on frost covered substrates or surfaces that are wet to touch.
 3. Product requirements may vary. Refer to Air Barrier Manufacturer's published literature.
- B. Protection:
1. It is the responsibility of the installing Subcontractor to protect all surfaces not included in scope of Work from damage.
 2. Cap and protect exposed back-up walls against wet weather conditions during and after application of air barrier.
- C. Complete preparation Work prior to installing the air barrier assembly.
- D. Ground electrical equipment during operations.

1.12. WARRANTY

- A. Manufacturer Material Warranty:

1. Provide Air Barrier Manufacturer's standard 10 year material warranty.

PART 2: PRODUCTS

2.01. MANUFACTURER

- A. Acceptable Manufacturers:
 1. Henry Company
999 N. Pacific Coast Highway, Suite 800
El Segundo, CA 90245
(800) 486-1278
www.Henry.com

2.02. MATERIALS

- A. Obtain components and auxiliary materials as a single-source from the assembly Air Barrier Manufacturer to ensure compatibility and compliance with the following requirements:
 1. UV resistant
 2. Watertightness (CAN/CGSB-37.58-M86): Pass
- B. Primary Air Barrier (Basis of Design):
 1. UV-Resistant, single-component, water-based, elastomeric emulsion, designed to provide a vapor permeable air and water barrier when applied above-grade wall assemblies, having the following typical properties:
 - a. Basis of Design Product: Air-Bloc® 33MR
 - b. Color: Black
 - c. UV Resistant
 - d. Watertightness (CAN/CGSB-37.58-M86): Pass
 - e. Solids Content:
 1. By Weight: 65%
 2. By Volume: 55%
 - f. Service Temperature:
 1. Low Temperature: -40 degrees F (-40 degrees C)
 2. High Temperature: 185 degrees F (85 degrees C)
 - g. Tensile Strength (ASTM D412): 125 psi (860 kPa)
 - h. Elongation (ASTM D412): 200%
 - i. Nail Sealability (ASTM D1970): Pass
 - j. VOC Content: 100 grams/liter max.
 - k. Water Vapor Permeance (ASTM E96 B) @ 40 mils nominal dry film: 11.4 perms
 - l. Air Permeability:
 1. Assembly Air Leakage (ASTM E2357): Pass
 2. Building Material (ASTM E2178): 0.008 L/s.m2
 - m. Chemical Resistance: Resists salt solutions, mild acids and alkalis. Non-resistant to oils, grease or solvents
 - n. Fire Testing (NFPA 285): Complies in various assemblies
 - o. Flame Spread/Smoke Development (ASTM E84): 25/85
 - p. Resistance to Mold, Mildew, and Fungal Growth (ASTM D5590): No growth
- C. Auxiliary Materials
 1. Flashings; choose from the following:
 - a. Liquid-applied flashings:
 1. Moisture-curing one component elastomeric liquid applied flashing using an STPe (Silyl-Terminated Polyether) polymer, having the following typical properties:
 - a. Basis of Design Product: Air-Bloc® LF
 - b. Color: Blue

- b. Self-Adhered flashings, choose from the following:
 - 1. UV-resistant, non-vapor permeable, self-adhered water resistive air and vapor barrier consisting of an SBS rubberized asphalt compound, integrally laminated to dual-layers of high strength polyethylene with surface layer of metallic aluminum film, having the following typical properties:
 - a. Basis of Design Product: Metal Clad®
 - b. Color: Metallic Aluminum
 - 2. Non-vapor permeable, self-adhered water resistive air and vapor barrier consisting of an SBS rubberized asphalt compound, integrally laminated to a blue engineered thermoplastic film, having the following typical properties:
 - a. Basis of Design Product: Blueskin® SA
 - b. Color: Blue

SPEC NOTE: Delete adhesives/primers that do not comply with ordinances and/or not relevant to specification.

- 2. Adhesives and Primers; choose from the following:
 - a. Spray adhesive, and having the following typical properties:
 - 1. Basis of Design Product: Blueskin® Spray Prep
 - 2. Color: Clear amber
 - 3. Solids Content (By Weight): 35%
 - 4. Aerosol
 - b. Synthetic rubber based adhesive type, quick setting, having the following typical properties:
 - 1. Basis of Design Product: Blueskin® Adhesive
 - 2. Color: Blue.
 - 3. Solids Content (By Weight): 35%.
 - 4. Solvent based: Maximum VOC: 450 g/L
 - c. Polymer emulsion based adhesive type, quick setting, low VOC content, having the following typical properties:
 - 1. Basis of Design Product: Blueskin® LVC Adhesive
 - 2. Color: Blue.
 - 3. Solids Content (By Weight): 40%.
 - 4. Solvent based: 240 g/L.
 - d. Polymer emulsion-based primer for self-adhered membranes, and having the following typical properties:
 - 1. Basis of Design Product: Aquatac™ Primer
 - 2. Color: Aqua.
 - 3. Solids Content (By Weight): 58%.
 - 4. Water based: Maximum VOC: 50 g/l
- 3. Sealants:
 - a. Moisture cure, medium modulus polymer modified sealing compound, having the following typical properties:
 - 1. Basis of Design Product: Henry® 925 BES Sealant
 - 2. Complies with Fed. Spec. TT-S-00230C, Type II, Class A.
 - 3. Complies with ASTM C920, Type S, Grade NS, Class 35.
- 4. Self-Adhesive Thru-Wall Flashing:
 - a. Non-vapor permeable, self-adhered water resistive air and vapor barrier consisting of an SBS rubberized asphalt compound, integrally laminated to a yellow engineered thermoplastic film, having the following typical properties:
 - 1. Basis of Design Product: Blueskin® TWF
 - 2. Color: Yellow

SPEC NOTE: Insulation adhesive is optional. Delete section if not relevant to specification.

- D. Insulation Adhesive:
 - 1. Synthetic rubber base compound having the following typical properties:
 - a. Basis of Design Product: Air-Bloc® 21
 - b. Color: Cream

PART 3: EXECUTION

3.01. EXAMINATION

- A. It is the installing Subcontractor's responsibility to verify the substrate is dry and in accordance with Air Barrier Manufacturer requirements prior to installation of air barrier. Commencement of the Work or any parts thereof, indicates installer acceptance of the substrate.
 - 1. Substrates must be continuous and secured.
 - 2. Drill fasteners into solid backing and set fastener penetrations flush with sheathing.
 - 3. Strike CMU mortar joints flush with block surface. Allow new CMU to cure for a minimum of twenty-four (24) hours.
 - 4. Fill form tie holes/voids in poured concrete to be flush and smooth. Allow new concrete to cure a minimum of sixteen (16) hours after forms are removed.
 - 5. Cap and protect exposed back-up walls against wet weather conditions prior to application of air barrier assembly.
- B. Notify contractor in writing of any conditions that are not acceptable.
- C. Do not apply air barrier assembly components until substrate and environmental conditions are in accordance with Air Barrier Manufacturer's published literature.

3.02. PREPARATION

- A. Surfaces must be sound, dry to touch, clean, and free of oil, grease, dirt, excess mortar, frost, laitance, loose and flaking particles, or other contaminants.
- B. Hot weather or direct-sun applications over porous substrates, such as concrete, promote rapid surface drying and can form blisters in the air barrier during curing. To aid in blister prevention prepare substrate in accordance with one of the following optional procedures:
 - 1. Prime coat:
 - a. Apply a thin prime coat of air barrier onto substrate.
 - b. Allow air barrier to fully cure prior to subsequent applications.
 - c. Install primary air barrier to Air Barrier Manufacturer minimum mil thickness.
 - 2. Two-coat:
 - a. Apply air barrier to achieve one-half (1/2) of Air Barrier Manufacturer minimum mil thickness.
 - b. Allow air barrier to fully cure prior to subsequent applications.
 - c. Apply air barrier to achieve one-half (1/2) of Air Barrier Manufacturer minimum mil thickness.

3.03. INSTALLATION

- A. Verify substrate is ready to receive the air barrier assembly in accordance with the Air Barrier Manufacturer's TDS and guide specification.

- B. Do not apply air barrier when ambient (air) and substrate temperatures are below 40 degrees F (5 degrees C).
- C. Do not proceed with application of air barrier when rain is expected within 16 hours.
- D. Refer to Air Barrier Manufacturer detail drawings for installation procedures including, but not limited to, the following:
 - 1. Changes in substrate
 - 2. Control joints
 - 3. Crack treatment
 - 4. Expansion joints
 - 5. Inside corners
 - 6. Outside corners
 - 7. Penetrations
 - 8. Rough openings
 - 9. Sheathing Joints
- E. Moving Joints:
 - 1. Contact Air Barrier Manufacturer.
- F. Contact Air Barrier Manufacturer to coordinate transition of air barrier to adjacent areas including, but not limited to, the following:
 - 1. Roof to air barrier
 - 2. Air barrier to waterproofing
 - 3. Fastener penetrations
- G. Thru-Wall Flashing:
 - 1. Coordinate with Section [project specific].
- H. Primary Air Barrier
 - 1. Install air barrier assembly in accordance with Air Barrier Manufacturer product specific TDS, details, guide specification, and technical bulletins to create a monolithic air and watertight application without sags, runs or voids.
 - 2. Lap air barrier onto flashing (1) inch (2.5 cm) minimum.
 - 3. Application Rate:
 - a. Wet film thickness: 100 mils (2.4 mm)

SPEC NOTE: Insulation adhesive is optional. Delete section if not relevant to specification.

- I. Insulation Adhesive:
 - 1. Coordinate with Section [project specific] for insulating materials.
 - 2. Apply insulation adhesive in a serpentine pattern onto cured air barrier assembly.
 - 3. Immediately embed insulation into adhesive and press firmly into place; ensuring full contact.

3.04. FIELD QUALITY CONTROL

- A. Final Observation and Verification:
 - 1. Final inspection of air barrier assembly shall be carried out by the [Architect] [Consultant] [General Contractor] and Air Barrier Manufacturer as required by warranty.

3.05. CLEANING

- A. As the Work proceeds, and upon completion, promptly clean up and remove from the premises all rubbish and surplus materials resulting from the foregoing Work.
- B. Clean soiled surfaces, spatters, and damage caused by Work of this Section.
- C. Check area to ensure cleanliness and remove debris, equipment, and excess material from the site.

END OF SECTION