

EFFECTIVE JUNE 30, 2020 AND SUPERSEDES ALL PREVIOUS VERSIONS.

SPEC NOTE: Blueskin® SA Self-Adhered Water Resistive Air Barrier. This specification is ideally suited for buildings installing a self-adhered water resistive air barrier in accordance with the weather resistive barrier (WRB) requirements of the International Building Code (IBC). Blueskin SA is used in cavity wall construction to provide an air and watertight membrane that resists 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 00
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. Adhesive/Primer
 - 2. Self-Adhered Air and Vapor Barrier
 - 3. Sealant
 - 4. Thru-wall Flashing
 - 5. Insulation Adhesive (optional)

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

- F. DIVISION 07 – Thermal and Moisture Protection Section 07 62 00 - Sheet Metal Flashing and Trim
- G. DIVISION 07 – Thermal and Moisture Protection 07 50 00 Membrane Roofing
- H. DIVISION 07 – Thermal and Moisture Protection Section 07 92 00 - Joint Sealants
- I. DIVISION 08 – Openings Section 08 40 00 - Entrances, Storefronts, and Curtain Walls

SPEC NOTE: Projects not referencing LEED delete Sections “1.03.J”, “1.04.C.4.b”, “1.05.D”, and “1.07.B.2.b.”

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

SPEC NOTE: Assemblies not requiring NFPA 285 compliance, delete “1.04.C.5”, “1.05.C”, and “1.07.B.3” of this Section:

1.04. ALTERNATES

- A. Submit requests for alternates in accordance with Section [project specific].
- B. Air barrier assemblies must meet the following standards:
 - 1. Minimum Application Temperature: 41°F (5 °C)
 - 2. Service Temperature: -40 °F to 158 °F (-40 °C to 70 °C)
 - 3. Water Vapor Permeance (ASTM E96 Method B): 0.08 Perms
 - 4. Air Permeance (ASTM E2178): <0.0002 cfm/ft2 (0.0011 L/s.m.2)
 - 5. Air leakage:
 - a. Assembly (ASTM E2357): Pass
 - b. Air Leakage Rate (CAN/ULC-S742) Classification A1
 - 6. Nail Sealability (AAMA 711, ASTM D1970 modified): Pass
 - 7. Fire Testing (NFPA 285): Compliant in various wall assemblies
 - 8. Declaration Status: LBC Red List Free
- 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. 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. Product Data:
 - a. Air Barrier Manufacturer’s guide specification
 - b. Air Barrier Manufacturer’s technical data sheets
 - c. Air Barrier Manufacturer’s details
 - 4. Certificates:
 - a. Product certification that the assembly components are supplied and warranted by single source Air Barrier Manufacturer
 - b. LEED HPD declaration
 - 5. Tests and Evaluation Reports:
 - a. NFPA 285 wall assembly compliance:
 - 1. Air Barrier Manufacturer statement that anticipated wall assembly complies with NFPA 285
 - 6. 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 E84 - Standard Test Method for Surface Burning Characteristics of Building Materials
 - 2. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials
 - 3. ASTM E1677, Standard Specification for Air Barrier (AB) Material or System for Low-Rise Framed Building Walls
 - 4. ASTM D1970, Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
 - 5. ASTM E2112, Standard Practice for Installation of Exterior Windows, Doors and Skylights
 - 6. ASTM E2178 - Standard Test Method for Air Permeance of Building Materials
- 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. 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
 - 2. Certificates:
 - a. Product certification confirming assembly components are supplied and warranted by a single source Air Barrier Manufacturer
 - b. LEED HPD declaration
 - c. Declaration Status: LBC Red List Free
 - 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. 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: Create mock-up to establish quality of work where practical. 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.
- 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. Protect top and backside of substrate walls against bulk water 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's Single Source Warranty; choose from the following:
 - 1. Provide Air Barrier Manufacturer's standard 10 year material warranty.

PART 2 - PRODUCTS

2.01. MANUFACTURERS

- 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 air barrier and auxiliary materials as a single-source from the Air Barrier Manufacturer to ensure compatibility and compliance with the following requirements:
 - 1. Minimum Application Temperature: 41°F (5 °C)
 - 2. Service Temperature: -40 °F to 158 °F (-40 °C to 70 °C)
 - 3. Water Vapor Permeance (ASTM E96 Method B): 0.08 Perms
 - 4. Air Permeance (ASTM E2178): <0.0002 cfm/ft2 (0.0011 L/s.m.2)
 - 5. Air leakage:
 - a. Assembly (ASTM E2357): Pass
 - b. Air Leakage Rate (CAN/ULC-S742) Classification A1
 - 6. Nail Sealability (AAMA 711, ASTM D1970 modified): Pass
 - 7. Fire Testing (NFPA 285): Compliant in various wall assemblies
 - 8. Declaration Status: LBC Red List Free
- B. Self-Adhered Water Resistive Air Barrier (Basis of Design):
 - 1. Self-adhered water resistive air barrier membrane comprised of rubberized asphalt integrally laminated to a blue engineered thermoplastic film surface; having the following typical physical properties:
 - a. Basis of design: Henry Blueskin SA Self-Adhered Water Resistive Air Barrier
 - b. Color: Blue
 - c. Thickness, nominal: 40 mils (1.0 mm)
 - d. Minimum Application Temperature: 41°F (5 °C)
 - e. Service Temperature: -40 °F to 158 °F (-40 °C to 70 °C)
 - f. Water Vapor Permeance (ASTM E96 Method B): 0.08 Perms
 - g. Air Permeance (ASTM E2178): <0.0002 cfm/ft2 (0.0011 L/s.m.2)
 - h. Air leakage:
 - 1. Assembly (ASTM E2357): Pass
 - 2. Air Leakage Rate (CAN/ULC-S742) Classification A1
 - i. Nail Sealability (AAMA 711, ASTM D1970 modified): Pass
 - j. Fire Testing (NFPA 285): Compliant in various wall assemblies
 - k. Declaration Status: LBC Red List Free

C. Auxiliary Materials:

SPEC NOTE: Verify physical properties on product specific technical data sheet. Delete adhesives/primers that do not comply with local ordinances and/or are not relevant to the project specification.

1. Adhesives/Primers:
 - a. Standard VOC adhesive:
 1. Synthetic rubber based quick setting adhesive; having the following typical physical properties:
 - a. Basis of design: Henry Blueskin Adhesive
 - b. Color: Blue
 - b. Quick setting primers:
 1. Synthetic rubber based quick setting adhesive with low VOC content; having the following typical physical properties:
 - a. Basis of design: Henry Blueskin LVC Adhesive
 - b. Color: Blue
 2. Synthetic rubber based quick setting spray primer with low VOC content; having the following typical physical properties:
 - a. Basis of design: Henry Blueskin LVC Spray Primer
 - b. Color: Blue
 3. Polymer emulsion water based quick setting primer with low VOC content; having the following typical physical properties:
 - a. Basis of design: Henry Aquatac™ Primer
 - b. Color: Aqua

SPEC NOTE: Henry recommends the use of Blueskin SA or Air-Bloc LF for window and door flashings. Other flashing options include Blueskin SA LT, Blueskin Butyl Flash or Blueskin Metal Clad. Modify this section per project specific requirements.

2. Flashings, choose from the following:
 - a. Liquid-applied flashing:
 1. Moisture-cure one component elastomeric liquid applied flashing using an STPE (Silyl-Terminated Polyether) polymer, having the following typical properties:
 - a. Basis of Design Product: Henry Air-Bloc LF® Liquid Applied Flashing
 - b. Color: Blue
 - b. Self-Adhered Flashing:
 1. Self-adhered water resistive air barrier membrane comprised of rubberized asphalt and integrally laminated to a blue engineered thermoplastic film surface; having the following typical physical properties:
 - a. Basis of design: Henry Blueskin SA Self-Adhered Water Resistive Air Barrier
 - b. Color: Blue
 2. UV resistant self-adhered water resistive air barrier membrane comprised of rubberized asphalt and dual-layers of high strength polyolefin with a surface layer metallic aluminum film; having the following typical physical properties:
 - a. Basis of design: Henry Blueskin Metal Clad Self-Adhered Water Resistive Air Barrier
 - b. Color: Aluminum foil laminate
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. Thru-Wall Flashing:
 - a. Vapor impermeable, 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: Henry Blueskin TWF Self-Adhered Thru-Wall Flashing
 2. Color: Yellow
5. Insulation Adhesive (optional)
 - a. Synthetic rubber base compound having the following typical properties:
 1. Basis of Design Product: Air-Bloc 21 Air and Vapor Barrier and Insulation Adhesive
 2. Color: Cream

PART 3 - EXECUTION

2.01. EXAMINATION

- A. It is the installing Subcontractor's responsibility to verify the substrate is in accordance with Air Barrier Manufacturer requirements and as specified in this Section prior to installation of air barrier. Commencement of the Work or any parts thereof, indicates installer acceptance of the substrate.
 1. Acceptable substrates include exterior-grade gypsum sheathing, plywood, OSB, pressure treated lumber, fire-treated lumber, precast or cast-in-place concrete, CMU, primed steel, aluminum mill finish, anodized aluminum and galvanized metal.
 2. Verify surfaces are sound, clean and free of frost, oil, grease, dirt, excess mortar or other contaminants.
 3. Substrate must be continuous and secure.
 4. Sheathing fasteners must be installed into solid backing and set flush with sheathing.
 5. Masonry joints must be struck flush.
 6. Concrete surfaces shall be smooth and without large voids, spalled areas or sharp protrusions.
 7. Tie holes/voids in poured concrete to be flush and smooth shall be filled. Allow new concrete to cure a minimum of fourteen (14) days after forms are removed.
 8. Top and backside of substrate walls must be protected against bulk water during and after application of air barrier.
 9. Curing compounds must be resin based without oil, wax or pigments. Substrates must be free of form release agents.
 10. Do not install air barrier over substrates that are wet to touch.
- 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. Verify surfaces are in accordance with the product specific technical data sheet and as stated in this specification.
- B. Protection:
 1. Protect top and backside of substrate walls against bulk water during and after application of air barrier.

3.03. INSTALLATION

- A. Environmental Requirements:
 - 1. Do not perform Work during rain or inclement weather.
 - 2. Do not perform Work on frost covered or wet substrates; can be applied to damp surfaces.
 - 3. Do not perform Work when ambient (air) and substrate temperatures are below 20 degrees F (-7 degrees C).

- B. 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. Inside corners
 - 5. Outside corners
 - 6. Penetrations
 - 7. Rough openings
 - 8. Sheathing Joints

- C. Moving Joints:
 - 1. Contact Air Barrier Manufacturer.

- D. Contact Air Barrier Manufacturer to coordinate transition of air barrier to adjacent areas including, but not limited to, the following:
 - 1. Roofing
 - 2. Waterproofing
 - 3. Fastener penetrations

- E. Thru-Wall Flashing:
 - 1. Coordinate with Section [project specific]

- F. Adhesive/Primer:
 - 1. Apply adhesive/primer at area of anticipated self-adhered membrane application.
 - a. Refer to the product specific technical data sheet for installation instructions and application rates.
 - 2. Allow adhesive/primer to fully cure prior to self-adhered membrane application.
 - a. Cured adhesive/primer must be covered with self-adhered membrane in the same working day. Primed surfaces that are not covered within the same day, must be re-primed.

- G. Primary Air Barrier:
 - 1. Install self-adhered membrane, in vertical or lateral oriented courses, in a shingle fashion.
 - 2. Overlap adjacent membranes two (2) inches.
 - 3. Peel release paper from leading edge of self-adhered membrane, and align top to verify positioning prior to complete release paper removal and membrane placement.
 - 4. Align and press self-adhered membrane into place from the center of the roll to the outside edges, eliminating entrapped air bubbles and wrinkles.
 - 5. Roll self-adhered membrane and laps with countertop roller immediately after application to obtain thorough adhesion.
 - 6. Seal end of day and permanently exposed reverse laps with building envelope sealant.

SPEC NOTE: Insulation adhesive is optional. Delete section if not applicable to project specific requirements.

- H. 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. [Architect] [Consultant] [General Contractor] and Air Barrier Manufacturer to complete final observation of air barrier assembly 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 to adjacent areas 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