SECTION 07270 / 07 27 00

SHEET AIR AND WATER BARRIERS

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**** NOTE TO SPECIFIER ** 3M Industrial Adhesives and Tapes; Sheet Air and Water Barrier.**

This section is based on the products of 3M Industrial Adhesives and Tapes, which is located at:
3M Center Bldg. 225-3S-06
St. Paul, MN 55144-1000
Toll Free Tel: 800-362-3550
Fax: 877-369-2923
Email:
Web: www.3M.com/construction
[Click Here] for additional information.

Whether it's new construction, renovation or demolition and clean-up, 3M has a wide range of reliable solutions for the building and construction industry to improve safety, productivity and efficiencies through each stage of the project. Our innovative and high performing products can be used for a variety of applications, and expert support is available.

Climate control is about more than personal comfort. Leaks, mold, high energy consumption, low air quality: the flow of air, moisture, and heat can have a costly impact on the health of the building and its components. We offer building envelope solutions that are tough on the job and easy on the applicator. Learn how we can help protect your products and your profits.

Air barriers are essential elements of new building construction. Air naturally moves from warm to cold areas, and moisture moves from humid to dry areas. In walls without air barriers, uncontrolled movement can result in condensation of moisture on cold surfaces. Uncontrolled flow of air and moisture can harm the long-term performance and durability of your building materials, decrease indoor air quality, lower energy efficiency, and affect the health of your building and its occupants.

PART 1 GENERAL

1.1 SECTION INCLUDES

**** NOTE TO SPECIFIER ** Delete items below not required for project.**

A. Vapor-permeable self-adhered air and water barrier membrane. (3M 3015VP)

1.2 RELATED SECTIONS

**** NOTE TO SPECIFIER ** Delete any sections below not relevant to this project; add others as required.**

A. Section 03300 - Cast-in-Place Concrete.

B. Section 06160 - Sheathing.

1.3 REFERENCES

**** NOTE TO SPECIFIER ** Delete references from the list below that are not actually required by the text of the edited section.**

A. American Architectural Manufacturers Association (AAMA):
   1. AAMA 711 - Voluntary Specification for Self-Adhering Flashing Used for Installation of Exterior Wall Fenestration Products.

B. American Association of Textile Chemists and Colorists (AATCC):
   1. AATCC-127 - Water Resistance: Hydrostatic Pressure Test.

C. ASTM International (ASTM):
   1. ASTM D882 - Standard Test Methods 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 D3330 - Standard Test Method for Peel Adhesion of Pressure-Sensitive Tape.
   4. ASTM D3652 – Standard Test Method for Thickness of Pressure-Sensitive Tapes.
   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 E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
   8. ASTM E2178 - Standard Test Method for Air Permeance of Building Materials.
   9. ASTM E2357 - Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.

B. Underwriters' Laboratory, Canada (ULC):
   1. CAN/ULC-S741, Standard for Air Barrier Materials – Specification.
   2. CAN/ULC-S742, Standard for Air Barrier Assemblies – Specification.

C. U.S. Green Building Council - LEED rating systems.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Physical properties, performance criteria, compliance reports, material compatibility, product limitations, and recommendations.
   2. Preparation instructions and recommendations.
   3. Storage and handling requirements and recommendations.

4. Installation methods.

C. Shop Drawings: Provide manufacturer's typical, scaled, shop drawings with actual product names on details of:
   5. Typical conditions.
   6. Transitions to adjacent systems.
   7. Mock-up, including plans and elevations.

D. Manufacturer's Letter Indicating Compatibility: Submit letter or technical bulletin listing specific air barrier materials, and typical adjacent system materials; that are compatible, both chemically and adhesively.

E. Qualifications:
   8. Submit manufacturer and installer qualifications.
   9. Submit 5 project references within the last 5 years of similar-sized projects with self-adhered sheet membrane air barrier assembly installation by the proposed installing contractor.

D. Warranty: Submit manufacturer's sample warranty.

**** NOTE TO SPECIFIER ** Delete the following paragraphs if LEED is not applicable. Coordinate with the Architect and Sustainable Design team as required for documentation.**

E. LEED Submittals: Provide product VOC data and manufacturer's certifications as requested by the Architect.

1.5 QUALITY ASSURANCE

A. Single Source Responsibility: Provide primary weather barrier materials from a single manufacturer. Secondary and accessory materials by other manufacturers shall be approved for compatibility by the primary manufacturer.

B, Testing Laboratory Qualifications: Accredited by the International Accreditation Service (IAS), American Association for Laboratory Accreditation (A2LA), or Standards Council of Canada (SCC).

C. Manufacturer Qualifications: Minimum 10 years of experience manufacturing similar products.

D. Installer Qualifications: Minimum 5 years of experience installing similar products and approved by the manufacturer.

**** NOTE TO SPECIFIER ** Include a mock-up if the project size or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.**

E. Mock-Up:
   1. Demonstrate the proper installation sequence and workmanship required for the air barrier assembly installation at typical conditions, transitions, openings, and penetrations through the exterior building envelope
   2. Finish areas designated by Architect, minimum size 8 by 8 feet (2.4 by 2.4 m).
   3. Exterior wall panel incorporating the back-up wall, window with sill, door frame, through-wall flashing, insulation, cladding, foundation, roof edge, and building corner. Show all air barrier assembly materials and seals. Coordinate with the Third-party Testing Agency for the size of testing area required for field testing the mock-up and allow testing prior to fully installing the insulation and cladding. Refer to Field Quality Control of this Section for test methods and quantity of tests.
   4. Do not proceed with remaining work until workmanship is approved by Architect.

5. Approved mock-up represents the minimum quality for the Work for the air barrier assembly installation. Materials and installation procedures utilized in the mock-up become the standard of quality and construction for all subsequent similar conditions on the building.
6. Remove the mock-up only after approval by the Owner and Architect/Engineer.

1.6 PERFORMANCE REQUIREMENTS

A. Assembly Performance:
1. Standards Compliance:
   a. ASTM E 2357.
   b. CAN/ULC-S741.
   c. CAN/ULC-S742.
2. Air Leakage: ASTM E2357:
   d. Opaque Wall: Less than 0.002 cfm/ft^2 at 1.57 psf (0.01 L/s/m^2 at 75 Pa).
   e. Penetrated Wall: Less than 0.006 cfm/ft^2 at 1.57 psf (0.03 L/s/m^2 at 75 Pa).
3. Loads from imposed pressures: Withstands design wind, fan, and stack pressures, both positive and negative, without damage or displacement of the air barrier assembly or adjacent materials. Allows transfer of these loads to the structure.
4. Movement: Allows for thermal, creep, and anticipated seismic and building movement within the air barrier assembly, each air barrier detail, and transitions to adjacent systems without breaching the air barrier system or negating specified air leakage performance.
5. Continuity: Joins air barrier materials and adjacent compatible materials and systems preventing air leakage and maintaining specified air leakage performance at the following locations and as shown on the Drawings:
   a. Transitions from roof air barrier to wall.
   b. Transitions from window, curtain wall, storefront, louvers, and doors to wall.
   c. Transitions from foundation waterproofing to wall.
   d. Transitions from one type of exterior cladding to another.
   e. Across construction, control, expansion, and seismic joints.
   f. Penetrations of utilities, pipes, conduit, and ducts.
   g. Penetrations of ties, anchors, and channels for exterior finishes.
   h. Pathways for potential air leakage into the building envelope.

1.7 COORDINATION

A. Coordinate Work of this Section with the work of other Sections that have work or materials connected to or passing through the air barrier assembly.
1. Sequence of construction to ensure continuity of the barrier assembly at openings, transitions, and penetrations.
2. Coordinate with installation of materials which cover the air barrier assemblies, to ensure exposure period does not exceed 12 months.
3. Coordinate field observations and testing by specified parties.

**** NOTE TO SPECIFIER ** Include a preconstruction meeting if the project size or complexity warrant taking such a precaution. A preconstruction meeting is recommended when an air barrier function is required for the building to allow coordination with other trades; review of the mock-up and project substrates and conditions; and to review proper installation details.**

1.8 PRECONSTRUCTION MEETINGS

A. Preconstruction Meeting: Prior to starting installation of the barrier system, conduct a preconstruction meeting at the job site to review the Project conditions and installation requirements.
1. Attendance is required by:
   a. Installing contractor of the air barrier assembly.

b. Representatives of related trades including exterior cladding, air barrier
c. substrate, penetrating work and systems, and adjacent material.
d. General Contractor.
e. Architect/Engineer.
f. Air barrier system manufacturer's field representative.
g. Owner's representative.
h. Third-party observer.
i. Field testing agency.

2. Agenda shall include:
   a. Construction of the mock-up.
   b. Sequence of construction and protection of installed air barrier assembly.
   c. Substrate condition and preparation.
   d. Materials approved for use.
   e. Compatibility of materials.
   f. Transition details between the various different types of barrier systems specified.
   g. Coordination with installation of adjacent and cladding materials.
   h. Project-specific details of construction.
   i. Field observation and testing.
   j. Repair of test and damaged areas.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Store in accordance with the manufacturer's instructions in clean, dry location protected from exposure to direct sunlight. Material that has been unwrapped shall be covered with opaque, light colored tarp or re-wrapped in manufacturer's packaging.

C. Use air barrier materials within 24 months from date of manufacture.

D. Handle materials to avoid damage.

1.10 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results.
   1. Install membrane in temperature range from 0 degrees F to 150 degrees F (-18 degrees C to 66 degrees C).
   2. Install sealant in temperature range from 40 degrees F to 95 degrees F (5 degrees C to 35 degrees C). For application temperatures outside this range, please contact 3M Technical Services

B. Install on substrates clear of dirt, debris, oils, other chemicals, snow, ice, frost, and moisture above the allowable limitations of the product.

C. Maximum exposure time of the air barrier assembly without cover or cladding is 12 months for 3015VP and 12 months for the 3015 Flashing widths.

D. Provide weather protection at the top of walls and unfinished roofs at the end of each day.

1.11 WARRANTY

A. Manufacturer's Product Warranty: Provide manufacturer's product warranty for a minimum of ten years from date of Substantial Completion with installation completed by a certified 3M applicator.

B. Installer's Workmanship Warranty: Provide workmanship warranty for a minimum of one year from date of Substantial Completion including all air barrier assembly materials and accessories, against failures including loss of air tight seal, loss of watertight seal, loss of attachment, loss of adhesion, and failure to cure properly.

PART 2 PRODUCTS

2.0 MANUFACTURERS

A. Acceptable Manufacturer: 3M Industrial Adhesives and Tapes, which is located at: 3M Center Bldg. 225-3S-06; St. Paul, MN 55144-1000; Toll Free Tel: 800-362-3550; Fax: 877-369-2923; Website: www/3M.com/construction

**** NOTE TO SPECIFIER ** Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.**

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600 - Product Requirements.

**** NOTE TO SPECIFIER ** 3M Air Barrier 3015VP is a self-adhered, vapor permeable, air and water impermeable membrane with an aggressive acrylic adhesive and a breathable film. Primer not required on most construction surfaces. Delete if not required.**

2.1 VAPOR PERMEABLE SELF-ADHERED AIR AND WATER BARRIER MEMBRANE

A. Membrane: 3M Air Barrier 3015VP Membrane, self-adhered, vapor permeable:
1. Description: White proprietary film with acrylic adhesive, elastomeric coated, nonwoven backing, and polyester liner.
2. Permeable to water vapor and impermeable to air and water.
3. Resists UV exposure for up to 12 months.
4. Meets requirements of ASTM E2178 and CAN/ULC S741-8.
5. Liner Thickness (ASTM D3652): 3 mils (0.078 mm).
6. Total Membrane Thickness (ASTM D3652): 15 mils (0.50 mm).
7. Elongation at Break (ASTM D882): 40 percent.
8. Tensile Strength (ASTM D882): 1177 psi (8.1 MPa).
9. Lap Adhesion (ASTM D3330): 50 oz/inch (0.44 N/mm).
10. Nail Sealability: ASTM D1970, Section 7.9: 5 inches (127 mm) of water head after 3 days, dry and passes.
11. Water Vapor Permeance (ASTM E96, Desiccant method): Greater than 10 US Perm (572 ng/Pa s m2).
12. Service Temperature: -40 to 240 degrees F (-40 to 116 degrees C).
13. Flammability:
    a. ASTM E84: Flame spread index less than 5, smoke developed value less than 0. Rating: Class A
    b. Membrane in an approved wall assembly meets performance requirements of NFPA 285.
14.

2.2 ACCESSORIES

**** NOTE TO SPECIFIER ** Delete accessories not required.**

A. Sealant: Polyurethane Sealant, one component, moisture curing: ASTM C920, Type S, Grade NS, Class 25:

**** NOTE TO SPECIFIER ** Delete sealant not required.**

1. Product: 3M Polyurethane Sealant 540:
    a. Tack free: 60-90 minutes at 73 degrees F at 50% relative humidity.

b. Elongation at Break (ASTM D882): 600 percent.
c. Tensile Strength (ASTM D882): 300 psi (2.1 MPa).

2. Product: 3M Polyurethane Sealant 525:
a. Tack free: 90-150 minutes at 73 degrees F at 50% relative humidity.
b. Elongation at Break (ASTM D882): 600 percent.
c. Tensile Strength (ASTM D882): 400 psi (2.6 MPa).

B. Flashing: 3M Self-Adhered Air and Vapor Barrier 3015 Membrane in detail widths.
1. Description: Tan colored, semi-transparent proprietary film with acrylic adhesive and silicone coated release liner.
2. Total Thickness (ASTM D3652): 10 mils (0.25 mm).

**** NOTE TO SPECIFIER ** Delete widths not required.**

3. Width: 2-3/8 inches (60 mm).
4. Width: 4 inches (102 mm).
5. Width: 6 inches (152 mm).
6. Width: 9 inches (229 mm).
7. Width: 12 inches (305 mm).
8. Elongation at Break (ASTM D882): 700 percent.
9. Tensile Strength (ASTM D882): 1740 psi (12 MPa).
10. Lap Adhesion (ASTM 3330): 40 oz/inch (0.44 N/mm).

C. Primer for Difficult Substrates: Test adhesion before application:

**** NOTE TO SPECIFIER ** Delete primers not required.**

1. 3M Hi-Strength 90 Spray Adhesive.
2. 3M Hi-Strength 94 ET Spray Adhesive.
3. 3M Scotch-Weld Holdfast 70.
4. 3M Fastbond Contact Adhesive 30NF.

D. Through-Wall Flashing Tapes:
1. Through Wall Flashing Tape: 3M Through Wall Flashing Tape 3015TWF:
a. Acrylic-based adhesive.
b. UV resistant up to 24 months.
c. No primer required.

PART 3 EXECUTION

1.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Substrate surfaces shall be free of grease, oil, unbonded paint, corrosion or other substances.

C. Verify that substrate construction is complete, clean, dry, and ready to receive barrier system with no damaged or unsupported areas; or sharp protrusions or voids. Substrate must meet the following requirements:
1. Exterior gypsum sheathing: Moisture content below 19 percent; no open joints or cracks wider than 1/4 inch (6 mm).
2. Plywood: Moisture content below 16 percent; no open joints or cracks wider than 1/4 inch (6 mm).
3. Concrete surfaces: Cured minimum 7 days, fins and extrusions ground flush and void areas filled and cured.
4. Masonry: Mortar joints struck flush.
5. Metal: Wipe down to remove any release agents or coatings.

D. If substrate preparation is the responsibility of another installer, notify Architect and General Contractor of unsatisfactory preparation before proceeding.

1.2 PREPARATION

A. Connection to Difficult Substrates and Other Systems:
   1. Test adhesion by installing a 6 inch (152 mm) square test patch of barrier product over the difficult substrate or other system. Removal of the test patch should not be possible without permanent damage to either the test patch or substrate material.
   2. Consult the manufacturer for detailing connections that fail this test.

B. Gaps or cracks in substrate exceeding 1/4 inch (6 mm) width: Fill gap or crack with sealant and tool surface flush and smooth.

C. Penetrations of air barrier assembly: Fill gaps or cracks exceeding 1/4 inch (6 mm) width between the substrate and the penetration with sealant.

D. Gaps or cracks in substrate exceeding 1/2 inch (12 mm) width: Fill gap or crack with closed-cell backer rod or spray foam. Once the spray foam is cured, shave flush to adjoining substrate.

1.3 INSTALLATION, VAPOR PERMEABLE MEMBRANE

A. Install 3M 3015VP in accordance with manufacturer's instructions in locations shown on the drawings to provide a continuous weather barrier.
   1. 3M 3015VP may be installed horizontally or vertically.
   2. A 2 inch overlap is required.
   3. Horizontal applications should be applied so the top row overlaps the lower row, creating a shingling effect.
   4. Remove the roll from the protective packaging.
   5. Remove and save the protective release liner on the outside of the roll.
   6. Unroll approximately 6 inches of material and position it onto the substrate. Positioning to allow for a minimum 2 inch overlap onto the adjoining section of 3M Air Barrier Membrane.
   7. Unroll the 3M Air Barrier 3015VP material onto the approved substrate. Hand wipe the material into place to ensure full contact of membrane to the substrate.
   8. Using a hand rubber roller, apply sufficient pressure to the rubber roller to work out any entrapped air and secure a tight permanent bond to the substrate. Pay attention to the 2-inch overlap area of the air barrier membrane.
   9. Remove the clear plastic surface liner and discard per local laws including the recycling of the clear plastic liner.
   10. Install the next section of membrane following steps #3 to 6 listed above.
   11. Install 6 inch (152 mm) wide membrane at inside and outside vertical corners and construction joints, lapping a minimum of 2 inches (51 mm) on either side.
   12. Carefully execute detail work to ensure a continuously sealed building envelope.
   13. Through-wall flashings: Lap membrane over through-wall flashing top edge minimum 2 inches (51 mm). Seal top edge of through-wall flashing with air barrier sealant, if a negative, or reverse, lap is used.
   14. Transitions to adjacent systems: See the Drawings for project specific detailing of transitions to the roof, foundation waterproofing, and door systems.
   15. Repair all wrinkles and fish mouths extending within 2 inches (51 mm) of the membrane edge with a repair membrane piece extending 2 inches (152 mm) beyond the defect.
   16. At the end of the installation, reinstall the protective release liner on the remaining roll of 3M Air Barrier 3015VP. This will protect the adhesive from contamination until the material is ready to be installed.

B. Install 3M 3015 Flashing widths in accordance with manufacturer’s instructions in locations shown on the drawings to provide a continuous weather barrier.
   1. 3M 3015 may be installed horizontally or vertically

2. A 2 inch overlap is required
3. Horizontal applications should be applied so the top row overlaps the lower row, creating a shingling effect
4. Cut material to desired length
5. Wind up into a roll for easy handling
6. Fold the starting edge back over itself to crease the paper release liner
7. Peel back the liner to expose a starting 2-3 inch adhesive strip
8. Keep clean – do not contaminate the starting strip with dust or debris before applying it to the intended surface
9. Once aligned, set the membrane in place by rolling the product back against the exposed adhesive
10. Wipe the membrane down with a feathering motion from the middle outward to obtain a smooth surface
11. Unwind the roll while simultaneously pulling the release liner, maintaining a pressure against the wall to tack the membrane in place.
12. Roll the membrane with a rubber roller to ensure a tight seal against the wall and between overlapped edges.
13. Install the next section repeating steps 4 through 12.
14. Install 6 inch (152 mm) wide membrane at inside and outside vertical corners and construction joints, lapping a minimum of 2 inches (51 mm) on either side.
15. Carefully execute detail work to ensure a continuously sealed building envelope.
16. Through-wall flashings: Seal top edge of through-wall flashing with air barrier sealant. Lap membrane over sealed through-wall flashing top edge minimum 2 inches (51 mm).
17. Transitions to adjacent systems: See the Drawings for project specific detailing of transitions to the roof, foundation waterproofing, and door systems.
18. Repair all wrinkles and fish mouths extending within 2 inches (51 mm) of the membrane edge with a repair membrane piece extending 6 inches (152 mm) beyond the defect.

C. Window and Louver Openings:
1. Wrap rough openings as detailed in the Drawings with either flashing or membrane material in detail widths.
2. Install sealant at each inside corner of the window sill, jamb, and head.
3. Apply detail strips of membrane at each inside corner extending the full depth of the sill and a minimum 2 inches (51 mm) onto the face.
4. Install detail strips at the sill, jambs, and head in lengths beyond window opening extending the full depth of the sill.
5. Apply reinforcing piece cut into a football, bowtie, or butterfly shape at each corner.
6. Install membrane in “weatherboard” or “shingle fashion” with a minimum 2 inch (51 mm) overlap at all detail strips.

D. Penetrations:
1. Seal all penetrations with sealant. Install flashing or membrane material cut to length to allow installation around the full circumference of penetration.
2. Masonry Ties or Anchors:
    a. Post-applied: Install back plate of tie or anchor over the air barrier with self-tapping screws. Apply sealant over the screw heads.
    b. Knife plate: Cut a piece membrane to overlap minimum 2 inches (51 mm) in each direction of the knife plate. Cut a slot for the knife plate and apply the membrane over. Apply sealant at the knife plate penetration perimeter.
3. Utilities, Pipes, Conduit, and Duct Penetrations:
    a. Apply sealant between the penetration and the exterior wall.
    b. Apply membrane to allow continuous 2 inch (51 mm) overlap onto vent/pipe penetration and cut “fingers” to transition to the exterior wall.
    c. Install a narrow membrane collar strip around the circumference of the

penetration perimeter, lapping onto the penetration and substrate.

d. Install one piece membrane with penetration shape cut out on to the substrate. Apply over “fingers” on the substrate and extend a minimum of 2 inches (51 mm) beyond the penetration perimeter.

e. Apply sealant at the penetration perimeter and cut edge of the piece membrane.

E. Substrate transitions and building joints: See Drawings for project specific detailing with backer rod, sealant, and membrane.

F. Repairs: Apply membrane 2 inch (152 mm) larger than test or damage area. Seal leading cut edges of membrane with sealant.

1.4 FIELD QUALITY CONTROL

A. Coordinate with Owner's testing agency to inspect installation areas with the manufacturer's authorized technical representative and the Architect. Do not cover weather barriers until accepted.

B. Test:

**** NOTE TO SPECIFIER ** Fill in quantities of tests to suit project. Delete any tests not required.**

1. Qualitative air leakage: ASTM E1186. Conduct ____ at the mock-up and ____ at select locations of the Work.
2. Quantitative air leakage: ASTM E783, at 1.57 psf (75 Pa). Conduct ____ at the mock-up and ____ at select locations of the Work.
3. Water penetration: ASTM E1105). Conduct ____ at the mock-up and ____ at select locations of the Work.
4. Membrane adhesion: ASTM D4541, modified. Use a Type II Pull Tester. Cut through the membrane at the perimeter of the disc.
   a. Conduct ____ sets at the mock-up and ____ sets at select locations 24 hours after installation. Each set includes three adhesion tests.
   b. Record the mode of failure and area where material failed.
   c. Record the adhesion level from the gauge at the end of the test.
5. Repair all test areas to conform to the project specifications.
6. Repair or take corrective action all non-conforming work to meet the project specifications.

1.5 CLEANING AND PROTECTION

A. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction and acceptable to the air barrier assembly manufacturer.

B. Protect air barrier materials from damage during installation and the remainder of the construction period.

C. Touch-up, repair or replace damaged products before Substantial Completion.

*** This Concludes the Vapor Permeable Specification ***

END OF SECTION