

**SECTION 07 27 26**  
**FLUID APPLIED MEMBRANE AIR BARRIERS**  
**GE Elemax\* 2600**

**PART 1 GENERAL**

1.1 SUMMARY

A. Section Includes:

1. Materials and installation methods for a liquid-applied 100% silicone vapor permeable air and water-resistive barrier system.

B. Related Sections

1. Section 01 33 00 Submittal Procedures
2. Section 03 30 00 Cast-in-Place Concrete
3. Section 04 22 00 Concrete Unit Masonry
4. Section 06 16 00 Sheathing
5. Section 07 25 00 Weather Barriers
6. Section 07 92 00 Joint Sealers
7. Section 08 50 00 Windows
8. Section [\_\_\_\_\_] Other

C. References

1. AATCC-127 Water Resistance: Hydrostatic Pressure Test
2. ASTM C1305, Standard Test Method for Crack Bridging Ability of Liquid-Applied Waterproofing Membrane
3. ASTM D412, Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers- Tension
4. ASTM D1970, Self Sealability Test, part of Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
5. ASTM D2370, Standard Test Method for Tensile Properties of Organic Coatings
6. ASTM D4541, Standard Test Method for Pull-Off Strength of Coatings using Portable Adhesion Testers
7. ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials
8. ASTM E96, Standard Test Methods for Water Vapor Transmission of Materials
9. ASTM E331, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
10. ASTM E1354, Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter
11. ASTM E2178, Standard Test Methods for Air Performance of Building Materials
12. ASTM E2357, Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
13. ASTM G154, Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials
14. CAN/ULC-S741, Standard for Air Barrier Materials - Specification

15. CAN/ULC-S742, Standard for Air Barrier Assemblies – Specification
16. NFPA 285, Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies Containing Combustible Components.

## 1.2 SUBMITTALS

### A. Comply with Section 01 33 00[\_ \_ \_]

1. Product Data: Submit manufacturer's technical datasheets, installation instructions, SDS, and warranty for approval.
2. Contractor Qualifications.
3. Samples as required by the architect or owner.

## 1.3 QUALITY ASSURANCE

### A. Comply with Section 01 40 00[\_ \_ \_]

### B. Contractor Requirements

1. Knowledgeable in the use and installation of GE products.
2. ABAA contractors are preferred but not required.

### C. Preconstruction Meeting:

1. Convene [\_\_\_\_\_] weeks prior to commencing Work of this section, in accordance with Section 013100 – Project Management and Coordination.
2. Attendees shall include Contractor, certified installer, and air barrier manufacturer's representative. Optional attendees Owner's representative and Architect.
3. Review air-barrier requirements and installation, special details, mockups, air-leakage and bond testing, air-barrier protection, and work scheduling that covers air barriers.

### D. Mock-Up

1. Prior to installation of air barrier, apply air barrier to verify details under shop drawing submittals and to demonstrate tie-ins with adjoining construction, and other termination conditions, as well as method of execution.
2. Construct typical exterior wall panel, 8 feet long by 8 feet wide, incorporating back-up wall, cladding, window and doorframe and sill, insulation, flashing, [building corner condition,] [junction with roof system] [foundation wall] [and] [typical penetrations and gaps]; illustrating materials interface and seals.
3. Install membranes as indicated on architectural/shop drawings per manufacturer's instructions.
4. Retain mock-ups until inspected and approved by architect, consultant and/or building owner/representative.

## 1.4 DELIVERY, STORAGE AND HANDLING

- ### A. Deliver materials in manufacturers original, unopened, undamaged containers with identification labels intact.

B. Store in original, unopened containers out of direct sun.

1.5 PROJECT CONDITIONS

A. Environmental Requirements:

1. Application is not recommended when the temperature is below 0° F (-18° C) or if frost or moisture is present on the surfaces to be coated.
2. Application is not recommended to surfaces above 150° F (66° C).

1.6 WARRANTY:

A. Provide manufactures 10 or 15 year material warranty.

1. Ensure all manufacturers installation guidelines, specifications, details and warranty requirements are met.
2. Warranty Period: [10] [15] years from date of substantial completion.

**PART 2 PRODUCTS**

2.1 MANUFACTURER

A. Manufacturer: Momentive Performance Materials, Inc., 260 Hudson River Rd., Waterford, NY 12188. Phone: +1 877-943-7325, [www.ge.com/silicones](http://www.ge.com/silicones)

2.2 MATERIALS

- A. Fluid Applied Air Barrier: GE Elemax\* 2600.
- B. Liquid Flashing (Detail Sealant/Adhesive): GE Elemax 5000 Liquid Flashing, GE SCS2000 SilPruf\*, GE SCS2700 SilPruf\* LM, GE SCS9000 SilPruf\* NB or GE SWS.
- C. Reinforcing Fabric: RF100 available in 4", 6" or 12" widths
- D. Transition Membrane: GE UST2200 UltraSpan\* available in 3", 6" or 12" widths.
- E. Pre-cured silicone molded corners: GE USM UltraSpan\* inside and outside corners.

2.3 PERFORMANCE REQUIREMENTS

- A. UV Exposure: No Limit
- B. Application Temperature: 0° F (-18° C) to 158° F (70° C)
- C. Performance Properties:

Property	Value <sup>(1)</sup>	Test Method
Required Dry Film Thickness	17 mils dry	Apply 19 mils wet
Air Permeance – tested at 1.57 psf (75 Pa)	0.00006 cfm/ft <sup>2</sup> (0.003 L/s·m <sup>2</sup> )	ASTM E2178
Air Permeance – tested at 1.57 psf (75 Pa)	0.0002 cfm/ft <sup>2</sup> (0.0009 L/s·m <sup>2</sup> )	CAN/ULC-741
Assembly Air Leakage - tested at 1.57 psf (75 Pa)	0.0002 cfm/ft <sup>2</sup> (0.0009 L/s·m <sup>2</sup> )	ASTM E2357
Assembly Air Leakage - tested at 1.57 psf (75 Pa)	0.0004 cfm/ft <sup>2</sup> (0.0018 L/s·m <sup>2</sup> ) Class A1	CAN/ULC-742
Water Resistance	Pass	AATCC- 127
Water Penetration	No water penetration observed after 15 min. @ 62.5 psf (2993 Pa)	ASTM E331

Water Vapor Permeance at 17 mils DFT	10.5 perms @ 17 mils DFT	ASTM E96
UV & Weathering Resistance	No degradation after 5000 hours	ASTM G154
Self Sealability around Nails	Pass @ 17 mils DFT	ASTM D1970
Crack Bridging Ability (1/16" or 1.5mm)	Pass	ASTM C1305
Service Temperature Range	-40°F to +300°F (-40°C to 149°C)	
Pull of Strength (concrete)	126 psi (0.87 MPa)	ASTM D4541
Pull of Strength (fiberglass mat faced gypsum sheathing)	44 psi (0.30 MPa) <sup>(2)</sup>	ASTM D4541
Tensile Strength	175 psi (1.21 MPa)	ASTM D412 <sup>(3)</sup>
Elongation	542%	ASTM D412 <sup>(3)</sup>
Recoat Time, typical	1-2 hours	Varies with Temp & RH
Cure Time, complete	1-2 days	Varies with Temp & RH
Multi-Story Wall Assembly Burn Test	Passed in assembly tested and acceptable for use in various wall assemblies per engineering analysis	NFPA 285
Surface Burning	Flame Spread: 10 Smoke Developed: 185 NFPA Class A, UBC Class 1	ASTM E84
Oxygen Consumption (Cone) Calorimeter	Effective Heat of Combustion: 9.8 MJ/kg Peak Heat Release Rate: 97 kW/m <sup>2</sup> Total Heat Release: 5.6 MJ/m <sup>2</sup>	ASTM E1354

(1) Average value. Actual value may vary.

(2) Full strength of silicone not realized due to failure of fiberglass mat / sheathing substrate prior to coating failure.

(3) Samples were prepared per ASTM D2370 and tested in accordance to ASTM D412.

## PART 3 EXECUTION

### 3.1 SURFACE PREPARATION

- A. All surfaces must be clean, dry and free of contaminants that may interfere with proper bonding of the materials.
- B. Clean loose mortar and other contaminations where necessary by wire brush or similar abrasion to provide a stable clean surface for application.
- C. Mask off adjoining surfaces not covered by air barrier to prevent spillage and overspray affecting other construction.
- D. Remove grease, oil, bitumen, form release agents, paints, curing compounds and other penetrating containments or film forming coatings from concrete.
- E. Masonry joints shall be struck flush and cracks greater than crack bridging ability shall be filled (routed and filled where necessary) with a trowel application of GE liquid flashing prior to application of the liquid membrane to the surface. The membrane coating can be spray, power roller, roller or brush applied immediately after the application of the GE liquid flashing.
- F. Sheathing joints must be treated per manufacturer's installation details.
- G. Spot all over and under drive fasteners with GE liquid flashing or GE Elemax 2600.

### 3.2 INSTALLATION

- A. Transition/Detailing treatment: Install appropriate materials to treat sheathing joints, expansion joints, drift joints, rough openings, transitions, terminations, penetrations and

similar surface irregularities. Transitions and detailing can be performed before or after air barrier membrane application. Ensure installation is performed in accordance with manufacturers written installation instructions and details.

1. Sheathing joints <1/2" may be treated with any of the following methods:
  - a. GE liquid flashing installed per manufacturers installation details.
  - b. 4" GE RF100 properly embedded in GE Elemax 2600 and centered on joint.
2. Inside or outside corners. Ensure liquid flashing or reinforcement extends a minimum 3" onto each angle change. Any of the following methods may be utilized:
  - a. GE liquid flashing installed per manufacturers installation details.
  - b. 6" GE RF100 properly embedded in GE Elemax 2600 and centered on corner.
  - c. GE UST2200 UltraSpan properly set in GE liquid flashing and centered on corner.
3. Rough Openings. Ensure liquid flashing or reinforcement extends a minimum 3" onto vertical wall and into rough opening. Any of the following methods may be utilized:
  - a. GE liquid flashing installed per manufacturers installation details.
  - b. Minimum 6" GE RF100 properly embedded in GE Elemax 2600.
  - c. Minimum 6" GE UST2200 UltraSpan properly set in GE liquid flashing.
  - d. GE USM UltraSpan outside corners may be utilized in combination with any of the above methods.
4. Pipe or Duct Penetrations may be treated with any of the following methods:
  - a. GE liquid flashing applied around entire perimeter and properly tooled.
  - b. GE RF100 properly embedded in GE Elemax 2600. Ensure GE RF100 extends a minimum 2" onto wall.
5. Static Joints >1/2", Expansion Joints and Drift Joints may be treated with any of the following methods:
  - a. Minimum 6" GE UST2200 UltraSpan properly set in GE liquid flashing or GE Elemax 2600 and centered on joint. Ensure GE UST2200 UltraSpan extends a minimum 1" onto wall.
6. Transitions may be treated with any of the following methods:
  - a. GE liquid flashing installed per manufacturers installation details.
  - b. GE RF100 properly embedded in GE Elemax 2600.
  - c. GE UST2200 UltraSpan properly set in GE liquid flashing.

## B. GE Elemax 2600 Fluid Applied Air Barrier

1. GE Elemax 2600 can be applied by spraying, power roller, roller and/or brush. Contact Momentive Technical Services for information on pump spraying and power rolling equipment useful to spray this material.
2. GE Elemax 2600 shall be applied at a rate of approximately 80 ft<sup>2</sup>/gal and can be done with a single coat application (a site verification mock-up is recommended to verify coverage rates which will vary with substrate and method of application). A 19 wet applied mil thickness will yield a 17 mil dry film thickness.
3. Spray or roller apply the coating in an appropriate manner to ensure a uniform and seamless application.
4. Touch up or damage repair can be accomplished using spray, power roller, roller or brush and can proceed at anytime after application; while coating is still wet or while coating is dry (cured).
5. GE Elemax 2600 application is not recommended when the temperature is below 0° F (-18° C) or if frost or moisture is present on the surfaces to be coated.



6. Application of GE Elemax 2600 is not recommended to surfaces above 150° F (66° C).
7. The ultimate cure and tack-free of this product is dependent upon temperature and humidity. Under basic conditions [72 °F (22° C) and 50%RH] this material can attain a tack-free surface in 1-2 hours and with full cure overnight. As temperatures decrease, the tack-free and cure rate slows down (and vice versa as temperatures increase).

### 3.3 CLEANING AND PROTECTION

- A. Protect air barrier system from damage during application and remainder of construction period.
- B. If damage occurs repair per manufacturers installation details.
- C. Clean spills, stains and soiling from construction that would be exposed in the completed work using cleaning agents and procedures recommended in writing by manufacturer of affected construction.
- D. Remove masking materials after installation.

**END OF SECTION**