AIRLOK FLEX®
AIRLOK FLEX® WITH ProBan®
air / vapor barrier - vapor impermeable - elastomeric

MANUFACTURER'S GUIDE SPECIFICATION

PART 1 – GENERAL

1.01 GENERAL

POLY WALL AIRLOK FLEX® with or without ProBan® is a fluid-applied surface barrier with excellent properties that retard or prevent air, water and vapor transmission. AIRLOK FLEX® is a surface treatment for application on oriented strand board (OSB), plywood, gypsum sheathing, concrete, and concrete masonry surfaces. AIRLOK FLEX®'s resistance to ultraviolet radiation (UV), algae, mold, bacteria, acids and alkali suggests other applications.

1.02 RELATED SECTION

Concrete – Section 03300
Masonry – Section 04500
Fluid-Applied Air & Vapor Barriers – Section 07262

1.03 REFERENCE DOCUMENTS

Reference shall be to the following documents:

A. Air Barrier Association of America (ABAA) Master specifications for Fluid-Applied Air and Vapor Barriers Section 07262.
B. ACI 515.1R: American Concrete Institute (ACI) Guide to the Use of Waterproofing, Dampproofing, Protective and Decorative Barrier Systems for Concrete (Revised 1982).
C. ACI 530.1/ASCE 6–92: American Concrete Institute (ACI) Building Code Requirements for Masonry Structures, Specification for Masonry Structures and Related Commentary.
D. ASTM Standards, as referred throughout this Guide Specification.

1.04 DESCRIPTION

A proper application of AIRLOK FLEX® provides air, water and vapor infiltration and exfiltration protection with minor crack bridging ability. AIRLOK FLEX® is a fluid-applied, single-component, elastomeric, EBS rubber based membrane. The AIRLOK FLEX® formula reduces problems associated with cold-weather application; ultraviolet radiation (UV) degradation; construction scheduling; poor adhesion; and prolonged wall cure time prior to application. AIRLOK FLEX® with ProBan® brings added contact molding inhibiting properties, available at extra cost.

1.05 QUALITY ASSURANCE

A. Manufacturer, Polyguard Products, Inc., is a company specializing in POLY WALL surface treatments since 1992.
B. Contractor shall be a trained installer.

1.06 SUBMITTALS

Submit POLY WALL data and Manufacturer's installation recommendations as required in Division 1 – Submittals.

1.07 ENVIRONMENTAL REQUIREMENTS

A. POLY WALL AIRLOK FLEX® shall be applied at temperatures in the range of –20°F to 120°F. Application of POLY WALL AIRLOK FLEX® components shall not be permitted, unless well-ventilated areas are provided.
B. POLY WALL AIRLOK FLEX® application at temperatures between –10°F to 32°F shall only continue after surfaces are free of moisture and ice.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Delivery, storage, and handling of POLY WALL AIRLOK FLEX® components shall be the responsibility of the Installer.
B. AIRLOK FLEX® shall be stored out of direct sunlight and in temperatures between –20°F to 100°F. AIRLOK FLEX® will not freeze and can easily be stored outside.

C. POLY WALL AIRLOK FLEX® shall be carefully stored according to the requirements of local authorities. Protect containers from water, sparks, flames, excessive heat and poor ventilation.

D. When storing outside, protect containers from water accumulating on or around container orifice and store containers on shaded hard surface. Inside storage requires appropriate fire safety sprinkler system.

E. Ignition source shall be prohibited from the work-space during the application period and from the immediate area where drums, trucks and spray equipment are on site.

F. Shelf life is longer than 2 years.

1.09 WARRANTY

All POLY WALL products are warranted to be free of manufacturer's defects for a period of five (5) years. Contact Polyguard Products, Inc. for further information.

PART 2 – PRODUCTS

2.01 MANUFACTURER

Approved Manufacturer shall be:

Polyguard Products, Inc.
Ennis, TX 75119
(800) 846-3020
www.poly-wall.com

2.02 MATERIAL

A. POLY WALL AIRLOK FLEX® is a material consisting of proprietary elastomeric resins. Performance characteristics of POLY WALL AIRLOK FLEX® shall be as follows:

1. Air Permeance: ASTM E 2178-01: Reported value 0.0007 CFM normal weight CMU tooled joints @ 50 SF/ gallon; 0.0025 CFM Dens Glass Gold @ 70 SF/ gallon.
2. Permeability: ASTM E 96 Method B: Typical results 0.002 perm*inch dry mils.
3. Water Hydrostatic Pressure Resistance: ASTM D 5385: Reported value 100+ feet head of water.
4. Low-Temperature Flexibility and Crack Bridging: ASTM C 836: No cracking.
5. Tensile Strength: ASTM D 412: @ 7 days 190 PSI; @ 28 days 346 PSI.
6. Adhesion to Substrate: ASTM D 4541: Average 100+ PSI.
7. Tested Adhesion & Compatability with:
   a) *Greatseal LT-100, Liquid tape*
   b) *Greatseal PE-150, Sealant*
   c) *Dow Corning 785, Silicone Sealant*
8. Metabolites: Chemical & Visual Analysis: Typical performance does not degrade.
9. Ultraviolet (UV) Resistance: Excellent. Applied coating can be left exposed for periods up to six months without significant deterioration.

PART 3 – EXECUTION

3.01 EXAMINATION

A. The decision to treat a surface shall be based on anticipated air, moisture and waterproofing needs; exposure conditions, the material to be treated and the transitions needed to complete the system. A single application or multiple lighter applications on the exterior surface will retard or prevent air, water and vapor flow through the treated surface. Prior to the application, the surface to receive POLY WALL AIRLOK FLEX® shall be inspected by the Owner or Owner's Representative to establish that the surface(s) to be covered are in accordance with contracts of allied trades.

1. By application of POLY WALL AIRLOK FLEX®, the POLY WALL Manufacturer and the Qualified Installer do not accept the quality of the surface as to individual components or the structural integrity of its components and their combination.
2. Surfaces shall be sound, dry, plane and true; free of oil, grease, dust, dirt, excess mortar and laitance in both exposed and unexposed areas to receive application.
3. Surface voids and cracks will require corrective action by the responsible trade.
4. Concrete and Concrete Masonry (CMU) to be constructed without integral moisture repellant. CMU shall be constructed with type M or type S mortar in accordance with ASTM C270.
5. Masonry joints are to be completely filled with mortar, tooled, and brushed, to increase profile. Excess mortar on masonry ties must be removed.
6. Parged surfaces are not approved substrates for AIRLOK FLEX®.

3.02 SURFACE PREPARATION

A. **Old Surfaces** must be sound. Surfaces that have been in service (not new) will need to be cleaned with detergents, steam, or commercial degreasing products and acid contamination neutralized. Following cleaning, the surfaces should be rinsed with clean water and the cleanliness verified by a site inspector. Deteriorated concrete needs to be prepared by high-pressure washing, wet abrasive blasting, grinding, or dry abrasive blasting. All existing coatings, deteriorated concrete, and loose aggregate is to be removed until only sound gray concrete remains and has a minimum 4-5% surface profile height, a minimum 175 PSI surface pull-off strength value, and a minimum 8.0 pH.

B. **New Surfaces** must be clean, dust free and dry. Concrete masonry units shall be normal density and joints are to be tooled or struck flush, full, free of

voids and gaps. Fill all holes and voids with non-shrinking grout. After 3 days of cure time, new concrete masonry (CMU) is ready to receive the application. No parging.

C. Clean, dry exterior drywall, glass-faced exterior sheathings, plywood, oriented strand board (OSB) and properly primed metal can receive AIRLOK FLEX® as a direct application.

D. Penetrations, voids, and holes must be filled and sealed. Large voids in poured concrete, concrete masonry, and honeycomb surfaces require a non-shrinking hydraulic grout. When hydraulic cement is installed to fill voids, allow to thoroughly dry prior to air barrier application. POLY WALL Hole Filler or POLY WALL Fiber Flash is recommended for sealing small voids, control joints, and penetrations. All areas shall be filled with POLY WALL Hole Filler or POLY WALL Fiber Flash and struck flush before or after the air barrier application. For larger openings, wrap pentrations and joints with POLY WALL 6-inch Self-Adhering Flashing, or approved equal, after the spray application has dried.

3.03 APPLICATION

A. **Safety Considerations –** The work areas during application shall be well ventilated and restricted to only Qualified Installers. The following safety precautions shall apply:

1. Qualified Installers shall wear a NIOSH approved disposable organic vapor respirator. Obtain medical approval for each person who will require a mask, individually fit.
2. A working fire extinguisher, type ABC, shall be available in all vehicles near truck doors and in the work area.
3. All trucks, barrels, and spray equipment shall be grounded.

B. **Temperature –** Application of AIRLOK FLEX® can be in a temperature range of –20°F to 120°F. In temperatures near or below freezing, do not install over frost or ice.

C. **Mixing –** AIRLOK FLEX® is single component and ready to for use right out of the drum. Simply thoroughly stir prior to use.

D. **Application** – The following specifications are prescribed for smooth dense surfaces. As surface porosity increases, the coverage rate will decrease. The mil thickness and coverage rate are based on good-quality, tight masonry units, good-quality gypsum board skin and wood surfaces. It is the responsibility of the Qualified Installer to adjust the coverage rates to meet the varying conditions.

1. Use of an airless sprayer with a 4000 PSI stall pressure and a 0.036-inch tip is recommended. For touch up, brush application may be employed.
2. On smooth Gypsum surfaces, apply POLY WALL AIRLOK FLEX® at 40 square feet per gallon (40 wet mils) or more such that a continuous film forms to an average 16 dry mils. On porous surfaces such as concrete masonry, apply AIRLOK FLEX® to smooth CMU surfaces at a rate of 40 square feet per gallon (40 wet mils) or less, inversely related to texture and porosity of wall surface. Thicker mil rates are acceptable but not required to meet or exceed code and the average 16 dry mils. During application spot-checking with a wet mil gauge controls thickness, examining as close to fresh material application location as safely possible.
3. Apply extra material around brick tie penetrations to create a continuous membrane seal to the tie.
4. Drying time is dictated by coating thickness, ambient temperature and air movement.
5. Application shall be considered complete after a visual inspection of the dry film establishes that the surface has been uniformly covered and free of voids, thin spots, and missed areas. Reapply material until complete coverage is accomplished.

E. **Detailing –** In most applications, detailing is best performed after spray application. Transitions to windows and door frames, beams, columns, soffits are best completed 24 hours or more after the spray application. This avoids problems associated with overspray and allows for spray coverage of the jambs and openings. The spray membrane serves as an excellent primer for the POLY WALL Self-Adhering Flashing or other compatible flashings. When applying POLY WALL Self-Adhering Flashing in cold ambient temperatures, apply Quik Grip Building Envelope Adhesive to the surface of the substrate or the POLY WALL Self-Adhering Flashing to increase adhesion. POLY WALL AIRLOK FLEX® can be applied to the wall surface to 12 inches below grade line, overlapping the below grade POLY WALL Stretch Waterproofing System, for continuous air, moisture and water protection to the footing.

F. **UV Exposure –** AIRLOK FLEX® can be applied and left exposed to ultraviolet radiation (UV) for up to 6 months. For surfaces left exposed to ultraviolet radiation longer than 6 months, such as transition from below grade to above grade, apply a 40 wet mil coat of AirLok Flex VP.

G. **Insulation –** After AIRLOK FLEX® has cured 24-48 hours, insulation may be installed. Spray Polyurethane may be applied directly onto the surface. Sheets of Polystyrene or foil faced isocyanine insulation board may be glued with Quick Grip Building Envelope Adhesive, or equal, directly to the AIRLOK FLEX® membrane. Insulation clips may be used. Self sealing qualities of AIRLOK FLEX® allow

for the proper installation of a variety of fasteners after application.

H. **Clean up –** Toluene or Xylene may be used for cleanup.