

Integrated Building Envelope®

Architectural Division

SMART DESIGN. SMART BUILD.

AIR BARRIER SYSTEMS

A comprehensive line of fluid-applied and self-adhered Air, Moisture and Vapor Barriers in permeable and non-permeable options.



Polyguard Air Barrier Systems

We construct buildings to shelter human activity. The very thought of a new building leaking is unfathomable. Unfortunately, water intrusion is a leading cause of building failure and ultimately, litigation in new construction today. In short, there is no good reason for a building to leak.

A Proven Industry Leader.....

Founded in 1953, Polyguard has a long history of specializing in products that are used in systems to protect structures from the environment, such as air, water and other undesired contaminants. Polyguard understands that we do not produce a finished product (the building). We need the partnership of architects and consultants to design our products into the building and the general contractors and installers, to apply our products as a system on the building. For the process to be a success, it requires quality communication between all parties. With over a half century in the industry, Polyguard has developed the products and expertise to facilitate this process through Design,

Material and Installation.

2 Polyguard supports your project needs with our Integrated Building Envelope® System approach. Our products and systems are designed to work together producing unique connection points intended to protect the structure from below-grade to the roof. We built this foundation with superior technical service, research and development, and manufacturing capabilities from our facilities in Ennis and Corsicana, Texas.

When your project needs the best in moisture protection, choose Polyguard. Our inside Technical Support Specialists are available with specification assistance and detail drawings. The products are readily assembled into a system that meet the project's demands. In addition, our Technical Field Specialists are there with training and job site support. Polyguard will assist you every step along the way.

SMART DESIGN, SMART BUILD WITH POLYGUARD



AIR BARRIER SYSTEM PRODUCTS

Polyguard offers a variety of sheet and fluid-applied Air, Moisture and Vapor barriers with our popular Airlok® family of products. These products come in both permeable and non-permeable options, and provide a tough, continuous barrier with exceptional UV resistant properties. Many of our fluid-applied air barrier products have passed NFPA 285 and Air Barrier Association of America (ABAA) test protocols. In addition, we offer self-adhering sheet air barrier membranes that are flexible and easy to install.

AIRLOK[®] SHEET (Non-Permeable) SELF-ADHERED MEMBRANES & FLASHINGS

- Airlok[®] Sheet 400 NP
- Airlok[®] Sheet 400 HT/NP
- Airlok[®] Sheet UV 400 NP
- Airlok[®] Sheet UV ULTRA 400 NP
- Airlok[®] Sheet 200 BU/NP
- Airlok[®] Sheet UV 200 BU/NP

AIRLOK[®] STPE WRB (Permeable) FLUID-APPLIED SYSTEMS

- Airlok[®] STPE Spray-N-Roll
- Airlok[®] STPE Flash-N-Roll
- Airlok[®] STPE Gun-N-Spread
- Airlok[®] STPE Detail-N-Joint

AIRLOK FLEX® FLUID-APPLIED SYSTEMS

- Airlok Flex[®] (Non-permeable)
- Airlok Flex[®] VP (Vapor Permeable) (Thin Mil)
- Airlok Flex[®] WG (Vapor Permeable) (Thin Mil)

Air Barrier Basics: The Key to Selecting Your System

Smart Design begins with a smart Air Barrier Strategy. We've got you covered.

An effective air barrier strategy begins with selecting products with proven performance, durability, energy efficiency and have the flexibility to integrate seamlessly with your design. Air leakage and the resulting moisture accumulation can lead to serious problems, for buildings and their occupants.

Protect your building with an effective, continuous air barrier around the entire Building Envelope, from foundation to the roof. The right air barrier system will:

- Extend building life by minimizing moisture accumulation
- Increase energy efficiency
- Improve indoor air quality and protect occupant health

These advantages make air barriers a crucial element in building design. Building code officials throughout North America are recognizing the significant benefits of air barriers, and have instituted building codes requiring continuous air barriers to eliminate air leakage entirely.

The solution is in choosing the right system.

Whether your air barrier requires a self-adhered sheet or a fluid-applied membrane, permeable or non-permeable, Polyguard has the systems that offer the right solution for superior performance with ease of application.

We understand that every building is unique, with its own air barrier challenges. That's why we offer a range of products, allowing you to select the system that meets your specific needs and conditions.

Polyguard has the experience to help you review your design conditions and help you select the ideal air barrier system for your building.

Selecting an Air Barrier System: Asking the Right Questions

What is the right system?

Permeable or Non-Permeable? sheet or East or Liquid? Factory or west? Job Made? New or Proven Many or Few Compatible Technology? **Penetrations? Detail Before** Solvent Based or or not? or After? Water Based? Spray or North or Roll-On? Winter or Cost or South? Summer? **Performance?**

Fluid-Applied Membrane or Self-Adhered Membrane

What's best for your design?

The choice of fluid-applied membranes or self-adhered sheet membranes will depend on a variety of factors, including wall shape and details, substrate, and available equipment and labor. For example, one consideration might be if the design of the building calls for few penetrations, then a sheet product might work well. Polyguard has both fluid-applied and selfadhered systems to help you meet your specific project needs.



Permeable or Non-Permeable

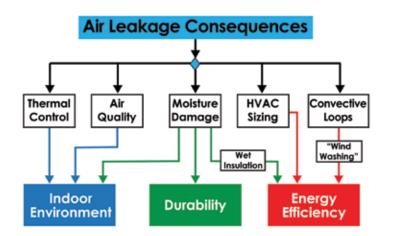
Permeable and non-permeable barriers both resist air leakage. The choice of permeable versus non-permeable depends on a range of factors, including climate conditions specific to the region, wall design, insulation placement and interior conditioning values.

Polyguard has both permeable and non-permeable products, including low temperature and low VOC options, to assist you in finding the right system for your project needs.

Key Components of a Weather Enclosure System

Main factors to consider in the design of an Air Barrier System are:

- **Continuity & Durability** Building envelope design must create a continuous barrier and be capable of withstanding the elements during and after the construction process.
- **Strength** Materials must be able to withstand the positive and negative loads of the building cycle.
- **UV Exposure** Consider the building schedule and check the manufacturer's recommendation for UV exposure limits.
- Climate Zones & Application Temperatures Include materials in your design that fit the season and geographic region.



It is important to evaluate all these qualities when selecting the air barrier system. This will help to prevent costly damage to the building, prevent air leakage in the building, and prevent envelope efflorescence caused by air leakage. The key to success in selecting an Air Barrier System is to know and understand the specification requirements thoroughly. An effective Air Barrier System must meet or exceed the following standard industry testing requirements:

Material Air Permeance	ASTM E 2178	Standard Test Method for Air Permeance of Building Materials
Full Wall Test	ASTM E 2357	Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
Nail Sealability	ASTM D 1970	Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
Pull Adhesion	ASTM D 4541	Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers
Crack Bridging	ICC-ES-AC 212	Acceptance Criteria for Water Resistive Coatings used as Water- Resistive Barriers over Exterior Sheathing Standard Test Method for Crack Bridging Ability of Liquid-Applied Waterproofing Membrane
Elongation / Tensile Strength	ASTM D 412	Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension
Water Vapor Transmission (at applied thickness)	ASTM E 96	Standard Test Methods for Water Vapor Transmission of Materials - Water and Desiccant Method
Fire Propagation	NFPA 285	Standard fire test method for evaluation of fire propagation
Water Resistance	AATCC 127	Hydrostatic Pressure Test

Selecting Your Air Barrier System

Many of Polyguard's air barriers have National Fire Protection Association (NFPA) 285 approval as part of a wall assembly with combustible materials.

Polyguard has air / moisture systems which are NFPA approved for a variety of wall conditions with and without exterior insulation to the requirements of the National Fire Protection Association (NFPA) 285 standard.

Along with associated accessory products, each system provides high-performance membranes to the market which can be further incorporated into Polyguard's Integrated Building Envelope® to provide critical moisture protection from underneath the slab, over to and up the wall.



POLYGUARD ABOVE-GRADE NON-PERMEABLE SHEET AIR BARRIERS

Our above-grade sheet air and moisture membranes provide excellent resistance to air leakage and vapor diffusion. The high puncture resistance provides protection against abuse by other trades during and after installation. It can be field cut and shaped to meet various jobsite conditions. Our foil cladding products have additional UV resistance.

AIRLOK[®] Sheet 400 NP

Airlok® Sheet 400 NP are each a 40 mil, 36" x 75' laminated, modified-asphalt, self-adhesive, non-permeable sheet membranes bonded to a cross-laminated polyethylene sheet designed for air and moisture applications with a 60-day UV exposure. Rubberizedasphalt properties allow for self-sealing around fasteners, sealing of laps, and adhesion to the substrate at ambient application temperatures of 25° F (-4° C) and rising.



AIRLOK[®] Sheet UV 400 NP

Airlok® Sheet UV 400 NP are each a 40 mil, 36" x 75' selfadhesive, non-permeable composite sheet membrane, consisting of a foil/polyscrim film, laminated to a layer of rubberized-asphalt designed for air and moisture applications with a 1-year UV exposure. Rubberizedasphalt properties allow for self-sealing around fasteners, sealing of laps, and adhesion to the substrate at ambient application temperatures of 25° F (-4° C) and rising.

6



AIRLOK[®] Sheet 400 HT/NP

Airlok[®] Sheet 400 NP/HT is a 40 mil, 36" x 75' laminated, modifiedasphalt, self-adhesive, non-permeable sheet membrane bonded to a cross-laminated polyethylene sheet designed for air and moisture applications. Provides a 60-day UV exposure with a broad service temperature up to 260° F. Rubberized-asphalt properties allow for self-sealing around fasteners, sealing of laps, adhesion to the substrate at ambient application temperatures above 40° F (5° C). Designed for use under metal cladding and copings.



AIRLOK[®] Sheet UV ULTRA 400 NP

Airlok® Sheet UV ULTRA 400 NP is a 40 mil, 36" x 75' self-adhesive, non-permeable composite sheet membrane, consisting of a durable foil facing, laminated to a layer of rubberized-asphalt designed for air and moisture applications with a 2-year UV exposure. Rubberized-asphalt properties allow for self-sealing around fasteners, sealing of laps, and adhesion to the substrate at ambient application temperatures above 40° F (5° C).



AIRLOK[®] Sheet 200 BU/NP

Airlok® Sheet 200 BU/NP is a 28 mil, 36" x 100' laminated, butyl, self-adhesive, non-permeable sheet membrane bonded to a cross-laminated polyethylene sheet designed for air and moisture applications. It provides a 60-day UV exposure and with a broad service temperature up to 200° F. The butyl properties allow for selfsealing around fasteners, sealing of laps, and adhesion to substrate at ambient application of temperatures 20°F (-7°C) and rising.



AIRLOK[®] Sheet UV 200 BU/NP

Airlok® Sheet UV 200 BU/NP is a 28 mil, 36" x 100' self-adhesive, non-permeable composite sheet membrane, consisting of a foil/ polyscrim film, laminated to a layer of butyl designed for air and moisture applications. It provides a 1-year UV exposure with a broad service temperature up to 200° F. Butyl properties allow selfsealing around fasteners, sealing of laps, adhesion to the substrate at ambient application temperatures above 20° F (-7° C).



AIRLOK® STPE WRB FLUID-APPLIED AIR BARRIER SYSTEM PRODUCTS

Airlok® STPE WRB products are a seamless fluid-applied solution specifically designed to protect the building envelope. While incorporating windows, doors, penetrations and transitions together with the field air and water resistive barrier, Polyguard is able to protect the building envelope from air infiltration/ex-filtration and moisture intrusion. When your job calls for most durable coating available, look for Airlok® STPE!

AIRLOK® STPE Spray-N-Roll

Airlok[®] Spray-N-Roll is a Silyl Terminated Polyether (STPE), which is a high performance coating providing extended service life in wall cavities. Typical applications include coating masonry, masonry cavity, poured and precast walls. Additional applications include plywood, oriented strand board (OSB), and exterior-grade gypsum sheeting which shall be covered with an exterior facade.



Packaging InformationPails5 Gal

Fulis	5 Gui
Drums	50 Gal
Std Color	Gray
Sprayable	Yes
Rollable	Yes



AIRLOK® STPE Flash-N-Roll

Airlok[®] Flash-N-Roll is a single-component, cold-fluid-applied, Silyl Terminated Polyether (STPE) fluid-applied air barrier and/or flashing material. Typical applications include rough openings and other above-grade flashings.

AIRLOK® STPE Gun-N-Spread

Airlok® Gun-N-Spread is an all-purpose, fluid-applied flashing

used to create a weather resistant, fully adhered waterproof

barrier system around rough openings. Used on window



Packaging Information

-	_	

Pails	2 Gal
Pails	5 Gal
Std Color	Gray
Sprayable	No
Rollable	Yes

AIRLOK[®] STPE Detail-N-Joint

Airlok[®] Detail-N-Joint is a single-component, cold-applied, Silyl Terminated Polyether (STPE), fiber-filled, fluid joint filler and transition flashing material. Typical detailing applications include rough openings, penetrations, above-grade flashings and transition joints. Applied with a putty knife.

E Altor General Spread Datase Attest - Gau A. Spread

openings. Applied with a putty knife.







AIRLOK FLEX® FLUID-APPLIED AIR BARRIER SYSTEM PRODUCTS

The Airlok Flex[®] family of products offer a variety of fluid-applied Air, Moisture and Vapor barrier options that provide a tough continuous barrier that are among the most cost effective sprayable and roll-on systems available. These asphalt-free systems have \geq 100 PSI bond to substrate, extended UV resistance, and are compatible with most construction surfaces as well as virtually every waterproofing material used in construction.

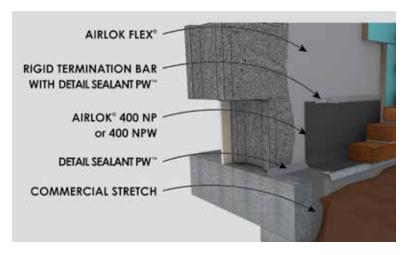
AIRLOK FLEX® NON-PERMEABLE FLUID-APPLIED AIR BARRIER

Patented, single-component, cold-applied, nonpermeable, solvent based, elastomeric, thermoplastic, and synthetic rubber coating designed to prevent the infiltration and exfiltration of moisture and air penetration. It offers UV resistance of up to 6 months. It can be applied in a broad temperature range of -20° F (-29° C) up to 120° F (49° C), allowing design flexibility and cost savings of not having to tent the project. You will be spraying when others are not. Airlok Flex[®] allows you the option to detail either before or after application of the product.



Packaging Information

Pails	5 Gal					
Drums	55 Gal					
Std Color	Gray					
Sprayable	Yes					
Rollable	Yes					



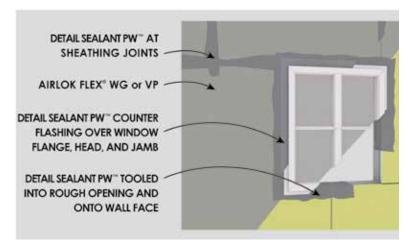
AIRLOK FLEX[®] WG (THIN MIL) & AIRLOK FLEX[®] VP (THIN MIL) PERMEABLE FLUID-APPLIED AIR BARRIERS

Water-based, above-grade air, weather and vapor coatings that forms a durable protection over 100 PSI adhesive pull-off strength. These products block inward moving water from penetrating through the coating to the substrate, reduces energy loss, and can be applied in temperatures ranging from 40° F (5° C) up to 120° F (49° C). Airlok Flex® WG LT or VP LT offer low temperature options for application in temperatures as low as 20° F (-7° C).



Packaging Information

Pails	5 Gal				
Drums	50 Gal				
Std Color	Gray				
Sprayable	Yes				
Rollable	Yes				



UW HEALTH AT THE AMERICAN CENTER

Throughout the years Polyguard has supplied products and contributed to countless number of projects across North America with our Architectural Products. Here is an example of how our products have been utilized by discerning owners, architects and contractors.



Architect Flad Architects Madison, WI

General Contractor J.H. Findorff & Son Inc. Madison, WI Waterproofing Contractor Pro-Foamers Inc Green Bay, WI

Featuring a design that adds to the Madison, WI skyline and offers impressive views of city landmarks.

On April 9, 2013, UW Health broke ground on a new hospital, outpatient care and wellness facility in Madison, Wisconsin. Located on Madison's east side in the American Center business park, UW Health at The American Center is a unique health care campus featuring inpatient and outpatient services along with wellness and preventive care programs.

Opened on August of 2015, the three-story, 496,000 square foot structure offers a 56-bed inpatient

hospital, two floors of clinical exam rooms, a physical therapy department, and a 24-hour emergency department.

Incorporated on the UW Health Center project were the following Polyguard products:

Air Barrier Systems

Airlok Flex®

- Airlok[®] 400 NP
- Airlok[®] UV Ultra 400 NP

System Accessories

Detail Sealant PW[™] 650 LT Liquid Adhesive





9

SUPERIOR QUALITY AND PERFORMANCE

How does Polyguard's Airlok® family of Air Barrier products stack up? The proof is in the numbers. Our systems meet or exceed industry standards for performance.

POLYGUARD AIR BARRIER SYSTEM	Application Temperature Range (° F)	UV Exp Limits (Month)	Air Perm (blocks) (cfm/sf)	Air Perm (cfm/sf)	Pull Adhesion (psi)	Vapor Perm (perm)	Tensile Strength (psi)	Elongation (%)	Nail Sealibility (Pass)	Fire Testing Compliant	VOC Content (gl)	Product Yield (sf/gal)	Product Thickness (dry)
STSTEIM			ASTM E 2178	ASTM E 2357	ASTM D 4541	ASTM E 96 dry cup/wet cup	ASTM D 412	ASTM D 412	ASTM D 1970	NFPA 285			
AIRLOK FLEX® *	-20 to 120	6	0.00012	0.0008	>135	0.058/0.216	387	515	Pass	Yes**	525	40	20 mil
AIRLOK FLEX® VP	40 to 120	12	0.003	0.002	>100	2.15/10	160	500	Pass	Yes**	< 50	50	16 mil
AIRLOK FLEX® VP LT	20 to 65	12	0.003	0.002	>100	2.15/10	160	500	Pass	Yes**	172	50	16 mil
AIRLOK FLEX® WG	40 to 120	24	0.00035	0.00001	174	3.49/21	168	528	Pass	Yes**	79	80	10 mil
AIRLOK FLEX® WG LT	20 to 65	24	0.00035	0.00001	174	3.49/21	168	528	Pass	Yes**	115	80	10 mil
AIRLOK [®] STPE SPRAY-N-ROLL	25 to 110	6	0.002	0.0016	>120	7.32/15	100	300	Pass	Yes**	< 20	69	20 mil
AIRLOK [®] STPE FLASH-N-ROLL	25 to 110	12	n/a	0.0016	>136	n/a	100	300	Pass	Yes**	< 23	64	25 mil

* Lower VOC content products available. ** Related to specific assemblies.

POLYGUARD AIR BARRIER SYSTEM	Application Temperature Minimum (° F)	UV Exp Limits (Month)	Air Perm (Blocks) (cfm/sf)	Air Perm (cfm/sf)	Pull Adhesion (psi)	Vapor Perm (perm)	Tensile Strength (psi)	Elongation Compound (%)	Nail Sealibilty (Pass)	Fire Testing Compliant	Puncture Resistance (Membrane)	Product Thickness
			ASTM E 2178	ASTM E 2357	ASTM D 4541	ASTM E 96 B	ASTM D 412	ASTM D 412	ASTM D 1970	NFPA 285**	ASTM E 154	
AIRLOK® Sheet 400 NP	25° F	2	0.00383	0.012	35.7	0.03	M-574 T-585	>800	Pass	Yes**	53.3 lbf	40 mil
AIRLOK® Sheet 400 HT/NP	40° F	2	0.00383	0.012	35.7	0.03	M-574 T-585	>800	Pass	Yes**	53.3 lbf	40 mil
AIRLOK® Sheet UV 400 NP	25° F	12	0.004	0.012	33.8	0.02	M-269 T-321	>800	Pass	Yes**	43.9 lbf	40 mil
AIRLOK® Sheet UV ULTRA 400 NP	40° F	24	0.0005	0.012	33.8	0.00	M-656 T-767	>800	Pass	Yes**	78.6 lbf	40 mil
AIRLOK® Sheet 200 BU/NP	20° F	2	n/a	n/a	41	0.44	M-1056 T-1574	>800	Pass	Yes**	48 lbf	28 mil
AIRLOK® Sheet UV 200 BU/NP	20° F	12	n/a	n/a	41	0.386	M-791 T-1326	>800	Pass	Yes**	47 lbf	28 mil

DETAILING AND ACCESSORY PRODUCTS FOR A SEAMLESS INTEGRATION

Polyguard's Airlok® family of Air Barrier products are complimented by a comprehensive range of accessory products to ensure maximum compatibility and single-source responsibility for your project.

Making the Connection...



Detail Sealant PW[™]

Single-component, STPE, 100% solid moisture-cured, elastomeric sealant. Detail Sealant PW™ (DSPW) is a low VOC/HAPS free, cold-applied, self-adhesive, elastomeric sealant.

Available in 3 gallon pails and 20 oz sausages.



650 LT Liquid Adhesive

Rubber-based, tacky adhesive which is specifically formulated to provide excellent adhesion. It is used to prime all structural concrete, masonry, or wood surfaces. Designed to be used on applications down to 25° F (-4° C).

Available in 1 and 5 gallon pails.



650 WB Liquid Adhesive

Water-based, rubber-based, low-tack adhesive which is specifically formulated to provide excellent adhesion under many kinds of surface conditions. It is used to prime all structural concrete, masonry, or wood surfaces. Designed to be used in ambient and surface temperatures of 40° F and rising.

Available in 1 and 5 gallon pails.



California Sealant

Rubber-based sealant which is specifically formulated to provide excellent adhesion. It is used to prime all structural concrete, masonry, or wood surfaces. Designed to be used on applications down to 25° F (-4° C). Available in 5 gallon pails.



Quick Grip Adhesive

An industrial-grade aerosolized adhesive in a portable spray system, formulated to adhere protection courses, drainage composites, insulations, sheet membranes and flashings to a variety of substrates. Quick Grip provides a fast and economical solution to most building envelope component adhesive requirements.

Available in 30 lb canister.





The Integrated Building Envelope[®] System - One solution for all your project needs.

For over 60 years, Polyguard's high quality products have been protecting structures from moisture and air intrusion on thousands of projects across the United States and globally. Our complete line of commercial grade products for our Waterproofing Systems, Air Barrier Systems, and Drainage Systems offer designers and contractors a single-source solution for all of their project needs. When your project demands the best in moisture protection, choose the best products available.

SMART DESIGN, SMART BUILD WITH POLYGUARD

Waterproofing Systems

Polyguard's below-grade waterproofing product line includes membranes intended for both pre and post applied concrete applications. It is anchored by the well known Underseal® brand that includes our Underslab and Blindside[™] products. The Underseal® Chemical Resistant System contains a purpose built, multi-layer backing which keeps the outside out and the inside in. The Underseal® line has exceptional puncture and moisture resistant properties. It also contains technology that creates a permanent seal underneath the concrete slab to eliminate water migration, while remaining flexible to meet the many contours and irregularities found on jobsites. In addition, our fluid-applied waterproofing system and self adhered membranes can stand up to the toughest weather and jobsite conditions.



Air Barrier Systems

Polyguard offers a variety of sheet and fluid-applied Air, Moisture and Vapor barriers with our popular Airlok® family of products. The products come in both permeable and impermeable options and provide a tough, continuous barrier with exceptional UV resistant properties. Our AirlokFlex® line has permeable and non permeable options, thin mil choices, and products with extended UV and Low VOC's. Airlok® STPE WRB products are a seamless single-component, cold-applied, Silyl Terminated Polyether (STPE) fluid-applied air barrier and/or flashing material offering a solution specifically designed to protect the building envelope that seals and protects your entire structure. Our Airlok® Sheet family includes both asphalt and butyl products as well as products with additional UV protection.



The Polyflow[®] family of geocomposite drainage products combine durability along with the functionality of a filter fabric to meet a variety of drainage requirements. Our Polyflow[®] products can be installed virtually anywhere that an aggregate drainage system has been used to relieve hydrostatic pressure more efficiently. Our drainage products offer a superior additional layer of protection for our waterproofing membranes.



System Accessory Products

Polyguard Architectural Products, as a single-source manufacturer, offers the necessary building envelope components from the slab to roof. This includes our comprehensive line of superior accessory products that are also compatible with most common structural construction materials. From Adhesives, Sealants, and Tapes to Prefabricated Boots and Flashings, we have virtually all the components you will need to successfully design and construct your project.



Polyguard Products, Inc.

P.O. Box 755, Ennis, TX 75120

For more information about our products:

Contact Polyguard by email: **archdivision@polyguard.com** Contact Polyguard by phone: **214-515-5000** Visit our website: **www.polyguard.com**



The information contained in this document is based on data and knowledge considered to be true and accurate at time of printing and is offered for the users' consideration, investigation and verification. Polyguard Products, Inc. cannot be held liable for errors made as a result of information herein. Changes and modifications can be made to this document without prior notice. No statement, recommendation or suggestion is intended for use which would infringe on patents or copyrights held by Polyguard Products, Inc.