

POLYGUARD UNDERSEAL™

BLINDSIDE WATERPROOFING MEMBRANE

Waterproofing with Termites and Gas Vapor Protection
(Formerly known as Underseal™ XT 751 Blindside)



PRODUCT FEATURES:

BASIC USES: *Underseal™ Blindside* Membrane* is used as a waterproofing membrane where vertical positive side waterproofing is required but access to the positive side is impossible due to the soil retention system.

DESCRIPTION: *Blindside Membrane* is a strong sheet membrane with a 4 mil thick high density polyethylene backing laminated to a 56 mil thick layer of proprietary waterproofing compound bonded to a 13 mil thick nonwoven geotextile fabric. Once the concrete is poured against the *Blindside Membrane*, the concrete cures, a mechanical bond forms to tightly and permanently secure the concrete to the membrane. On the fabric side, a 4" wide lap of adhesive waterproofing compound is manufactured on one edge and covered with a removable silicone coated release sheet. This adhesive compound is exposed just prior to the installation of the adjacent roll forming a tight **self-adhesive vertical lap**.

Total membrane thickness is factory controlled at **73 mils**.

ATTRIBUTES: *Blindside Membrane* provides a permanent seal between the membrane and poured concrete wall to eliminate moisture migration into the structure. *Blindside Membrane* also acts as a barrier against termites and toxic contaminants including methane and radon gas which may attempt to enter the structure through cracks or joint openings.

LIMITATIONS: *Blindside Membrane* should only be used on vertical surfaces. However, occasionally it may be used horizontally, consult Polyguard for horizontal recommendations. If lengths of *Blindside Membrane* greater than 20' are to be installed contact Polyguard for mechanical attachment recommendations. *Blindside Membrane* should only be installed when temperatures are 40°F (4.44°C) and rising. This membrane should always be installed when the weather is dry. This product should not be installed when it is raining or when freezing precipitation is occurring. Concrete should be poured within 30 days of membrane installation. Extended exposures will be considered, please contact Polyguard for technical assistance.

Underseal™ is protected by U.S. Patent No. 7,488,523

Polyguard

This Information is based on our best knowledge, but POLYGUARD cannot guarantee the results to be obtained.

POLYGUARD PRODUCTS, INC • ENNIS, TEXAS 75120-0755
PH: 214-515-5000 • 800-541-4994 • FAX: 972-875-9425
Web Site: www.polyguardproducts.com



REFERENCES: *Blindside Membrane* qualifies under LEED IAQ Credit 5 - Indoor Chemical and Pollutant Source Control (below grade toxin barrier/reduced pesticide usage). SS3 - Brownfield redevelopment (can be used for pesticide contaminated sites). Can be considered for ID-1 Innovation in design.

PACKAGING:

PRODUCT	ROLL SIZE	PACKAGING	SQ.FT./ ROLL	LBS. /ROLL	CTNS / PALLET
Underseal™ Blindside Membrane	4' x 50'	ROLL	200	70	25
Underseal™ Fabric Tape	12" x 200'	CARTON	200	70	24
Flow 15-P Drainage Composite	4' x 50'	ROLL	200	50	9

SAFETY: *Polyguard* liquid adhesives, mastics and liquid membrane products used along with this product can contain varying amounts of solvents and other substances which could be hazardous if not handled safely. Hazards can include breathing vapors, flammability, skin irritation, and toxicity. It is important that users obtain *Polyguard's* current Material Safety Data Sheets, and follow with care all safety instructions related to the products. Of particular importance is the presence of adequate ventilation, and the absence of excessive heat, flame, or sparks in areas where the products are stored, handled, or applied. **CLOSE CONTAINER AFTER EACH USE. KEEP OUT OF REACH OF CHILDREN.**

PRODUCT PLACEMENT:

PREPARATION:

FORMS – Care should be taken in the choice of forms selected. One sided wall forming systems are the best choice due to the absence of form ties. Inspect all surfaces for any conditions detrimental to the proper completion of the work. Surfaces should be structurally sound. Remove debris or any other foreign material that could damage the *Blindside Membrane*. Use repair materials that are acceptable to *Polyguard Products*.

WOOD LAGGING: Timber lagging systems should be closely butted together to provide a sound substrate. Fill gaps, missing/damaged boards and adjust board misalignments of over 1/2" with concrete grout, treated wood, plywood or other approved facing. If lagging boards are placed interior to the steel piles any gaps between ends of the boards which exceed 2" should be covered with plywood and secured or grouted behind for stability.

STEEL SHEET PILING: If the membrane is to be in continuous contact with the profile of the sheet piling, all sharp protrusions must be addressed or removed. If waterproofing is expected to span the sheet pilings then place 3/4" plywood across void and mechanically anchor into place every 12" O.C. Fill void behind plywood with sand.

CAISSON: If the surfaces of drilled piers appear relatively smooth install (mechanically attach) directly against piers. However, the groove between each pier has to be filled with concrete grout and all sharp protrusions addressed or removed.

SHOTCRETE WITH CONCRETE AND CHEMICALLY STABILIZED EARTH: Remove all sharp protrusions and fill all voids with concrete grout.

SLURRY WALL: Clean off all mud and dirt. Remove all sharp protrusions and fill all voids with concrete grout.

INSTALLATION: For vertical application of *Blindside Membrane* up to 20 feet in length mechanically attach with fasteners every 12" across the top lagging. Fasten through the *Polyguard Flow 15 P Drainage Composite* and the *Blindside Membrane* allowing the membrane to hang to the bottom of wall. If depth is over 20 feet contact your Polyguard Representative for application instructions.

Always apply *Flow 15 P Drainage* with the fabric side toward the lagging retention system in blindside applications.

Cut holes in the *Flow 15 P Drainage* where penetrations including lag bolts extend out of the substrate through the drainage composite. Apply a detail coat of *Polyguard LM-95 Liquid Membrane or Polyguard Detail Sealant* around the bolts. Allow *Polyguard Detail Sealant* to cure for 24 hours. Place the *Blindside Membrane* with the high density polyethylene backing side toward the *Flow 15 P Drainage*. The fabric side of the *Blindside Membrane* should face the interior of the form to receive the concrete.

Blindside Membrane seams should be addressed as follows:

SIDE LAPS – If lap areas become dirty remove all debris and dust from the polyethylene backing, clean with 30% isopropyl alcohol prior to securing the 4" side lap seal and roll with laminate type roller to obtain full adhesion.

END LAPS – Prime end laps with a heavy coat 150 - 200 sq. ft. per gallon (13.93 - 18.58 M²) of **Polyguard 650 LT Liquid Adhesive or California Sealant**. Allow this adhesive to dry (until tacky) before membrane application. Install a reverse shingle lap with the Blindside Membrane on the vertical wall. Place a 12" wide piece of **Underseal™ Fabric Tape** over the primed seam area. The **Underseal™ Fabric Tape** should be applied by centering it over the seam. Apply even pressure with a roller to obtain full adhesion.

PATCHING - Take precautions to protect **Blindside Membrane**. Visually inspect the **Blindside Membrane** prior to pouring concrete for any punctures or damage to the membrane which needs repair. Patch any damaged areas by applying the **Polyguard 650 LT Liquid Adhesive or California Sealant** at a coverage rate of 150 - 200 sq. ft. per gallon (13.93 - 18.58 M²) to the damaged **Blindside Membrane** prior to application of the **Underseal™ Fabric Tape**. Patches must extend at least 6" in all directions from the damaged area and sealed with **Polyguard 650 Mastic** around the edges.

PENETRATIONS - If annular space around pipes, bolts, soil nails or penetrations is ½" or less apply the **Polyguard 650 LT Liquid Adhesive or California Sealant** to fabric side of **Blindside Membrane**. Apply a ¾" faced cant/fillet of **Polyguard LM-95 Liquid Membrane or Polyguard Detail Sealant** extending onto the fabric side of the **Blindside Membrane** and onto the pipe a minimum of 3". Allow **Polyguard Detail Sealant** to cure 24 hours. Penetrations should be prepared for this application by removing all debris and other bond-breaking substances with wire brushing until clean.

Note: If pipes or penetrations are in tight clusters and a more flowable detailing liquid is required LM-95 should be used, contact Polyguard for more details.

If the annular space of pipes, bolts, soil nails, or other penetrations exceeds ½" a patch of **Underseal™ Fabric Tape** is required. Apply a patch of tape 6" larger than the penetration diameter installed over the **Polyguard 650 LT Liquid Adhesive or California Sealant** at a rate of 150 - 200 sq. ft. per gallon (13.93 - 18.58 M²) extending 6" beyond pipe to the fabric side of the **Blindside Membrane**. Press and roll firmly to obtain full adhesion. Apply a ¾" faced cant/fillet of **Polyguard LM-95 Liquid Membrane or Polyguard Detail Sealant** extending onto the fabric side of the **Underseal™ Fabric Tape** and onto the penetration a minimum of 3". Penetration surfaces should be prepared as described above to remove all debris and bond-breaking substances. **Polyguard Detail Sealant** must cure 24 hours.

Termite and Gas Vapor Protection - Termite and gas vapor protection pipe penetrations must be wrapped using the **Underseal™ Fabric Tape** and secured to the pipe with a screw clamp.

OWNER INSTRUCTIONS: This material is offered for sale by POLYGUARD PRODUCTS, INC. only for the expressed purposes as described in this literature. Any use of the products other than taught here by POLYGUARD shall be the responsibility of the purchaser, and POLYGUARD does not warrant, nor will be responsible for any misuse of these products.

The POLYGUARD products described here are for construction or industrial use only. Application of the products should be performed by workmen who are skilled in the application of these types of materials, and installation should follow manufacturer specifications.

Material Safety Data sheets and precautionary labels should be read and understood by all user supervisory personnel and employees before using. Consult POLYGUARD for Material Safety Data Sheets. Purchaser is responsible for complying with all applicable Federal, State and local laws and regulations covering health, safety, and use of the product, including waste disposal. This is not a Material Safety Data Sheet and is not to be used as such. POLYGUARD has prepared separate Material Safety Data Sheets on each product.

WARRANTY: Polyguard Products are warranted to be free of defects in manufacture for five years. Material will be provided at no charge to replace any defective products.

Note: Product Properties Table is on page 4

PRODUCT PROPERTIES:

PROPERTY	TEST METHOD	ENGLISH	METRIC
Color		Black/White	
Thickness	ASTM-D-1000	.073 in.	1.42
Low temperature flexibility	ASTM D-1970 180° at -25°F.	No effect	No Effect
Resistance to hydrostatic head, minimum	ASTM D-5385-93	231 ft.	70.4 m
Elongation, minimum	ASTM D-412-06	>655%	>655%
Tensile strength, film minimum	ASTM D-882 PSI (N/mm^2)	6783	46.8
Crack cycling	ASTM C-836 Tested @-15°F	Pass	Pass
Puncture resistance, minimum	ASTM E-154	>327 lbs.	>1455.7N
Peel adhesion to concrete	ASTM D-903 modified	14.9 lbs.in	2614 N/m
Lap Peel Adhesion	ASTM D-1876-01	9.02 lb./in	1.58 N/mm
Moisture Vapor Transmission	ASTM E-96-B US grains/h/ft ² ($g/h\cdot m^2$)	.01	1.48×10^{-9}
Permeability (hydraulic conductivity)	ASTM D 5084-90	$K = 1.18 \times 10^{-8}$ $cm \cdot s^{-1}$	$K = 1.18 \times 10^{-8}$ $cm \cdot s^{-1}$
Methane Permeability	ASTM D-1434 tested using 99.99% purity methane $ft^3/(ft^2 \cdot hr \cdot psi)$ ($mol/m^2 \cdot s \cdot Pa$)	6.3×10^{-7}	3.5×10^{-13}
Resistance to Penetration by Termites	Texas A&M Method percentage of penetration	0.0 %	0.0%
Resistance to Penetration by Pesticides	ASTM F- 2130 percentage of penetration	0.0 %	0.0%
Resistance to Fungi in Soil	GSA-PBS 07115 - 16 Weeks	No effect	No effect

¹ Test is done using smaller sample than recommended and at room temperature.