



PANGO® WRAP

TERMITE/VAPOR BARRIER

INSTALLATION INSTRUCTIONS



A Proven Physical Barrier Against
Subterranean Termites and Moisture Vapor

PANGO® WRAP TERMITE/VAPOR BARRIER INSTALLATION INSTRUCTIONS



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IMPORTANT: Please read these installation instructions completely, prior to beginning any Pango Wrap installation. The following installation instructions are based on ASTM E1643 - Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs. There are specific instructions in this document that go beyond what is stated in ASTM E1643 to take into account subterranean termite protection. If project specifications call for compliance with ASTM E1643, then be sure to review the specific installation sections outlined in the standard along with the techniques referenced in these instructions.

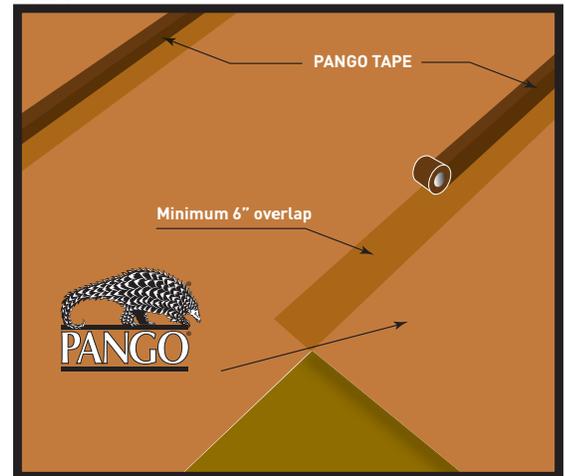
UNDER-SLAB INSTRUCTIONS:

1. Pango Wrap can be installed over an aggregate, sand, or tamped earth base. It is not necessary to have a cushion layer or sand base, as Pango Wrap is tough enough to withstand rugged construction environments.
2. Unroll Pango Wrap over the area where the slab is to be placed. Pango Wrap should completely cover the concrete placement area. All joints/seams should be overlapped a minimum of six inches and taped using Pango® Tape. (Fig. 1)

NOTE: The area of adhesion should be free from dust, dirt, moisture, and frost to allow maximum adhesion of the pressure-sensitive tape. Ensure that all seams are taped with applied pressure to allow for maximum and continuous adhesion of the pressure-sensitive Pango Tape.

3. ASTM E1643 requires sealing the terminating edge of the vapor barrier to a concrete construction. *Extend vapor retarder over footings and seal to foundation wall, grade beam, or slab at an elevation consistent with the top of the slab or terminate at impediments such as waterstops or dowels.* Consult the project design team to determine where to terminate Pango Wrap to strike the right balance between termite and vapor protection at and around foundation constructions and any structural concerns before proceeding. Seal the vapor barrier at its terminating edge with one of the following options.

FIG. 1



PERIMETER SEAL OPTIONS:

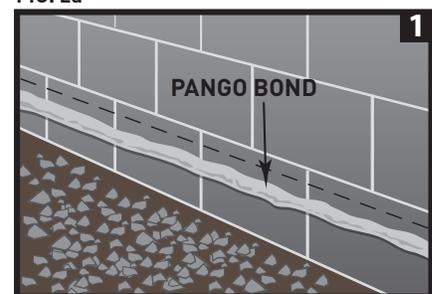
AT SLAB ELEVATION (NO IMPEDIMENTS)

OPTION 1: SEAL PANGO WRAP TERMINATING EDGE* TO WALL WITH PANGO® BOND & PANGO® TERM BAR: (Fig. 2a)

- a. Make sure area of adhesion is free of dust, dirt, debris, moisture, and frost to allow maximum adhesion.
- b. Mix Pango Bond and apply to the foundation construction with a trowel or glove.
- c. Use enough Pango Bond so that when you apply consistent pressure to seal Pango Wrap along the edge, it creates a continuous 2" wide strip.
- d. Utilize Pango® Term Bar to fasten Pango Wrap to concrete or masonry and secure in place. For added assurance that a seal has been achieved, you may apply additional Pango Bond over the lip of Pango Wrap and/or Pango Term Bar.

* Terminating Edge - Anywhere Pango Wrap stops within the interior area of the slab placement or at the slab perimeter. Example: At impediments or, depending on possible structural concerns, adjacent to interior footings or grade beams, if they exist.

FIG. 2a



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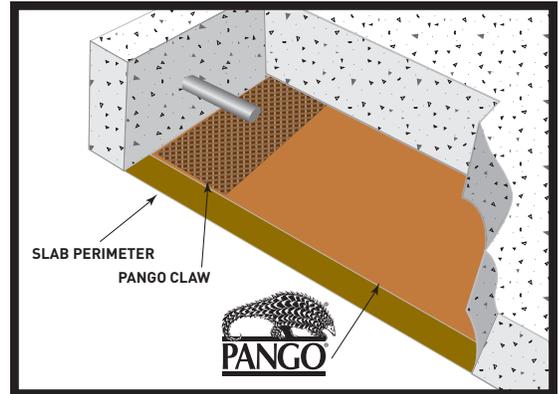


AT IMPEDIMENTS

OPTION 2: SEAL TO SLAB AT TERMINATING EDGES WITH PANGO CLAW®: (Fig. 2b)

- a. Apply Pango Claw as close to the terminating edge as possible while keeping it entirely on Pango Wrap.
- b. Prior to the placement of concrete, ensure that the top of Pango Claw and all terminating edges are free of dirt, debris, or mud to maximize the bond to the concrete.

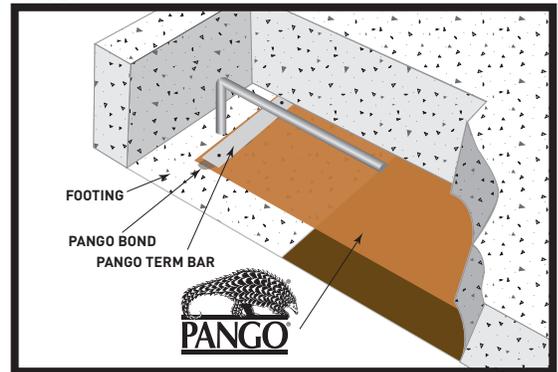
FIG. 2b



OPTION 3: SEAL TO FOOTING WITH PANGO BOND: (Fig. 2c)

- a. Make sure area of adhesion is free of dust, dirt, debris, moisture, and frost to allow maximum adhesion.
- b. Mix Pango Bond and apply to the foundation construction with a trowel or glove.
- c. Lap Pango Wrap over the Pango Bond and apply consistent pressure to seal Pango Wrap along the edge so that it creates a 2" wide strip.
- d. Utilize Pango Term Bar to fasten Pango Wrap to footing and secure in place.

FIG. 2c

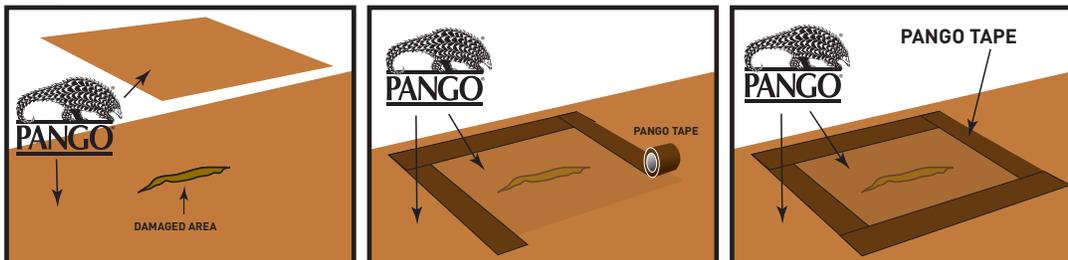


- 4. In the event that Pango Wrap is damaged during or after installation, repairs must be made. Cut a piece of Pango Wrap to a size and shape that covers any damage by a minimum overlap of six inches in all directions. Clean all adhesion areas of dust, dirt, moisture, and frost. Tape down all edges using Pango Tape (Fig. 3).

REPAIRS:

SEALING DAMAGED AREAS

FIG. 3



PANGO® WRAP TERMITE/VAPOR BARRIER INSTALLATION INSTRUCTIONS



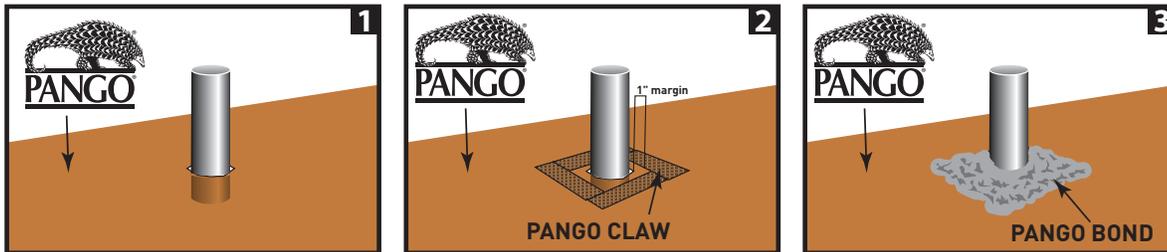
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5. **IMPORTANT: ALL PENETRATIONS MUST BE SEALED.** All pipe, ducting, rebar, wire penetrations and block outs should be sealed using Pango Claw and Pango Bond (Fig. 4a); Pango Wrap and Pango Tape (Fig. 4b); or, Pango Claw, Pango® Sealant Form, and Pango® Sealant (Fig. 4c).

PENETRATION SEALING OPTIONS:

OPTION 1: SEALING PIPE PENETRATIONS WITH PANGO CLAW AND PANGO BOND: (Fig. 4a)

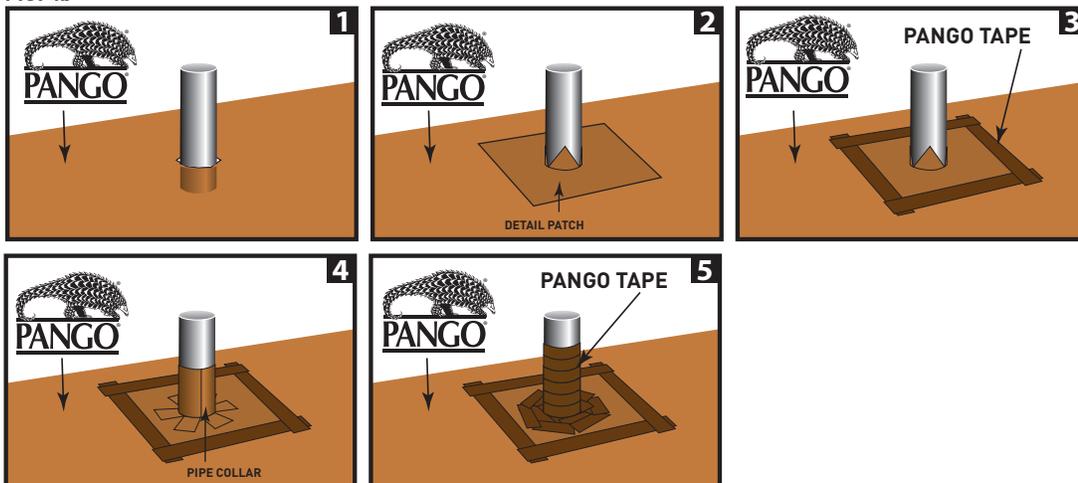
FIG. 4a



- 1 Cut a hole into Pango Wrap such that the membrane fits over and around base of the pipe as closely as possible.
- 2 Place sections of Pango Claw around the pipe, within 1 inch of all edges of the hole. Do not overlap Pango Claw on itself; it should abutt adjacent sections but adhere only to Pango Wrap.
- 3 Apply Pango Bond around the base of the pipe, mounding up the pipe slightly, and spreading out continuously to cover at least 1 inch across all sections of Pango Claw.

OPTION 2: SEALING PIPE PENETRATIONS WITH PANGO WRAP AND PANGO TAPE: (Fig. 4b)

FIG. 4b



- 1 Cut a hole into Pango Wrap such that the membrane fits over and around the base of the pipe as closely as possible.
- 2 Cut a detail patch to a size and shape that creates a six inch overlap on all edges around the void space at the base of the pipe. Cut an "X" the size of the pipe diameter in the center of the pipe boot and slide tightly over pipe.
- 3 Tape the edges of the detail patch using Pango Tape.
- 4 Construct a pipe collar using Pango Wrap by cutting a piece with width at least 2 inches and length at least 50% greater than the pipe's circumference. Cut slits half the width of the film, and tightly wrap the collar around the pipe as shown. The previously cut slits will manifest as flanges that lie flat against the horizontal Pango Wrap.
- 5 Place strips of Pango Tape over the flanges of the collar such that: all edges are secured to the underlying Pango Wrap, and no voids at the base of the collar and the pipe (where the collar transitions vertically) are left uncovered by Pango Tape. Encircle the base of the collar with Pango Tape and continue upward such that the vertical portion of the collar is completely encompassed with Pango Tape. Extend this tape at least an inch beyond the top of the collar onto the pipe itself, or as far as needed to ensure the collar is secured and the Tape completely adhered to the pipe around its full circumference.

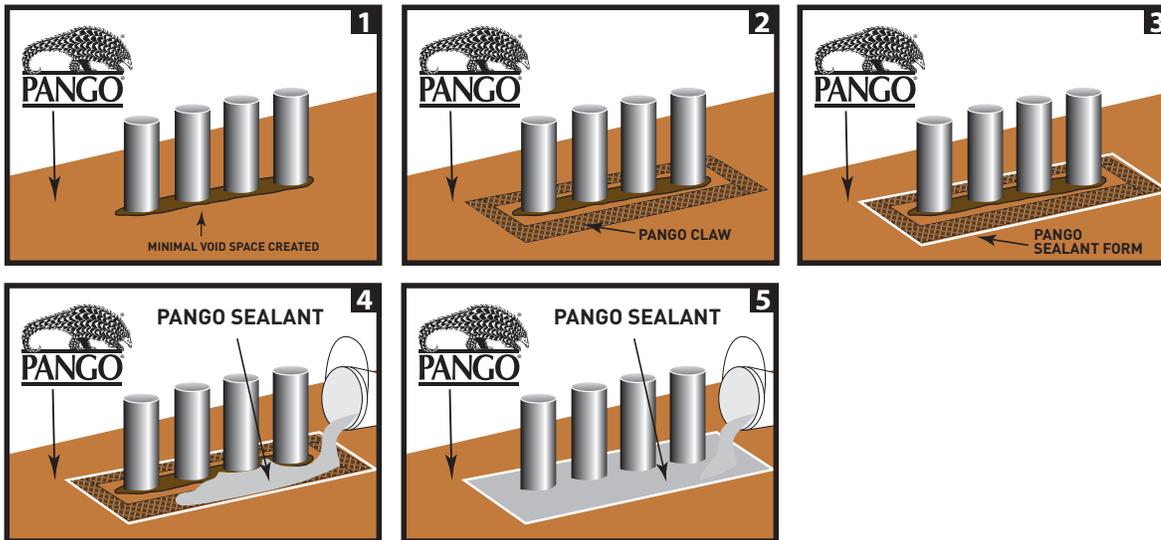
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OPTION 3: SEALING MULTIPLE PIPE PENETRATIONS WITH PANGO WRAP, PANGO CLAW, PANGO SEALANT FORM AND PANGO SEALANT: (Fig. 4C)

FIG. 4c



NOTE: For the toughest, hardest-to-reach clusters of multiple pipes or penetrations – Pango Sealant used with Pango Claw and Pango Sealant Form provide an efficient way to achieve a seal.

- 1** Cut a hole in Pango Wrap such that the membrane fits over and around the base of the pipes as closely as possible, ensuring that it is flush with the base of the penetrations.
- 2** Place sections of Pango Claw around the pipe, within one inch of all edges of the hole. Do not overlap Pango Claw on itself; it should abutt adjacent sections and adhere only to Pango Wrap.
- 3** Install Pango Sealant Form continuously to Pango Wrap and around the entire perimeter of the outer edge of Pango Claw.
- 4** Pour Pango Sealant inside of Pango Sealant Form to create a seal around the penetrations.
- 5** If the void space between Pango Wrap and the penetrations is not minimized and/or the base course allows for too much drainage of sealant, a second coat of Pango Sealant may need to be poured after the first application has cured.

IMPORTANT: AN INSTALLATION COMPLETED PER THESE INSTRUCTIONS SHOULD CREATE A MONOLITHIC MEMBRANE BETWEEN ALL INTERIOR INTRUSION PATHWAYS AND VAPOR SOURCES BELOW THE SLAB AS WELL AS AT THE SLAB PERIMETER. THE UNDERLYING SUBBASE SHOULD NOT BE VISIBLE IN ANY AREA WHERE CONCRETE WILL BE PLACED.

NOTE: Pango Wrap installation instructions are based on ASTM E1643 - *Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs*. These instructions are meant to be used as a guide, and do not take into account specific job site situations. Consult local building codes and regulations along with the building owner or owner's representative before proceeding. If you have any questions regarding the above mentioned installation instructions or products, please call us at 877-464-7834 for technical assistance. While Stego Industries' employees and representatives may provide technical assistance regarding the utility of a specific installation practice or Stego product, they are not authorized to make final design decisions.

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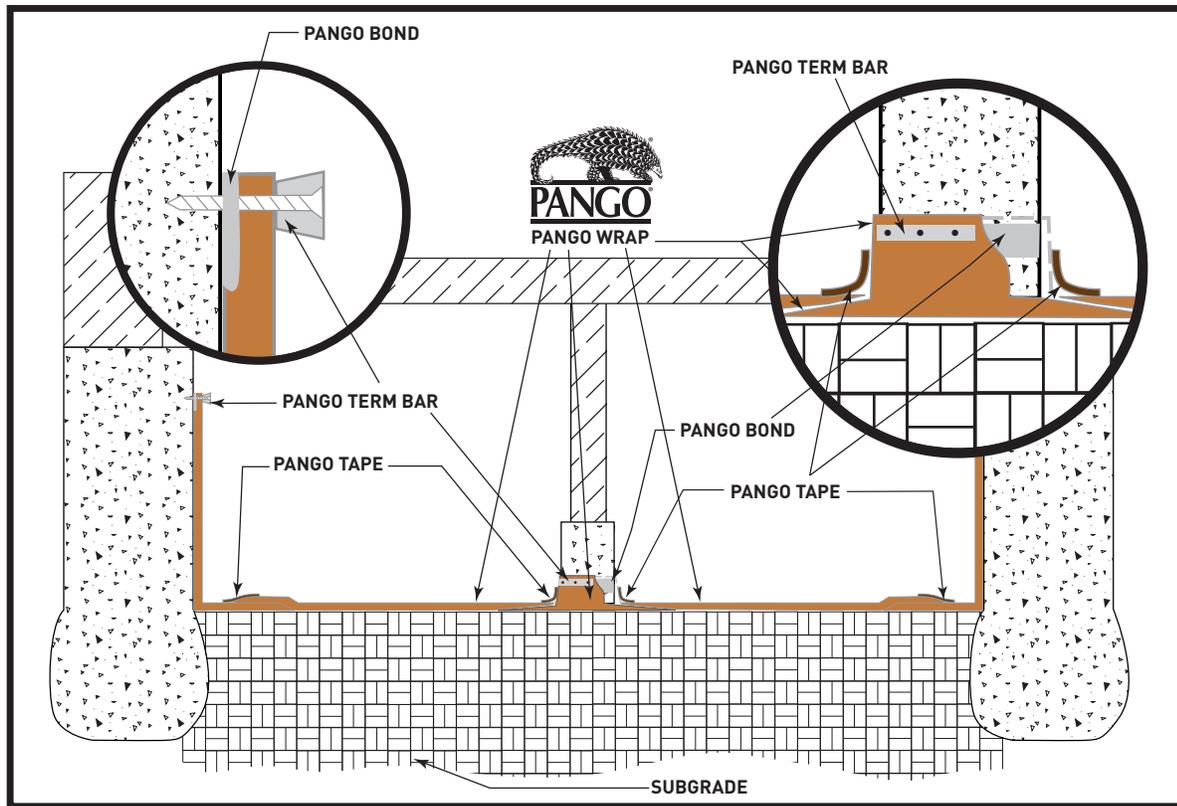


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For crawl space applications or when Pango Wrap is terminated to existing concrete, reference the instructions below.

CRAWL SPACE INSTRUCTIONS: (FIG. 5)

FIG. 5



1. Plan to extend Pango Wrap up the interior foundation wall leaving a 3 inch gap from the top of the masonry wall (for termite inspection) or in compliance with local building codes. To form a complete seal, first apply Pango Bond to the foundation wall. Then, lap Pango Wrap completely over the Pango Bond and press firmly to seal. Next, install Pango Term Bar over the top of the Pango Wrap and in line with the Pango Bond. For added assurance that a seal has been achieved, you may apply additional Pango Bond over the edge of the Pango Wrap and against the lip of the Pango Term Bar.
2. Seal Pango Wrap around all penetrations in the manner described above.
3. Seal Pango Wrap around all columns using Pango Bond and Pango Term Bar.
4. Place Pango Wrap directly over the crawl space floor. If rigid insulation is to be used, install Pango Wrap prior to insulation (under insulation and between the foundation wall and insulation).
5. Overlap seams a minimum of six inches and seal with Pango Tape. Some codes require a minimum of a twelve-inch overlap. Check appropriate codes prior to installation.

INSTALLATION TIP

- a. For a cleaner look and to prevent against tenting of Pango Wrap at the foundation wall/foundation floor intersection, consider mechanically fastening Pango Wrap to base of foundation wall in addition to the above-mentioned wall termination.
- b. Some contractors have found it more efficient to detail/seal the pipes, columns, utilities, and seal the Pango Wrap to the foundation wall perimeter prior to installing the remaining wrap.

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BEAST® CONCRETE ACCESSORIES - VAPOR BARRIER SAFE

Stego Industries recommends the use of BEAST vapor barrier-safe concrete accessories, to help eliminate the use of non-permanent penetrations in Pango Wrap installations.



BEAST® SCREED is a fixed-elevation, point-to-point guide screed system designed to replace common wet-screed methods.



BEAST® HOOK is a **faster, easier** way to set 2x4 overhead screeds. Use Beast® Foot and Beast Form Stake and make it a vapor barrier-safe screed system.



BEAST® FORM STAKE can be used with Beast Foot as part of the Stego vapor barrier-safe forming system which meets ASTM E1643 requirements.



STEGO INSTALLATION SUPPORT

PEACE OF MIND IS OF GREAT VALUE...
A **FREE SERVICE** OFFERED BY STEGO INDUSTRIES

When you choose **Stego® Barrier Solutions** and products, you gain access to a large network of full-time technical sales representatives providing unmatched local support and service.

