

100-1125

11/6/2002

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PULL HERE TO OPEN ►

# Impasse™

## TERMITE SYSTEM

**Termite barrier system for the protection of structures from subterranean termites**

**Active Ingredient:**  
 Lambda-cyhalothrin\*  
 [1α(S\*),3α(Z)]-(±)-cyano-(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate . . . . . 0.77%

**Other Ingredients:** . . . . . 99.23%

**Total:** . . . . . 100.00%

\*A synthetic pyrethroid

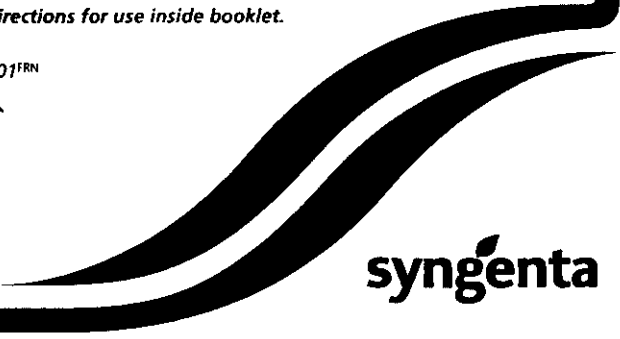
**KEEP OUT OF REACH OF CHILDREN.  
CAUTION**

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1125  
 EPA Est. 73961-GA-002<sup>11</sup>, EPA Est. 73792-CAN-001<sup>18M</sup>  
 Superscript is first three letters of batch code.

Product of the United Kingdom  
 Formulated in Canada  
 Not Registered for use in Canada

SCP 1125A-L1 1002  
 104641



**ACCEPTED**  
 NOV 6 2002

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 100-1125

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FIRST AID	
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>HOT LINE NUMBER</b> For 24 Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call <b>1-800-888-8372</b>	

## PRECAUTIONARY STATEMENTS

### Hazards To Humans And Domestic Animals

#### CAUTION

Prolonged or frequently repeated skin contact may cause skin reactions in some individuals. Wear gloves when handling this product.

### Environmental Hazards

This product is toxic to fish. Do not apply directly to water. Do not contaminate any water by disposal of this product.

## CONDITIONS OF SALE AND LIMITATION OF WARRANTY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, INC. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and Buyer and User assume the risk of any such use. SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall SYNGENTA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with the label. Please read this entire label prior to installing the Impasse™ Termite System.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

### Storage

Store in original container only and under cover with good ventilation. Store in cool and dry storage area. Do not store in the open or where it will be exposed to prolonged direct sunlight. Do not store near food or feed.

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## Handling of Discards or Trimmings

When installing the Impasse Termite System on a building site, there will be discards remaining after installation. There are several options for disposal or re-use as recommended below.

- Replace remnants in the product's original delivery bag, seal or tie off the container, and dispose at an approved waste disposal facility.
- Remnants may be collected and used at a later date as repair patches.
- Remnants may be laid singly under the installed Impasse Barrier so they are buried by the concrete.

## Container Disposal

Dispose of empty delivery bag at an approved waste disposal facility. The Impasse Barrier roll core must also be disposed of at an approved waste disposal facility.

## Pails

Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other procedures approved by state and local authorities. Do not reuse container.

## INTRODUCTION

### General

Impasse Termite System is intended for new construction and is to be installed by trained personnel. Impasse Termite System is installed onto the soil surface before the footings or slab are poured and before the construction of the structure.

### Termite Protection

Impasse is a uniform multi-layer polymer sheet consisting of an interior layer of lambda-cyhalothrin insecticide, surrounded on either side by layers of polymers that are impervious to the active ingredient. These outer layers also act as an UV protector, providing long-term storage and exposure durability of the product. The 16-mil thick polymer sheet provides a pliable yet highly durable construction-grade product. The Impasse Termite System is an effective pre-construction treatment for subterranean termite prevention.

Long-term, effective termite protection is created under the slab foundation by heat seaming sheets of Impasse Barrier and installing and heat seaming Impasse Boots over all utility penetrations to form a continuous and uniform barrier system.

Follow state and local regulations to meet minimum treatment standards for preventive pre-construction treatments.

To provide protection against the most common entry points of subterranean termites, it is necessary to effectively secure the perimeter of the building. When using the Impasse Termite System after the final grading has been done around the structure, a treatment may be applied to the perimeter of the structure using an EPA-registered approved termiticide.

### Vapor Barrier

Impasse Barrier is impervious to water and vapors. Impasse Barrier may be used in place of the traditional polyethylene sheeting commonly used under concrete foundations as a vapor barrier. Impasse has a perm rating of 0.075. Impasse Barrier has been tested for durability under field conditions and has proven to resist damage of penetration by aggregates and other materials used during normal handling and construction.

## INSTALLATION OVERVIEW

Impasse Termite System has been designed to provide termite protection and to replace the traditional vapor barrier under structures with either slab-on-grade or similar type foundation systems.

Impasse Termite System must be installed at the building site. The installation process begins after the building site has been prepared and all plumbing and other utility penetrations have been installed and inspected. Installation takes place just prior to pouring of the concrete slab foundation. Some external and internal footings may be poured prior to installation of Impasse Termite System, e.g., floating and supported slabs.

The type of footing system and method of construction will directly influence the method of installation. Consult the section titled **FOOTING AND FOUNDATION SYSTEMS** to obtain details on installation for various footing and foundation designs. Do not use in crawl spaces or plenums.

Prior to installation, the building site should be inspected and any sharp objects that could puncture or damage Impasse Barrier should be removed.

Impasse Barrier is laid over the entire foundation area of the structure. When installed, Impasse Barrier material will extend to the edge of the foundation. This will ensure that adequate material remains for effective perimeter attachment as outlined in the section titled **PERIMETER ATTACHMENT**. If perimeter attachments (secondary pours, e.g., garage, patio, porch) are required, Impasse Barrier must extend at least 12 inches beyond the edge of the slab forms to allow attachment to the primary barrier application.

To form a continuous barrier beneath the structure and to provide effective termite protection, adjacent sheets of the Impasse Barrier must be heat-seamed together. Consult the section titled **HEAT SEAMING**.

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Impasse Barrier must be laid under the foundation so that the bottom surface of the slab panels and all internal walls are completely insulated from the soil. See the section titled **FOOTING AND FOUNDATION SYSTEMS** to obtain specifications on the installation of Impasse Barrier with respect to different designs of footing system.

Utility penetrations need special attention, as they are common entry points to buildings for subterranean termites. Correct installation of Impasse Boots around utility penetrations will maintain the integrity and effectiveness of the system from termite entry.

Refer to the section titled **UTILITY PENETRATIONS** to obtain specifications on the installation of Impasse Boots around intrusions through the concrete slab.

It is important to secure Impasse Barrier into position to prevent movement as a result of inclement weather. Reinforcement mesh is the best option although form boards or other available building materials will suffice in the short term.

Should a situation occur after installation where the Impasse Termite System is purposely or accidentally punctured. Refer to the section titled **PUNCTURES AND REPAIRS** for proper repairs.

**Prior to proceeding with an installation, please review the following section to determine the foundation type under which you will be installing the Impasse Termite System.**

## FOOTING AND FOUNDATION SYSTEMS

A supported slab is a concrete floor supported on the ground and stiffened by integral edge beams or a grid of internal beams. This footing system is built by either using a monolithic poured or floating slab method of construction.

### Monolithic Poured Construction Method

A monolithic slab is one in which all elements of the foundation system, including the slab and perimeter elements such as the garage and patios, are poured at the same time resulting in one continuous piece of concrete. The following instructions describe how to treat this kind of foundation system.

Lay Impasse Barrier following the precise contours of the site, covering the sidewalls and base of all bulk piers, internal and external beams (see Figures 1, 2 and 3). If no secondary pours are planned at the edge of the slab, Impasse Barrier should extend no more than 4 inches beyond the edge of the concrete to allow folding and attachment into the concrete slab.

Where bored piers are incorporated into the design of the footing, the installation of Impasse Barrier will need to be modified to allow concrete to flow unimpeded into the space that will eventually form the pier. After Impasse Barrier has been positioned over the pier and secured to the adjacent sheets, the material may be cut to allow the barrier to follow the contours of the pier. Additional Impasse Barrier may need to be installed to ensure that the perimeter of the pier is protected for a minimum of 8 inches below the base level of the slab panel (see Figure 4).

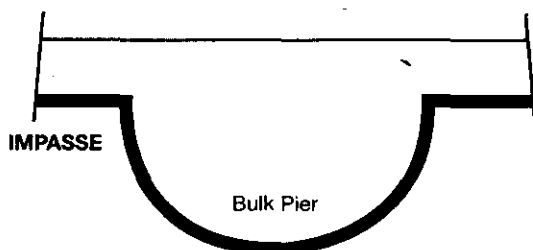


FIGURE 1. Shows position of Impasse Barrier fitted to bulk piers.

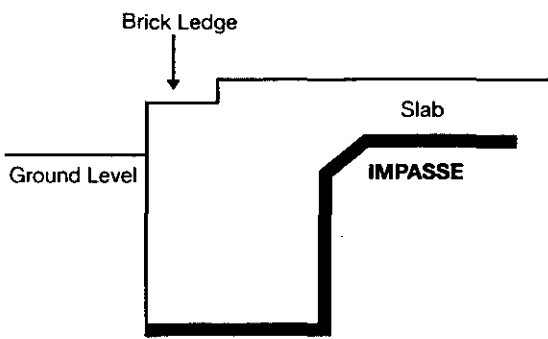


FIGURE 2. Shows position of Impasse Barrier installed beneath the external beam and slab panel of a supported slab on ground.

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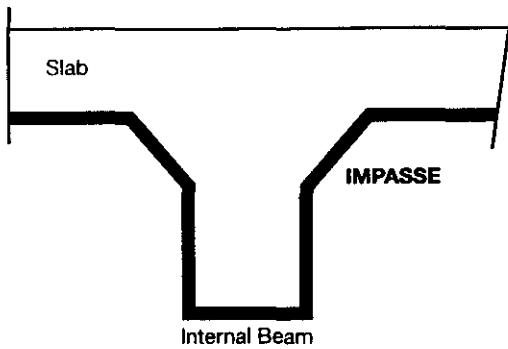


FIGURE 3. Shows position of Impasse Barrier installed beneath the internal beam and slab panel.

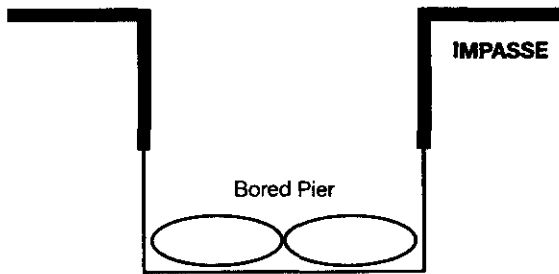


FIGURE 4. Shows position of Impasse Barrier fitted to bored piers.

## Non-Monolithic Poured Construction Method

A non-monolithic type foundation is one in which internal or external grade beams (or both) are poured prior to pouring the slab panel. Non-monolithic foundations require special care as multiple trips to the installation site may be required to treat all the elements of the foundation.

The Impasse Barrier is installed as a continuous barrier beneath the slab after all internal and edge beams have been poured. Impasse Barrier is directly laid on top of all edge and internal beams. Impasse Barrier may be terminated either at the internal wall cavity or extended to provide perimeter protection (see Figures 5 and 6).

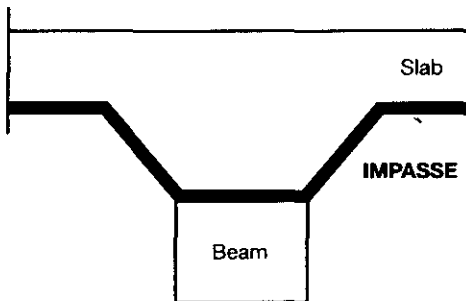


FIGURE 5. Shows Impasse Barrier installed between the slab panel and internal beam of a non-monolithic slab.

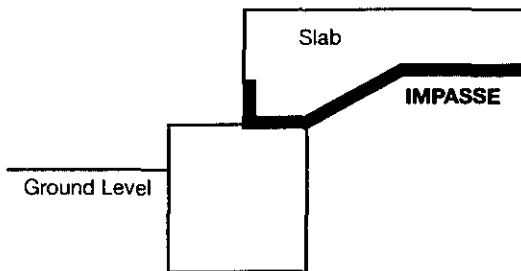


FIGURE 6. Shows Impasse Barrier installed between the slab panel and edge beam of a non-monolithic slab.

## Floating Slab Construction Method

When the floating slab method is utilized in the construction of a structure, two options are available with respect to the installation of Impasse Barrier.

- 1) Impasse Barrier is to follow the precise contours of the site and cover the interior sidewalls and base of all internal beams. Installation of Impasse Barrier in the sidewalls and base of all internal beams will be done before the footings are poured. After the footings have been poured, Impasse Barrier should be continued, under all slab panels, to form a continuous barrier (see Figure 8).

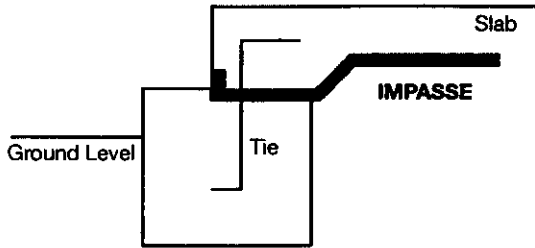
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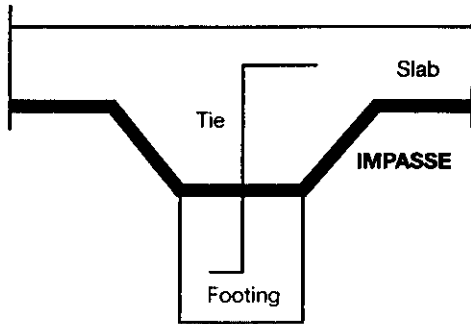
2) A single pass installation is done after all internal and edge beams have been poured. This option involves laying the Impasse Barrier as a continuous barrier beneath the slab covering the top of all edge and internal beams (see Figures 7, 8 and 9).

Where a stem wall has been poured on top of the footings, Impasse Barrier may be extended up over the footing to the outer edge of the stem wall (see Figure 10). If bolts for attachment of the sill plate have been embedded into the stem wall, Impasse Barrier can be attached to the wall by perforating Impasse Barrier with the bolts. Impasse Barrier should be positioned over the bolts and an "X" cut in the film the width of the bolt. Impasse Barrier is pushed down over the bolt to the level of the concrete. A bead of asphalt roofing cement or other bituminous asphalt sealant should be placed along the inside edge of the top of the stem wall to hold Impasse Barrier in place until the concrete is poured and the sill plate is attached.

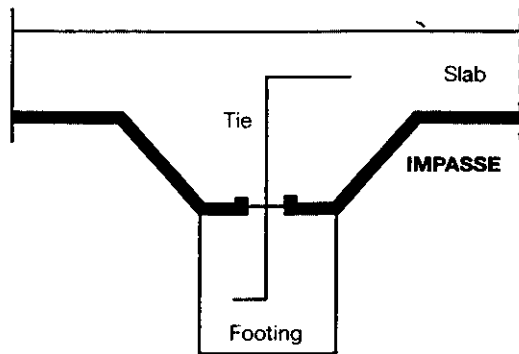
When attaching Impasse Barrier to the stem wall, care should be taken to leave enough slack in the barrier so that the concrete can form to the contour of the footing. If Impasse Barrier is attached to the stem wall and is not allowed to fit snugly to the footing, there will not be proper support for the poured slab by the footing.



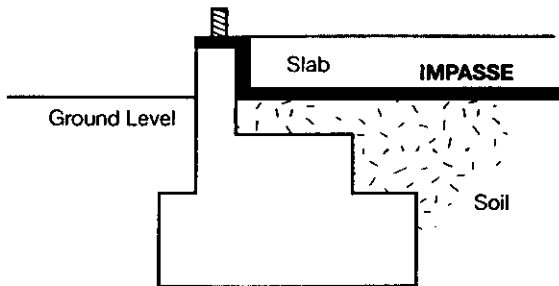
**FIGURE 7.** Shows position of Impasse Barrier installed around an external beam. Impasse Barrier is laid after the footings have been poured. Note the extension of the Impasse Barrier at the interface of the footing and slab panel.



**FIGURE 8.** Shows position of Impasse Barrier installed around an internal beam. Impasse Barrier is laid after the footings have been poured.



**FIGURE 9.** Shows position of Impasse Barrier installed around an internal beam. Impasse Barrier is laid after the footings have been poured. Impasse Barrier is terminated at the interface of the footing and the slab panel where it must be physically secured into the slab. This applied where the width of the internal beam is less than 6 inches.



**FIGURE 10.** Shows position of Impasse Barrier installed around external beam. Impasse Barrier is laid after the footings have been poured. Impasse Barrier is terminated at the interface of the footing and the slab panel where it must be physically secured to the beam.

**Waffle Raft**

A waffle raft is a supported slab with closely spaced ribs constructed on the ground and with slab panels suspended between ribs. The slab panels in this design commonly rest on top of foam pads which are placed on the surface of level ground and reduce cracking of the slab by allowing contraction and expansion of the sub-soil into the foam voids without movement of the concrete slab (see Figure 11).

The waffle raft is designed from the ground up and is therefore based on a level pad. Impasse Barrier is positioned as a continuous barrier on top of the bedding soil and is installed before positioning foam pads and adding mesh. Impasse Barrier must extend to the edge of the perimeter of the slab. If perimeter attachments are required, Impasse Barrier must extend at least 12-inches beyond the edge of the slab as outlined in section titled PERIMETER ATTACHMENTS.

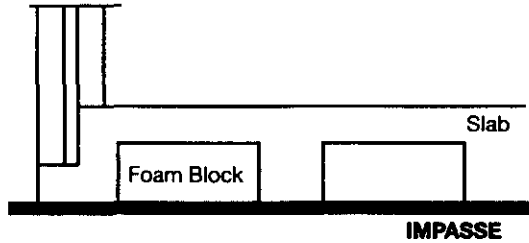


FIGURE 11. Shows Impasse Barrier installed beneath a waffle raft.

**In-fill (Hollow-Block) Slabs**

The support brick for an in-fill slab should be raised to the planned top of the slab level. At this stage Impasse Barrier is installed as shown in Figure 12. Impasse Barrier is laid to the outer edge of the first course of block work. A slit is made from the inside edge of the block to the edge of the Impasse at each joint in the block. The resulting flaps of Impasse Barrier should be pushed into the void in the block. When the concrete is poured, Impasse Barrier will be locked into the foundation wall below the slab.

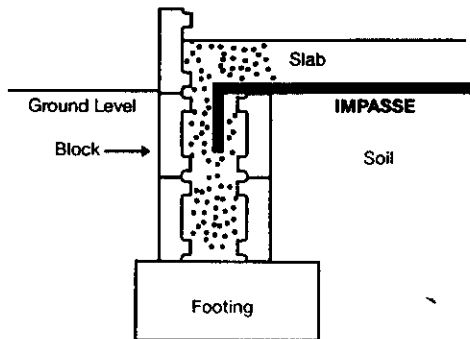


FIGURE 12. Shows Impasse Barrier installed in a hollow-block slab that will be filled with concrete.

For hollow-block foundations that are 1) filled with soil prior to the pouring of the concrete slab and 2) provide support for a sill plate, Impasse Barrier is extended up over the block to the outer edge of the block work as shown in Figure 13. If reinforcing re-bar is installed prior to the installation of Impasse Barrier, Impasse Barrier should be positioned over the re-bar and an "X" cut in the film the width of the re-bar. Impasse Barrier is pushed down over the re-bar to the level of the concrete block.

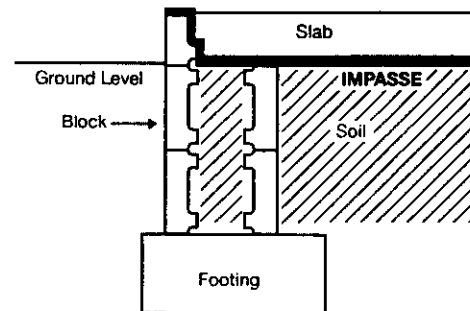


FIGURE 13. Shows Impasse Barrier installed over a hollow-block slab where the hollow-blocks will be filled with soil.



## LAYING OUT IMPASSE BARRIER SHEETS

Lay Impasse Barrier, logo side up, at the edge of the foundation, leaving enough material to reach to the edge of the foundation (depending on the type of foundation being installed). Roll the Impasse Barrier to the opposite side of the foundation and cut the Impasse Barrier, allowing sufficient material for proper edge attachment. If there are utility penetrations within this area, fit the Impasse Barrier over the penetrations as described in section titled **UTILITY PENETRATIONS**.

Place additional sheets of Impasse Barrier overlapping adjacent sheets by 4-inches. Using automated heat seaming equipment, heat seam adjacent sheets as per Heat Seaming instructions below.

In some cases, e.g., deep internal grade beams, it may be necessary to make panels of Impasse Barrier to fit over the foundation areas between grade beams. These panels can be seamed to fit the area being treated. These panels are easiest seamed outside of the foundation area and moved onto the foundation and secured in place.

## HEAT SEAMING

Heat seaming Impasse Barrier is performed using commercially available seaming equipment that uses hot air to melt the outer layers of adjacent sheets of Impasse Barrier allowing them to be heat welded together.

Surfaces to be heat-seamed together must be dry and clear of dust and dirt in order to produce a good weld.

For large seams, automated seaming equipment should be used to achieve a uniform seam across the barrier. Automated seaming machines are self-propelled. **When using automated equipment, the sheets of Impasse Barrier should be overlapped at least 4 inches.** The automated equipment will force hot air between the two sheets then use textured rollers to press the sheets together. The settings for temperature, roller pressure, and speed can be adjusted to obtain the best seal. Settings may vary depending on the ambient temperature.

**It is important that the seaming equipment is properly set to the environmental conditions at the time of installation. Prior to a full installation, it is recommended that a small test piece of Impasse Barrier be used to determine proper equipment. Settings may need to be changed during the day as environmental conditions change (e.g., increased temperature, change from cloudy to sunny conditions, etc.).**

For attaching the Impasse Boot and for repairs and patches, a hand held heat gun is recommended. Adjacent surfaces are heated with the hot air gun then pressed together using a hand held roller. On uneven surfaces an effective weld can be achieved by pressing the two heated surfaces together with a gloved (heat resistant) finger.

As the hot air is applied to the surface of Impasse Barrier, you may observe the outer layer becomes shiny as it begins to soften. Impasse Barrier should not be heated after softening starts, as it is easy to melt a hole through the film with the hot air gun. Should this happen, follow the repair process.

The melted surfaces will cool rapidly and form a tight bond if pressed together immediately after welding is observed.

## UTILITY PENETRATIONS

Slabs poured on grade often are penetrated inside the structure by drains, water pipes, electrical conduits, utility supporting rods, etc. All such penetrations need to be protected so that termites cannot gain entry into the structure through these natural breaks in the slab.

All penetrations are protected by the use of an Impasse Boot. The Impasse Boot is an envelope shaped device with flaps at the bottom that are heat seamed to the Impasse Barrier. The Impasse Boot also has a tapered collar that is clamped to the pipe using cable ties with a tensile strength of at least 50 lbs.

Prior to installation, all hollow building materials used to support utility penetrations should either be submerged to a level that will be below the concrete slab surface, replaced with solid supports, or filled with a material impervious to termites. If these pipes cannot be removed or replaced, fill the hollow pipe with a material impervious to termites and install an Impasse Boot.

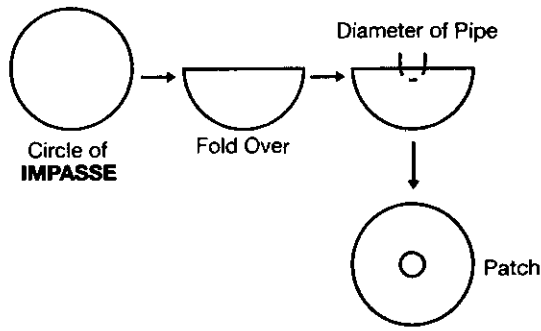
### Vertical Penetrations

Identify where the penetration will be situated by placing the Impasse barrier sheet over the penetration. Make two incisions in the shape of a cross. Match the intersection of the incisions as closely as possible with the center of the penetration. It is important that the Impasse Barrier sheet provide as tight a fit as possible around the penetration.

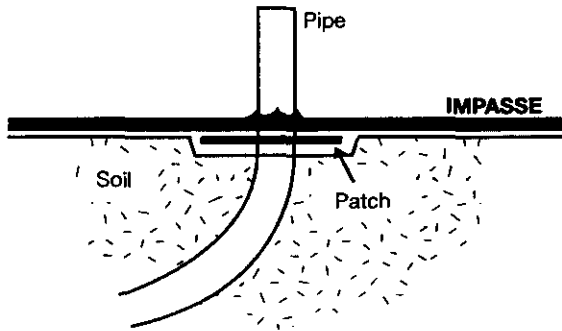
Should the Impasse Barrier sheet not fit relatively tight over the penetration, cut a circle of Impasse Barrier film that is slightly larger than the diameter of the penetration (see **Figure 14**) and place the Impasse Barrier circle of film under (see **Figure 15**) the Impasse Barrier sheet prior to installing the Impasse Barrier sheet and over the penetration; or place the Impasse Barrier circle of film over the Impasse Barrier (see **Figure 16**) after it has been installed. In this case the circle of Impasse Barrier **must** be seamed (like a patch) to the underlying layer of Impasse Barrier.

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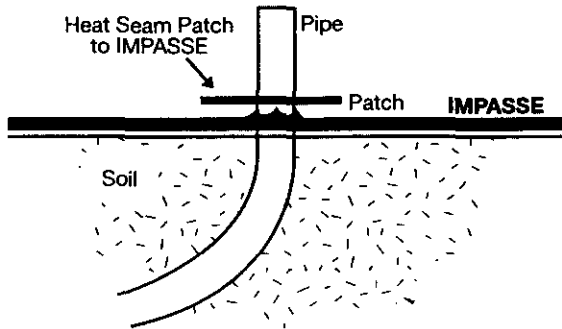
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**FIGURE 14.** Steps to follow to cut a circle of Impasse Barrier.



**FIGURE 15.** Laying the Impasse Patch under the Impasse Barrier.

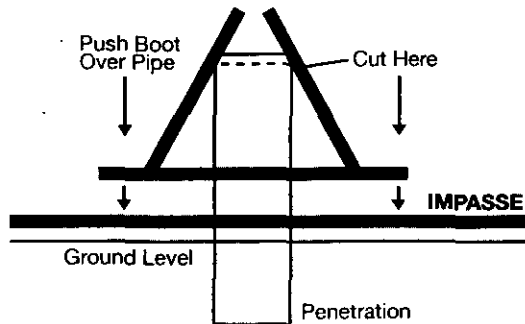


**FIGURE 16.** Laying the Impasse Patch over the Impasse Barrier. Patch must be heat seamed to the Impasse Barrier.

It is important that the Impasse Boot fits tightly over the utility penetration. In order to do this, the top of the Impasse Boot must be cut to the appropriate size.

Select the size of Impasse Boot that will fit the size of the penetration being treated. Do not cut the Impasse Boot until it has been fitted to size. To do this, fit the Impasse Boot tightly over the penetration (see Figure 17) until a slight indentation is made at the top of the Impasse Boot. This will provide a guide for cutting the Impasse Boot to the correct size. Remove the Impasse Boot and cut across the top of the Impasse Boot at the place of the indentation.

After the top of the Impasse Boot has been cut to size, push the Impasse Boot down over the penetrating pipe until the bottom flange of the Impasse Boot meets the impasse Barrier.



**FIGURE 17.** Fitting the Impasse Boot to pipes.

**Heat-Seaming Impasse Boot Flange to Impasse Barrier sheet**

Heat-seam the rim (flange) of the Impasse Boot to the base Impasse Barrier using a hand held hot air gun and roller.

It is important that the seaming equipment is properly set to the environmental conditions at the time of installation. It is recommended that a small test piece of Impasse Barrier be used to determine proper equipment settings prior to installing the Impasse Boot. Settings may need to be changed during the day as environmental conditions change (e.g., increased temperature, change from cloudy to sunny conditions, etc.).

**Securing the Top of the Impasse Boot to the Utility Penetration**

Fasten the top of the Impasse Boot into position with two plastic cable ties that have a tensile strength of at least 50 lbs., ensuring complete contact between the Impasse Boot and the penetrating pipe. The cable tie clasps should be positioned on opposite sides of the penetration (see Figure 18). The two clasps should not be positioned over the seam of the Impasse boot. The clasps should be at least 1/4 inch apart when fully cinched. A mechanical cable tie fastener must be used to achieve a tight fit of the top of the Impasse Boot to the utility penetration.

Before securing the two cable ties, rotate the seams of the Impasse Boot so they lay flat against the pipe penetration. Once cinched tight, the cable ties should be low enough on the penetration that they will not be visible above the top of the poured concrete slab.

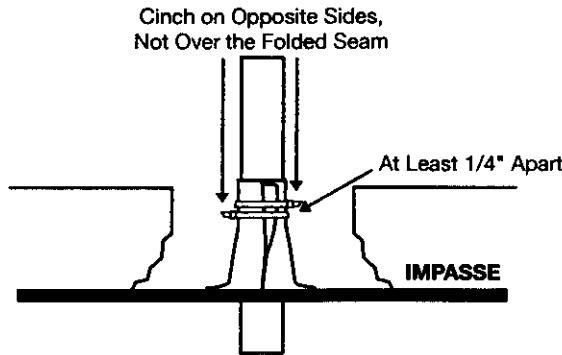


FIGURE 18. Securing the Top of the Impasse Boot to the Utility Penetration

**Manifold Water Pipes/Finished PVC Drains, Vents**

Some types of plumbing may be installed such that an Impasse Boot cannot be fitted over the top of the pipe. In addition, some plumbers may finish the drains and side vent attachments prior to pouring the concrete slab so that Impasse Boots will not fit over the top of the drainpipes. In these instances, the Impasse Boot will need to be cut open and wrapped around the penetration. The cut edges of the Impasse Boot are then heat seamed to reform the boot.

Select an Impasse Boot of the correct size for the penetration. Using scissors, cut the boot vertically from top to bottom so the Impasse Boot can be wrapped around the pipe, (see Figures 19 and 20). Remove enough material from the top of the Impasse Boot so that the top of the Impasse Boot will wrap around the pipe and overlap by at least 1/4 inch. Using the hand-held heat gun, heat seam the overlapped edges to reform the Impasse Boot (see Figure 21). Seam the Impasse Boot flange to the Impasse Barrier and secure the top of the Impasse Boot with cable ties (see Figure 22). See sections titled Heat-Seaming Impasse Boot flange to Impasse Barrier sheet and Securing the top of the Impasse Boot to the utility penetration.

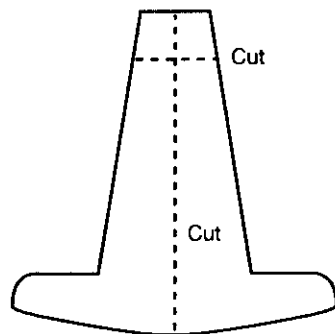
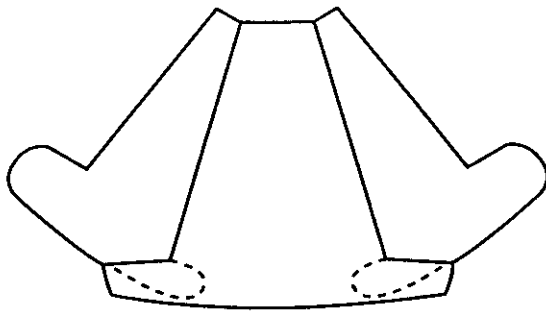
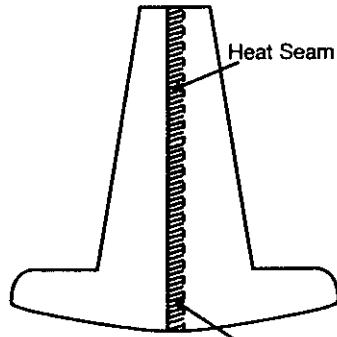


FIGURE 19. Cut locations for fitting an Impasse Boot to manifold utilities.

# Impasse™ Termite System

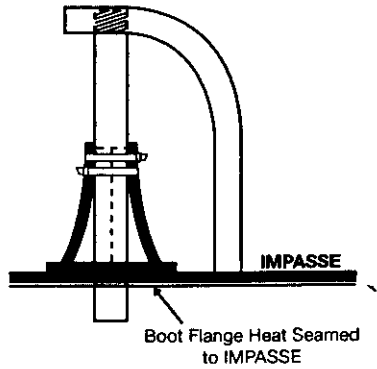


**FIGURE 20.** Impasse Boot after it has been cut and folded open.



**FIGURE 21.** Heat seam area after Impasse Boot has been fitted over a manifold utility.

Fold Over & Heat Seam



**FIGURE 22.** Impasse Boot fitted over a manifold utility. Impasse Boot flange is heat seamed and cable ties are installed.

Boot Flange Heat Seamed to IMPASSE

### Horizontal Penetrations

A horizontal penetration is defined as an intrusion that is at right angle to the vertical at the point where the penetration intersects the under slab area. This situation is most commonly encountered where a penetration passes through an edge beam of a structure, or also may be quite common in foundations with internal grade beams.

Horizontal penetrations which cross the edge beam of the structure should be dealt with in the same manner as vertical penetrations using the procedures described for **Manifold Water Pipes/Finished PVC Drains, Vents**. Care must be taken to ensure any cuts in the Impasse Barrier are heat-seamed. Refer to section titled **PUNCTURES AND REPAIRS** for proper repairing.

### Multiple Penetrations

The term multiple penetrations refer to a cluster of two or more penetrations, which are in close proximity. Commonly, multiple penetrations consist of more than one size of pipe or conduit providing access for a range of utilities.

Impasse Barrier is fitted over multiple penetrations in the same manner as single penetrations unless the pipes are less than 2-inches apart. In this situation, identify where the cluster of penetrations will be situated in the Impasse Barrier and cut a slit long enough to accommodate the group of pipes. If needed, make individual crosscuts to allow fitting over large diameter pipes.

Should Impasse Barrier not fit tightly over the penetration, an additional piece of Impasse Barrier may be added as described in section titled **Vertical Penetrations** (see **Figures 14, 15 and 16**).

Place an Impasse Boot over each pipe in the cluster and seal as described in the section titled **Heat-Seaming Impasse Boot flange to Impasse Barrier Sheet**. Special attention must be paid to heat-seaming between the pipes.

Secure the top of the Impasse Boot to the utility penetration (see section titled **Securing the top of the Impasse Boot to the utility penetration**).

**Bath Traps**

When a bath trap box (e.g., cardboard box, empty bucket, etc.) filled with soil around the bath drain has been installed, the following installation procedures must be used.

Remove the box, bucket, etc., and remove all soil from around the protruding drainpipe and water pipes. Install Impasse Barrier as described for vertical penetrations and seal around the drain and water pipes with Impasse Boots as described for vertical penetrations. Replace the box or bucket and refill with soil. The soil displaces the concrete giving the plumber access to the bath drain after the concrete is poured.

After the installation of the Impasse Barrier and Impasse Boot around each penetration has been completed, check to ensure that the entire area has been completely covered with Impasse material, heat seamed and secured. If gaps are found, patch and heat-seam as described in section titled PUNCTURES AND REPAIRS.

**PERIMETER ATTACHMENTS**

It is common for more than one method of perimeter attachment to be utilized in the construction of a structure because of the various functions of the areas immediately surrounding the building. All of the following methods have been approved in the installation of the Impasse Barrier; however, not all methods are suitable for every slab design.

**Driveways / Pathways / Paving**

Where permanent structures, that will not be treated with Impasse Barrier System, are positioned immediately adjacent to the structure and form the finished ground level, Impasse Barrier should be laid immediately underneath that adjacent structure (e.g., no sand on top of the Impasse Barrier.) In this situation, the Impasse Barrier extends up the vertical face of the external footing until it reaches the finished ground level. At this point the material is extended horizontally underneath the structure (driveway, pathway or paving) for at least 12 inches (see Figure 23). To extend the length of barrier beyond the minimum requirement, attach and secure additional panels of the Impasse Barrier by heat seaming.

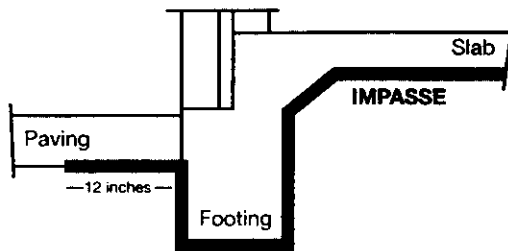


FIGURE 23. Shows Impasse Barrier installed as a perimeter treatment beneath concrete or pavers.

**Exposed Slab Edges**

In situations where the slab remains exposed from the finished ground level to the underside of the first course of masonry, the Impasse Barrier should be installed to the external corner of the footing (see Figure 24).

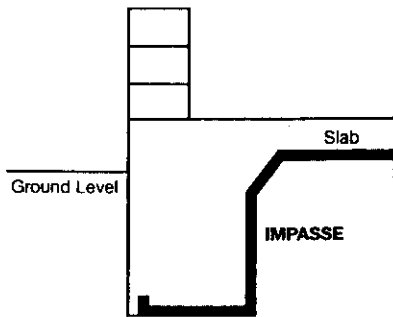


FIGURE 24. Exposed slab edge from finished ground level to first course of masonry.

**CORNER DETAILS**

**Internal Corners**

When Impasse Barrier is installed underneath footings, internal corners will be encountered at the junction of both internal and external beams that are positioned at right angles to one another. A number of alternative methods are recommended when this situation is encountered.

**Method 1: Overlap**

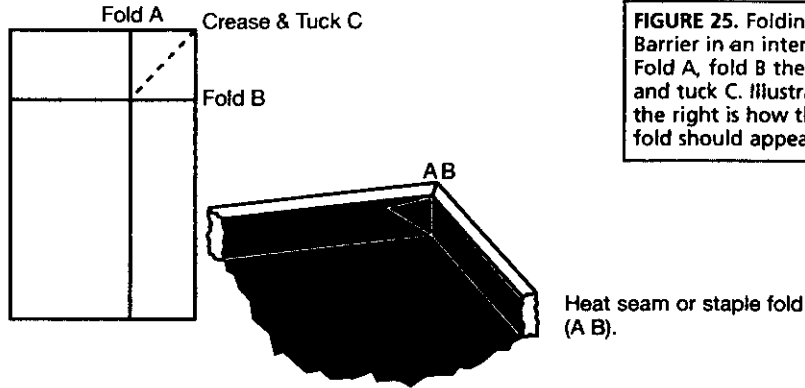
Separate sheets of Impasse Barrier should be positioned along the line of each internal or external beam and then heat seamed at the junction. Overlaps should be a minimum of 2 inches and all joints must be secured with heat seaming.

**Method 2: Joining**

Sheets of Impasse Barrier should be laid parallel to one another and formed to fit into the cavity of the beams. At the junction of two external beams, additional Impasse Barrier should be used to ensure that sufficient material extends beyond the perimeter of the building to allow for take-up during the concrete pour.

**Method 3: Folding**

Lay Impasse Barrier sheet into the corner and fold the excess to form the vertical walls as shown in Figure 25. Heat seam or staple the folds onto the base Impasse Barrier.



**FIGURE 25.** Folding Impasse Barrier in an internal corner. Fold A, fold B then crease and tuck C. Illustration to the right is how the finished fold should appear.

**ATTACHING TO CONCRETE**

Concrete does not adhere well to creases and folds in Impasse; therefore, a connecting tab should be formed at the external edge of the Impasse Barrier by pleating and stapling or heat seaming to hold shape. The tab will become inset into the concrete after the slab is poured.

**PUNCTURES & REPAIRS**

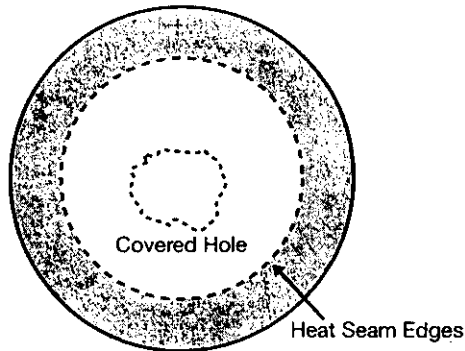
**PUNCTURES**

Punctures in the Impasse Barrier or Impasse Boots affect the integrity of the system. All punctures, tears, rips, cuts, etc. must be repaired prior to pouring the concrete.

**REPAIRS**

**Before Pouring Concrete**

Punctures to Impasse Barrier or Impasse Boots are easily repaired by positioning a patch of Impasse Barrier over the damaged area. The patch should extend at least 2-inches from the perimeter of the puncture and should be heat-seamed to the existing Impasse Barrier or Impasse Boot (see Figure 26).



**FIGURE 26.** A circular Impasse Patch placed OVER the damaged area within the Impasse Barrier. The shaded area represents where to heat seam the Impasse Patch onto the Impasse Barrier or Impasse Boot.

Illustration not to scale.

**After Concrete Pour**

Where a penetration is incorrectly positioned and the intrusion must be relocated by excavating through the slab and Impasse Barrier (see Figure 27), the damaged area must be repaired. This is done by excavating the bedding sand underneath the Impasse Barrier to obtain sufficient area to attach a new piece of Impasse Barrier to the damaged Impasse Barrier. The patch must be secured to the original Impasse Barrier with the use of heat seaming.

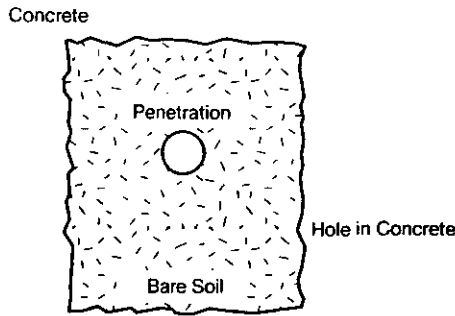


FIGURE 27. Top view of a piece of concrete excavated for utility relocation.

When the repairs to a penetration are being made, the hole in the concrete will need to be enlarged by about 1-inch, taking extreme care not to damage the Impasse Barrier under the concrete (see Figure 28). This enlarging of the hole is to allow about a 1-inch flap of Impasse Barrier to be exposed. The patch for the hole will be heat-seamed to this flap.

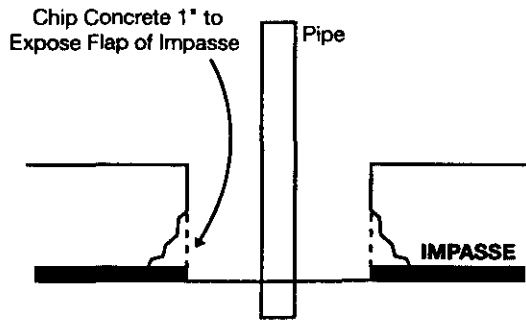


FIGURE 28. Enlarge the concrete approximately 1-inch on each side, exposing a flap of Impasse Barrier.

After the hole in the concrete has been cleared and a flap of Impasse Barrier has been uncovered all the way around the hole, cut a piece of Impasse Barrier 1 to 2-inches larger than the hole in the concrete. Slide the edges of this piece of Impasse Barrier under the exposed flap of the Impasse Barrier in the hole. (This first piece of patch prevents dirt from blowing between the exposed flap and the second piece of patch being heat-seamed.) (see Figure 29.)

Cut a second piece of Impasse Barrier the size of the bottom of the hole in the concrete. Place this piece in the hole so it fits over the exposed flap of Impasse Barrier. Using a hand held heat gun, heat-seam the patch to the exposed Impasse Barrier flap.

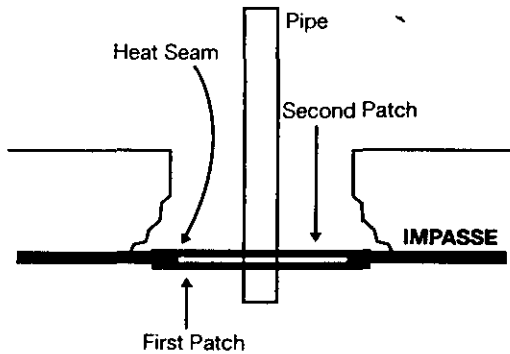


FIGURE 29. First patch of Impasse Barrier is placed underneath the exposed Impasse flaps. The second patch of Impasse Barrier is placed over the Impasse flap and heat seamed into place.

Any vertical penetrations through the hole in the concrete will need to be sealed with an Impasse Boot (see Figure 30). Once the hole in the Impasse Barrier has been repaired, the concrete can be poured.

# Impasse™ Termite System

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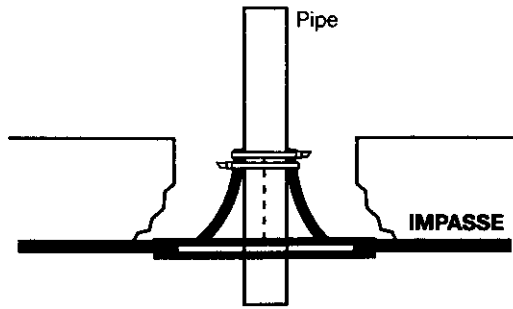


FIGURE 30. Vertical penetrations protruding through the excavated area must be sealed with an Impasse Boot.

## QUALITY CONTROL

Impasse Termite System should be thoroughly inspected after installation (all Impasse Barrier seams, Impasse Boot installations including flange seams and cable tie attachments as well as external footing attachments). Follow all Quality Control guidelines as directed by the manufacturer.

Impasse™ and the Syngenta logo are trademarks of a Syngenta Group Company.

For non-emergency (e.g., current product information) call Syngenta Crop Protection at 1-800-334-9481

Syngenta Crop Protection, Inc.  
Greensboro, North Carolina 27409  
www.syngenta-us.com

SCP 1125A-L1 1002  
104641



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# Impasse™

TERMITE SYSTEM

Termite barrier system for the protection of structures  
from subterranean termites

Active Ingredient:

Lambda-cyhalothrin\*

[1α(S\*),3α(Z)]-(±)-cyano-(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropane-carboxylate

Other Ingredients: 99.23%

Total: 100.00%

\*A synthetic pyrethroid

EPA Reg. No. 100-1125

EPA Est. 73961-GA-002<sup>ST</sup>, EPA Est. 73792-CAN-001<sup>TM</sup>

Superscript is first three letters of batch code.

**KEEP OUT OF REACH OF CHILDREN.**

## CAUTION

See additional precautionary statements and directions for use in attached booklet.

### PRECAUTIONARY STATEMENTS

Hazards To Humans And Domestic Animals

#### CAUTION

Prolonged or frequently repeated skin contact may cause skin reactions in some individuals. Wear gloves when handling this product.

#### FIRST AID

If on skin or clothing: Take off contaminated clothing. Rinse immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**HOT LINE NUMBER:** For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call 1-800-888-8372.

#### Environmental Hazards

This product is toxic to fish. Do not apply directly to water. Do not contaminate any water by disposal of this product.

### STORAGE AND DISPOSAL

Refer to attached booklet for full storage and disposal directions.

#### Container Disposal

Dispose of empty delivery bag at an approved waste disposal facility. The Impasse Barrier roll core must also be disposed of at an approved waste disposal facility.

#### Pails

Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other procedures approved by State and local authorities. Do not reuse container.

Syngenta Crop Protection, Inc.  
Greensboro, North Carolina 27409

www.syngenta-us.com

SCP 1125A-L1 1002

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