



STEGO™ WRAP

VAPOUR BARRIER AND RETARDER INSTALLATION INSTRUCTIONS



ENGINEERED PERFORMANCE
LIFE OF THE BUILDING™ PROTECTION



Additional Stego Wrap installation resources and videos are available on our website at:

www.stegoindustries.com/resources



CONTENTS

The installation recommendations set forth in these instructions are based on ASTM E1643 and specific applications of Stego products. Each section provides explanations and options for the varying conditions.

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Stego Installation Support - A Free Service

When you choose **Stego™ Barrier Solutions** and products, you gain access to a large nationwide network of full-time technical sales representatives providing unmatched local support and service. If you ever have a question or concern regarding the following installation scenarios please contact us and take advantage of our free Stego Installation Support.



Stego Wrap

Stego Wrap is made from a proprietary blend of prime virgin resins and additives, a combination lending to great value and effectiveness in protecting the concrete slab from moisture intrusion. All rolls of Stego Wrap are continuously printed with the Stego logo. This ensures no copycat or counterfeit products show up on a job site that could expose you to liability if an incorrectly identified product fails.

- Stego™ Wrap 20-Mil Vapour Barrier (Class A)
- Stego™ Wrap 15-Mil Vapour Barrier (Class A)
- Stego™ Wrap 10-Mil Vapour Retarder (Class A)
- Stego™ Wrap 10-Mil Vapour Retarder (Class C)

Stego Accessories

At Stego, we know every project has its own unique challenges. To make a Stego Wrap installation easy and flexible, we offer an extensive line of accessory items that give you options to accomplish an effective perimeter seal that meets ASTM E1643. **Consult the project architect, owner's representative, and structural engineer of record before proceeding with any of these options.**



Stego™ Tape

This low permeance and pressure-sensitive tape is engineered to bond specifically to Stego Wrap, making it ideal for sealing Stego Wrap seams and penetrations.



Stego™ Mastic

A liquid vapour retardant membrane, designed to be used with Stego Wrap, for sealing utility and pipe penetrations.



Stego™ Crete Claw™ Tape 75 mm (3")

This multi-layered tape utilizes a textured film that mechanically bonds to concrete cast against it. It is used to create a seal at Stego Wrap's terminating edges to subsequently placed slabs.



Stego™ Term Bar

A semi-flexible plastic termination bar, optimal for mechanically securing Stego Wrap to concrete, wood, or masonry.



StegoTack™ Tape

A double-sided adhesive strip used to bond and seal Stego Wrap to concrete, masonry, wood, metal, and other surfaces.

Creating a Monolithic Membrane

The key to an effective Stego Wrap installation is to create a monolithic layer of protection between the concrete slab and moisture sources below. This can be accomplished by following the installation instructions outlined in ASTM E1643 - *Standard Practice for Selection, Design, Installation, and Inspection of Water Vapour Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs*.

ASTM E1643 discusses the selection of the vapour retarder and preparation of the subbase to minimise potential damage during installation and concrete placement.

ASTM E1643, Section 5.3.4.1 - *Select a vapour retarder material capable of withstanding potential construction site damage.*

ASTM E1643, Section 5.3.5.1 - *Select vapour retarder material capable of withstanding tear or puncture damage due to the type, gradation, and texture of the base material to be installed below the material. Prepare base material to minimise risk of puncture, for example, by rolling or compacting.*

ASTM E1643, Section 6.1 - *Level and compact base material.*

ASTM E1643 then states to create a monolithic membrane to protect the slab from adjacent moisture sources.

ASTM E1643, Section 6.4 - *. . . create a monolithic membrane between the surface of the slab and moisture sources below the slab as well as at the slab perimeter.*

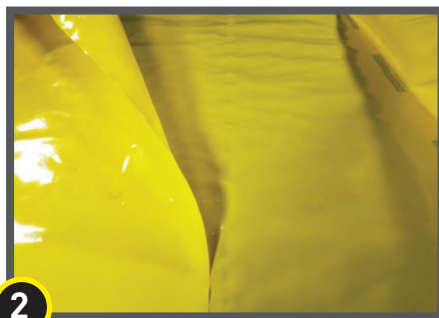
ASTM E1643, Section 6.5 - *Lap joints minimum 150 mm (6 in.), or as instructed by the manufacturer, and seal laps in accordance with the manufacturer's recommendations.*

Stego 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 Stego Wrap is tough enough to withstand rugged construction environments.



1

Unroll Stego Wrap over the area where the slab is to be placed.



2

Unless otherwise indicated by the design professional(s) of record, unfold Stego Wrap to completely cover the placement area.



3

All joints/seams should be overlapped a minimum of 150 mm (6").



4

Ensure Stego Wrap is clean and dry when applying Stego Tape.

Tip: Use a cloth or other means to remove dust, debris, and excess moisture from Stego Wrap prior to applying Stego Tape.



5

Seal the seams with Stego Tape.

Where to Terminate the Stego Wrap

Always consult the project design team for where to terminate the vapour barrier to strike the balance between the location of the vapour barrier on or around foundation constructions and any structural concerns before proceeding.

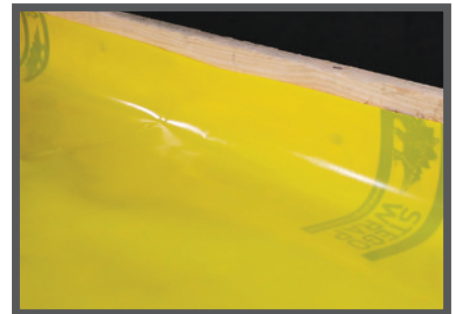
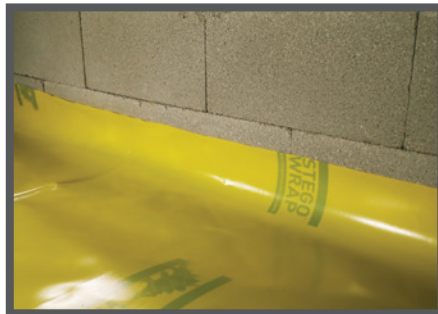
ASTM E1643 provides direction on where to terminate the vapour barrier as follows:

ASTM E1643, Section 6.4 - *Extend vapour 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...*

ASTM E1643, Section 6.6 - *Extend vapour retarder over the tops of pile caps and grade beams to a distance acceptable to the structural engineer.*

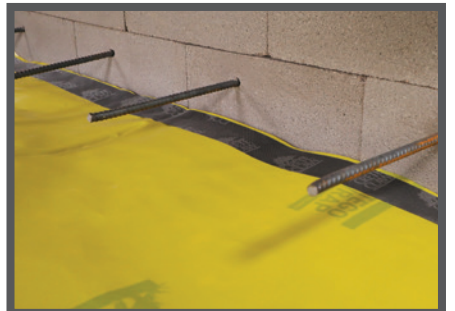
In accordance with ASTM E1643, terminate the Stego Wrap as follows:

At an elevation (height) consistent with the top of the slab;



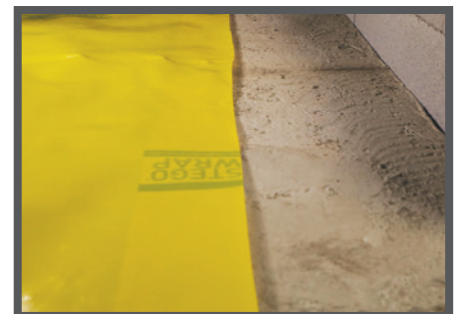
Note: Turn Stego Wrap up foundation walls or forms.

At Impediments; OR



Note: Impediments may include rebar, dowels, water stops, etc.

At a location of termination designated by the project design team.



Note: The distance to which the vapour barrier is extended adjacent to, onto, or completely over a footing or grade beam should be determined by the project design team.

If the location of vapour barrier termination has not been clearly addressed in the construction documents, then clarification should be requested from the project design team. Should no direction be given, Stego recommends the project team follow the guidelines of ASTM E1643.

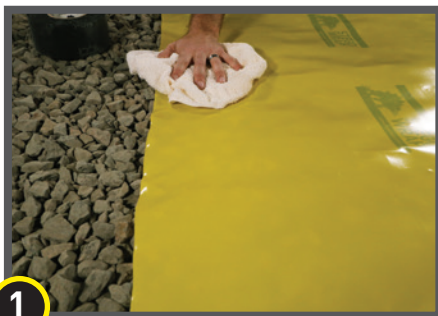
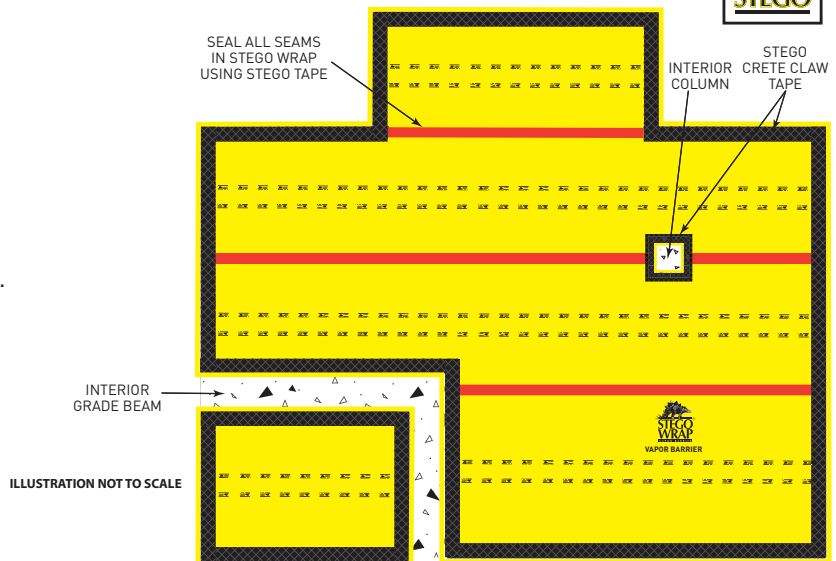
Regardless of where the vapour barrier is determined to be terminated, ASTM E1643 requires the terminating edges to be sealed. See Sealing Stego Wrap at Terminating Edges, next page.



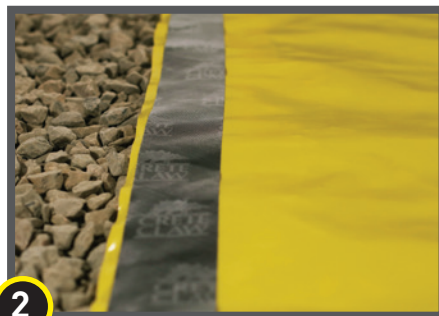
Sealing Stego Wrap at Terminating Edges

Always consult the project design team for where to terminate the vapour barrier to strike the balance between the location of the vapour barrier on or around foundation constructions and any structural concerns before proceeding.

Seal Stego Wrap along all terminating edges as indicated by the project team. Stego provides several innovative options for creating a seal as required by ASTM E1643.



Ensure Stego Wrap is clean and dry when applying Stego Crete Claw Tape.
Tip: Use a cloth or other means to remove dust, debris, and excess moisture from the vapour barrier prior to applying Stego Crete Claw Tape.



Apply Stego Crete Claw Tape as close as possible to the terminating edge of Stego Wrap.
Tip: Applying Stego Crete Claw Tape within 50 mm (2") of the terminating edge is almost always possible, even when the terminating edges are not cut perfectly straight.



Install Stego Crete Claw Tape last for a successful installation.
Tip: Install Stego Crete Claw Tape before rebar but after Stego Wrap has been overlapped and sealed at the seams with Stego Tape, sealed at penetrations, and terminated at the project's perimeter and/or other specified terminating location.

Stego Crete Claw Tape - Installation Tips



IMPORTANT:
Do not overlap Stego Crete Claw Tape over itself.
Tip: If placing multiple sections of Stego Crete Claw Tape, minimise gaps by abutting each adjacent section against one another.



Do not leave any open gaps between Stego Crete Claw Tape.
Tip: If a small gap exists between two pieces of Stego Crete Claw Tape, a supplementary piece of Stego Crete Claw Tape should be applied to run along the inside edges of the two original pieces and span the gap between them. The supplementary piece should run parallel and flush to the original pieces without overlap.



If protrusions or penetrations are determined to be impediments to applying Stego Crete Claw Tape along the perimeter terminating edges of Stego Wrap, route Stego Crete Claw Tape around the impediment, as close to the impediment as possible, and continue along the terminating edge of Stego Wrap on the opposite side of the impediment.

Stego Crete Claw Tape is often the preferred product because of its ease of application and versatility to accommodate most conditions. It has been engineered to create a seal between Stego Wrap and the concrete subsequently cast against it. See also StegoTack Tape and Stego Mastic options, detailed on the next few pages.

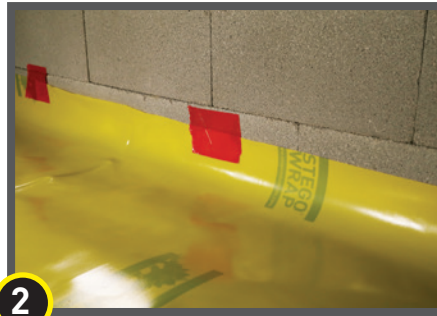
Sealing the Terminating Edges of Stego Wrap on Vertical Planes Using Stego Crete Claw Tape

IMPORTANT: Make sure the area of adhesion is free of dust, dirt, debris, moisture, and frost to allow maximum adhesion.

Vertical Plane: Foundation Wall



1 Extend Stego Wrap up the vertical surface, likely to the height of the slab.
Note: See Where to Terminate the Stego Wrap, page 5.



2 **Optional:** Temporarily secure Stego Wrap to the foundation wall with a small piece of Stego Tape.

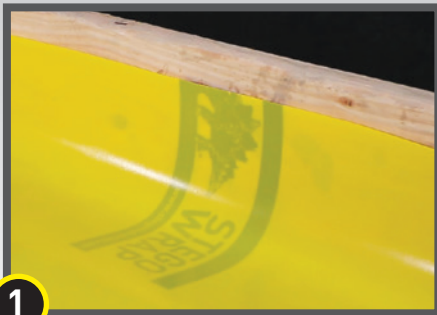
Note: Trim excess Stego Tape after concrete has been placed and before removal of any adjacent forms.



3 Apply the entire 75 mm (3") width of Stego Crete Claw Tape on the perimeter edge of Stego Wrap.

Note: Clean surface of Stego Wrap to ensure that it is free of moisture and debris prior to the installation of Stego Crete Claw Tape.

Vertical Plane: Concrete Form



1 Extend Stego Wrap up the vertical surface, likely to the height of the forms.
Note: See Where to Terminate the Stego Wrap page 5.



2 **Optional:** Temporarily secure Stego Wrap to the concrete form with a small piece of Stego Tape.

Note: Trim excess Stego Tape after concrete has been placed and before removal of any adjacent forms.



3 Apply the entire 75 mm (3") width of Stego Crete Claw Tape on the perimeter edge of Stego Wrap.

Note: Clean surface of Stego Wrap to ensure that it is free of moisture and debris prior to the installation of Stego Crete Claw Tape.

Sealing Stego Wrap Up Foundation Walls and Vertical Surfaces Using StegoTack Tape

StegoTack Tape can also be used to seal Stego Wrap to foundation walls, grade beams or other adjacent concrete constructions.

IMPORTANT: Make sure area of adhesion is free of dust, dirt, debris, moisture, and frost to allow maximum adhesion.



1

Remove the release liner on one side of StegoTack Tape and stick to foundation wall at the height of the slab or at impediments.



2

When ready to apply Stego Wrap, remove the exposed release liner from StegoTack Tape.



3

Press Stego Wrap firmly against StegoTack Tape to secure.

NOTE: If consistent, continuous pressure will not be applied (e.g. by a concrete slab), Stego Term Bar may be necessary.

Sealing Stego Wrap Up Foundation Walls and Vertical Surfaces Using Stego Mastic

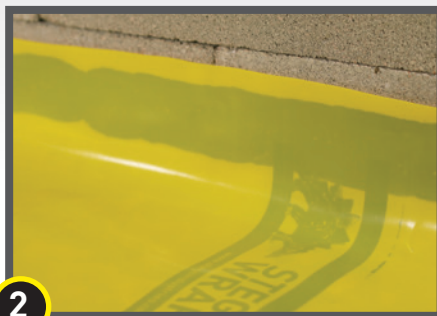
Stego Mastic can also be used to seal Stego Wrap to foundation walls, grade beams or other adjacent concrete constructions.

IMPORTANT: Make sure area of adhesion is free of dust, dirt, debris, moisture, and frost to allow maximum adhesion.



1

Apply Stego Mastic to the foundation wall at the anticipated edge of the subsequently applied Stego Wrap at the height of the slab or impediments.



2

Press Stego Wrap firmly against the applied Stego Mastic on the foundation wall.



3

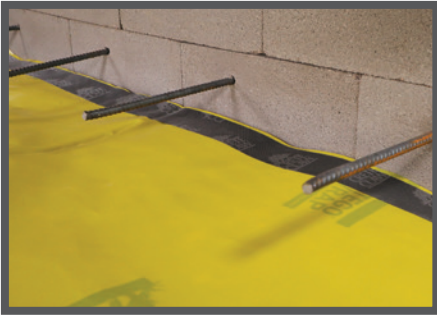
If consistent, continuous pressure will not be applied (e.g. by a concrete slab), Stego Term Bar may be necessary.

Sealing the Terminating Edges of Stego Wrap on a Horizontal Plane

Always consult the project design team for where to terminate the vapour barrier to strike the balance between the location of the vapour barrier on or around foundation constructions and any structural concerns before proceeding.

After the location of where to terminate the vapour barrier has been determined, seal Stego Wrap along all terminating edges as indicated by the project team.

With Stego Crete Claw Tape



At a Foundation Wall: Install Stego Crete Claw onto the terminating edge of Stego Wrap.

Tip: Install Stego Crete Claw onto Stego Wrap before sliding Stego Wrap into final termination location.



At Interior Grade Beam Impediments: Install Stego Crete Claw onto the terminating edge of Stego Wrap.



At a Location Designated by the Design Team: Install Stego Crete Claw onto the terminating edge of Stego Wrap.

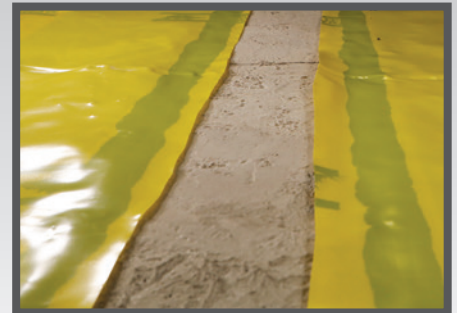
With Stego Mastic



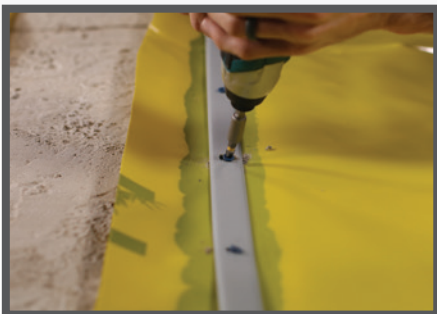
Onto a Perimeter Footing at Impediments: Seal Stego Wrap to concrete with Stego Mastic.



Onto Interior Grade Beams at Impediments: Seal Stego Wrap to concrete with Stego Mastic.



At a Location Designated by the Design Team: Seal Stego Wrap to concrete with Stego Mastic.



If consistent, continuous pressure will not be applied (e.g. by a concrete slab), Stego Term Bar may be necessary.

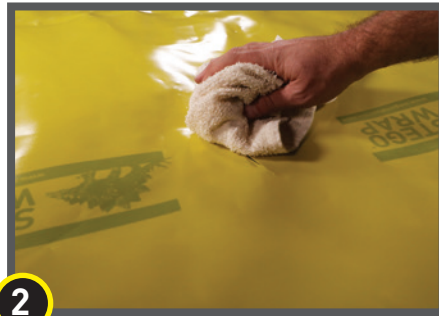
See “Where to Terminate the Vapour Barrier” on page 5 prior to choosing your terminating edge sealing accessory.

Sealing Damaged Areas: Small Hole or Slice

In the event that Stego Wrap is damaged during or after installation, repairs must be made. For smaller holes or slices in Stego Wrap, Stego Tape can be used as noted below.



1 Small hole or slice in Stego Wrap.



2 Clean area of adhesion.



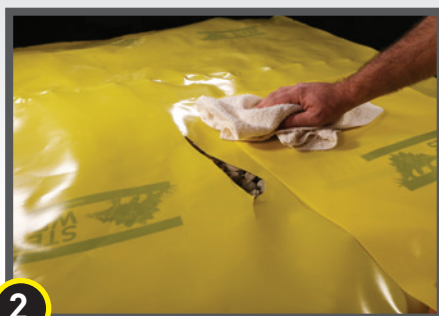
3 Center Stego Tape over small hole or slice in Stego Wrap.

Sealing Damaged Areas: Larger Hole

In the event that Stego Wrap is damaged during or after installation, repairs must be made. For larger holes, cut a piece of Stego Wrap to a size and shape that covers any damage by a minimum overlap of 150 mm (6") in all directions. Clean all adhesion areas of dust, dirt, moisture, and frost. Tape down all edges using Stego Tape.



1 Occasionally there are larger holes in the vapour barrier that require a patch.



2 Clean area of adhesion.



3 Measure and cut a piece of Stego Wrap to cover damaged area 150 mm (6") in all directions. Seal patch with Stego Tape.

Sealing Single Pipe Penetration: Minimal Void Space

All penetrations must be sealed. All pipe, ducting, rebar, wire penetrations and block outs should be sealed using Stego Wrap, Stego Tape and/or Stego Mastic. If penetrations are encased in other materials, such as expansive materials like foam, unless otherwise specified, Stego Wrap should be sealed to the underlying penetration directly.



1 Install Stego Wrap around pipe penetrations by slitting/cutting material as needed. Try to minimise the void space created.



2 Pull material over and flatten. Clean area of adhesion where Stego Tape will be applied.



3 If Stego Wrap is close to pipe and void space is minimised then seal around pipe penetration with Stego Tape and/or Stego Mastic.

Sealing Single Pipe Penetration: Larger Void Space Requires Detail Patch

To minimise void space around a larger penetration, a detail patch may be required. Stego Pre-Cut Pipe Boots are also available to speed up the installation.



1 Cut a detail patch to a size and shape that creates a 150 mm (6") overlap on all edges around the void space at the base of the pipe.



2 Cut an "X" the size of the pipe diameter in the center of the pipe boot and slide tightly over pipe.



3 Seal all sides of the pipe boot with Stego Tape.



4a Seal around the base of the pipe using Stego Tape. **OR...**



4b Seal around the base of the pipe with Stego Mastic. Note: apply using disposable glove, paint brush, or similar.

Sealing Multiple Pipe Penetrations: Using Stego Tape

Multiple pipe penetrations in close proximity and very small pipes may be sealed using Stego Tape and/or Stego Mastic for ease of installation.



1

Cut a slit the size to accommodate the width of the multiple pipes. Try to minimise the void space created.



2

Seal any void space around each pipe using Stego Tape.

Note: Subbase should not be visible from above.

Sealing Multiple Pipe Penetrations: Using Stego Mastic



1

Seal any void space around each pipe penetration with Stego Mastic.



2

Dab Stego Mastic with disposable glove, paint brush, or similar, making sure entire void space is sealed.

Note: If pipe penetrations are abutted against one another, minimise any void space first with Stego Wrap, then seal any remaining void space with Stego Tape and/or Mastic in the same manner represented above.



Avoid Punctures with Beast™ Concrete Accessories

To help eliminate the use of non-permanent penetrations in Stego Wrap installation, Stego Industries recommends the use of Beast vapour barrier-safe concrete accessories.

IMPORTANT: Avoid puncturing Stego Wrap with stakes while forming, bracing, and screeding.

Preventing punctures in the vapour barrier.



BEAST™ FORM STAKE can be used with **BEAST™ FOOT** as part of the Stego vapour barrier-safe forming system which meets ASTM E1643 requirements.



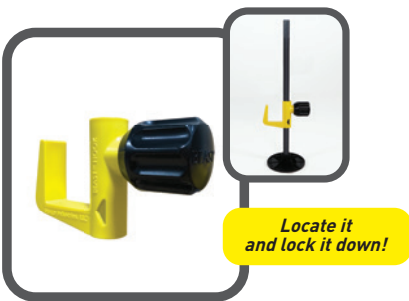
This concrete form stake takes the place of traditional nail stakes for interior forming applications, utilising SpeedTrack™ Fastening Grooves for unlimited fastener placement.

Note: Refer to Beast Form Stake Installation Guide for detailed usage instructions.



Beast Form Stake is strong enough to withstand a beating during concrete placement while holding its shape. It is easy to remove and reusable for the next job.

Note: Beast Form Stake can be removed once concrete has set sufficiently to hold its shape. Fill and repair any voids in the concrete as necessary once the Beast Form Stake has been removed and strike Beast Form Stake against a hard surface to loosen the concrete buildup.



Locate it and lock it down!

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

No tools are required, just grip the knob to loosen or tighten. Fast, easy, efficient.



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

Improve efficiency and maintain concrete floor levelness with the **BEAST SCREED SYSTEM!**



Set it and forget it. Beast Screed eliminates the need to frequently re-establish grade to ensure floor elevation has not changed during the screeding operation as is typical with traditional wet-screed methods.

Note: Refer to Beast Screed System Installation Instructions for detailed usage instructions.

NOTE: Stego Industries, LLC's ("Stego") installation instructions are based on ASTM E1643 - *Standard Practice for Selection, Design, Installation, and Inspection of Water Vapour 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 Stego products, please call us at +1 877-464-7834 for technical assistance. While Stego employees and representatives may provide technical assistance regarding the utility of a specific installation practice or Stego product, they are not authorised to make final design decisions.

Contact Please contact us to get in touch with the nearest Stego representative. We look forward to working with you on your next project. **+1 877-464-7834 | www.stegoindustries.com**

GAME-CHANGING BARRIER SOLUTIONS

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