



# Self-Adhering, High Temp Underlayments Installation Instructions

***SECURE START™ HT***  
***SECURE START™ HT NS***

# Directions for Applying Malarkey SecureStart™ HT Self-Adhering, High Temperature Underlayments

## GENERAL INSTRUCTIONS

Install Malarkey's 406 SecureStart™ HT and 405 SecureStart™ HT NS Self-Adhering, High Temperature Underlayments<sup>1</sup> according to adopted building code and local amendments. To qualify for warranty protection and obtain stated coverage, the installation instructions detailed here must be followed. Contact Malarkey Technical Services or check our website at [WWW.MALARKEYROOFING.COM](http://WWW.MALARKEYROOFING.COM) for the most current version.

For current warranty information, visit [WWW.MALARKEYROOFING.COM/WARRANTY-CENTER](http://WWW.MALARKEYROOFING.COM/WARRANTY-CENTER).

We assume no responsibility for damage to the underlayment or water damage to the roof deck prior to installation of the finished roofing system, or for leaks due to improper application or failure to properly prepare the surface.

## IMPORTANT

- ALWAYS wear fall protection when working on a roof.
- Underlayments can be slippery, particularly when wet or covered with frost or debris. Be careful when walking on them.
- The release film protecting the adhesive of self-adhering membranes is also slippery. Once removed, dispose of it off the roof.
- All material loaded on the surface of SecureStart™ HT underlayments should be blocked to prevent slippage.

## PRODUCT DESCRIPTIONS

**Product Use:** SecureStart™ HT underlayments are lightweight, extremely versatile, synthetic membranes suitable for use as waterproof underlayments in steep slope applications with metal roofing, asphalt shingles, wood shakes/shingles, and mechanically-fastened roof tile.

With their high-temp tolerance, SecureStart™ HT underlayments are primarily intended for complete deck coverage under metal but also recommended for high elevations, climates causing ice dams, and areas with high winds or wind-driven rain. SecureStart™ HT underlayments are engineered to perform in temperatures from 40°F (4.4°C) to 260°F (127°C).

SecureStart™ HT underlayments serve a dual role as flashing membranes, protecting areas susceptible to leaks such as valleys, roof-to-sidewall transitions, and around flanged penetrations like vents and pipe jacks. Install SecureStart™ HT underlayments in these places first, then follow with field application.

**Composition and Materials:** SecureStart™ HT and HT NS's multi-layer design, plus adhesive, is manufactured for strength and durability. They have a synthetic, textured polypropylene surface while the underside is coated with an aggressive, asphalt-based adhesive. The adhesive is protected by split-release film that is removed prior to application.

<sup>1</sup> When differences between the two SecureStart™ HT products require specific information, we will use their SKU numbers to distinguish them and provide clarity.

**Note:** 406 SecureStart™ HT's selvage edge also has adhesive, and it is likewise protected by release film. 405 SecureStart™ HT NS (Non-Selvage) does not have selvage edge adhesive. A dashed line on the surface of the sheet indicates the 3-inch (76 mm) selvage they both share.

**Storage:** SecureStart™ HT underlayments require dry, well-ventilated storage and protection from the weather. Storage temps between 40°F (4.4°C) and 100°F (38°C) are recommended for best installation.

**Deck Preparation:** Roof decks should be sound, smooth, and meet adopted building code requirements. Sweep dirt and debris from the roof deck.

Minimum approved slope for 406 SecureStart™ HT is 2" (51 mm) per 12" (305 mm) and 405 HT NS, 5" (127 mm) in 12" (305 mm). Apply underlayment courses parallel to the eaves.

**Precautions:** Optimum weather conditions are 40°F (4.4°C) and rising throughout the installation process. Note:

- Colder temps can affect adhesion properties so *priming the roof deck may be necessary*. Clean and dry wood decks usually do not require priming, but it is recommended for concrete and masonry surfaces. Use asphalt primer conforming to ASTM D41, and follow the manufacturer's instructions for application.
- Conversely, the warmer the weather, the more aggressive the adhesive becomes. Elevated temperatures can also make it difficult to remove the release film. Moderate temperatures produce the best conditions.

SecureStart™ HT underlayments are considered *Class I impermeable vapor retarders*. To prevent harmful condensation beneath the roof sheathing, roof structures must be provided with adequate ventilation. Ventilation provisions must meet or exceed current FHA or HUD requirements and adopted building code.

SecureStart™ HT underlayments are not intended as permanently-exposed roofing surfaces but can be left uncovered for up to 180 days if necessary before the primary roof covering is installed. However, good roofing practice dictates the finished roofing material be installed over underlayment as quickly as possible to minimize the chance of blow-off and/or leaks.

Cut the material with straight edge or hook blades; do not use scissors.

*In most instances, application of self-adhering membranes is better, more easily accomplished with two installers.*

## APPLYING SELF-ADHERING MEMBRANES

Roll out the material, and cut SecureStart™ HT underlayments into manageable, job-appropriate lengths.

Begin at a lower corner of roof, and position a length of SecureStart™ HT underlayment parallel to the eave (atop the drip edge flashing/eave metal), adhesive side down, aligning in the desired position.

Fold the upper half of the membrane back on itself lengthwise to expose the release film on that side: 1) Peel off the release

film completely; and 2) Carefully lay that portion back down into place on the roof deck, and apply heavy hand pressure to establish contact.

Once secure, repeat the process for the lower half: fold it back over the adhered upper half, peel off the release film, and return that portion into place.

With a roller, apply firm, even pressure from the center of the sheets to the outer edge, eliminating wrinkles. (See Figure 1)

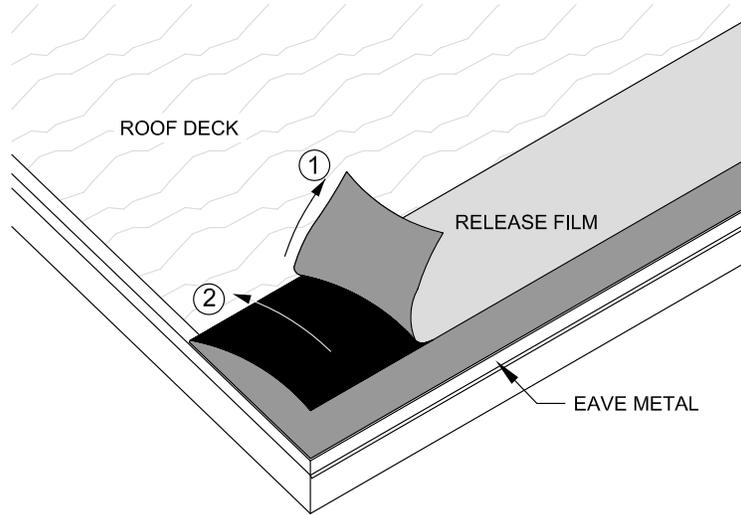


Figure 1 - Applying Self-Adhering Membranes

When installing subsequent courses of 406 SecureStart™ HT, remove the release film from the selvage edge of the underlying course just before overlapping it. This will keep the adhesive area protected and clean.

As SecureStart™ HT underlayments are installed, use a hand roller to seal side and end laps, walls, base flashings, etc. and a weighted roller over the entire surface to promote complete adhesion.

In every application of SecureStart™ HT underlayments, side laps should be 3" (76 mm; width of selvage edge), vertical end laps in the same course, 6" (152 mm), and staggered 6' (1.8 m) apart in subsequent courses.

Extend SecureStart™ HT underlayments 6" (152 mm) over hips, ridges and valleys. At roof-to-wall transitions, lap the membranes a minimum of 3" (76 mm) up the vertical wall and secure.

Once the top of an expanse of roof is reached, apply drip edge flashing to the rakes, over the ends of underlayment courses.

**Securing Side Laps:** If installing 406 SecureStart™ HT in extreme temperatures, below 40°F (4.4°C) or above 100°F (38°C) and on roof slopes 4:12 (102 mm per 305 mm) and greater, Malarkey recommends back-nailing side laps prior to overlapping them. Use metal cap roofing nails with a nominal cap diameter of 1" (25 mm). Fasten in a staggered row, 6" (152 mm) O.C.

As mentioned previously, the minimum approved slope for 405 SecureStart™ HT NS is 5:12 (127 mm per 305 mm); in adverse conditions producing high winds or wind-driven rain, it is recommended to seal side laps with appropriate adhesive (see next section) prior to overlapping them.

**T-Joints at End Laps:** The construction and treatment of vertical end laps is very important to prevent moisture intrusion.

As mentioned above, the ends of membranes in the same course should overlap 6" (152 mm). At opposing diagonal corners of both underlying and overlapping membranes, make angled, 45° cuts. The width of the cut should be equal to the width of side laps (3" [76 mm]). The underlying piece will have a cut in its down-side corner while the overlapping piece will have a cut in the high-side corner.

With a ¼" (6 mm) notched trowel, apply a thin, uniform coat (⅛" [3 mm] thick) of trowel-grade adhesive to the entire 6" (152 mm) end lap of the underlying section (including the notched corner), and press the overlapping end down over it. Follow with a roller to promote complete adhesion.

(See Figure 2)

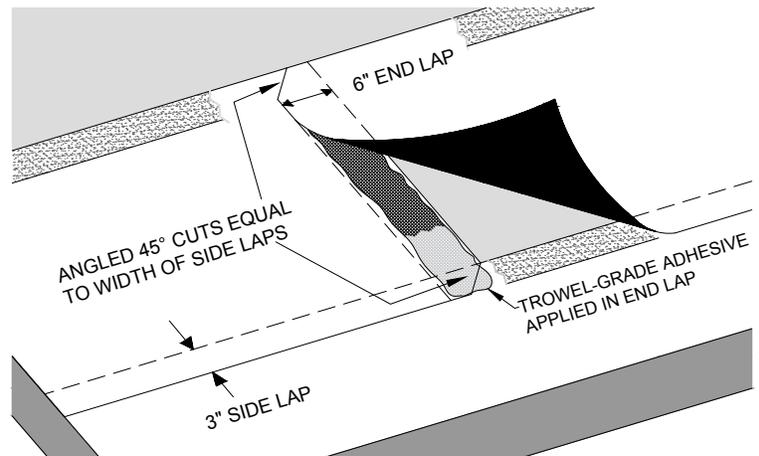


Figure 2 - Construction and Sealing of End Laps

Recommended adhesives:

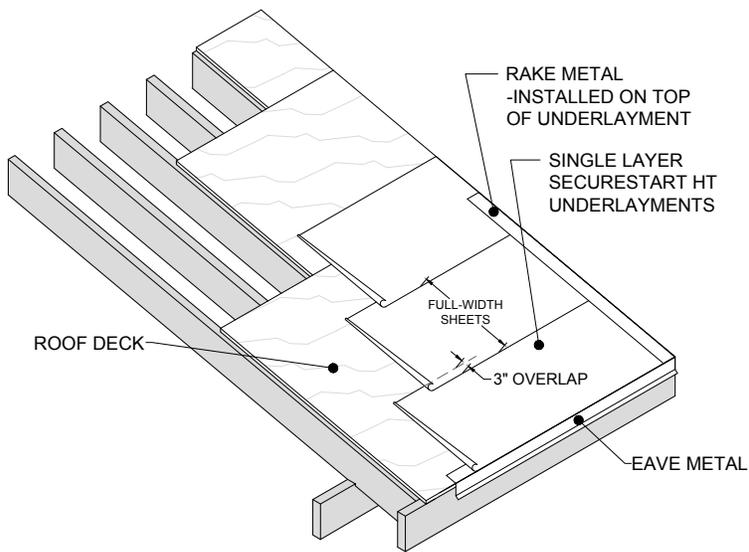
- Shingle or tile roofs: Asphalt cement conforming to ASTM D4586
- Metal Roofing: A 100% solids, asphalt-compatible sealant such as MasterSeal® NP 1™ or Chem Link® M-1

## INSTALLATION FOR COMPLETE DECK COVERAGE

Install the initial, full-width course at the lowest point of the roof deck, flush to the rake and along the eave.

Continue working up the roof, subsequent courses overlapping at side laps 3" (76 mm). Consider back-nailing side laps if conditions merit, especially if the finish roof covering won't be installed for 14 days.

Complete deck coverage using 405 SecureStart™ HT NS can only be for roof slopes 5:12 (127 mm per 305 mm) and greater. (See Figure 3)



**Figure 3 - Application of SecureStart™ HT Underlayments for Complete Deck Coverage**

### INSTALLATION WITH OTHER MALARKEY UNDERLAYMENTS

When complete deck coverage with SecureStart™ HT underlayments is not required due to weather or finish roofing choice, it may be combined with other Malarkey underlayments once either SecureStart™ HT or HT NS are first applied along the eaves.

Roof decks are vulnerable to leaks at the eaves but especially in geographic regions that regularly experience ice dams. For this reason (or if required by building code), install SecureStart™ HT underlayments up the roof from the eaves and along the rakes, too, no less than 24" (610 mm) past the interior, warm inside wall of the house or above the expected level of ice dams.

Once past 24" (610 mm), switch to applications of Malarkey's water-resistant, mechanically-attached *field* underlayments (Right Start™ UDL, SecureStart™ SG or Plus<sup>2</sup>), the first course lapped 6" (152 mm) over the termination of self-adhering underlayment.

### FINAL NOTE

These instructions are meant to act as a general guide. If you have questions about this installation or any Malarkey roofing product, please contact our Technical Services Department weekdays at (800) 545-1191 or (503) 283-1191, 7:00 am to 5:00 pm, Pacific Standard Time. You can also email us at: [technicalinquiries@malarkeyroofing.com](mailto:technicalinquiries@malarkeyroofing.com). Thank you.

<sup>2</sup> Installation instructions at [WWW.MALARKEYROOFING.com](http://WWW.MALARKEYROOFING.com).



P.O. Box 17217  
Portland, OR 97217-0217

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