



# Synthetic Underlayment Installation Instructions

***SECURE START™ SG***  
***SECURE START™ PLUS***

# Directions for Applying Malarkey SecureStart™ SG and SecureStart™ Plus Synthetic Underlayments

## GENERAL INSTRUCTIONS

Install Malarkey's 1030 SecureStart™ SG and 1031 SecureStart™ Plus synthetic, field underlayments 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 underlayments 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. Be careful when walking on them.
- All material loaded on the surface of SecureStart™ underlayments should be blocked to prevent slippage.

## PRODUCT DESCRIPTION

**Product Use:** SecureStart™ SG and SecureStart™ Plus are lightweight, *mechanically-attached*, synthetic membranes suitable for use as water-resistant underlayments or dry-in sheets in steep slope roofing applications with asphalt shingles, wood shakes/shingles, and metal roofing. SG features smooth surfaces, top and bottom, which can help speed installation by lessening shingle drag. SecureStart™ underlayments are also preferred for installation over vented nail base.

**Composition and Materials:** SecureStart™ underlayments are manufactured of 100% recyclable polypropylene and engineered with multiple layers for long-term strength and durability. They meet or exceed the physical requirements of ASTM D226 and ASTM D4869, and are engineered to perform in temperatures from -40°F to 240°F (-40°C to 116°C).

The sheets have *course lap guide lines* (lay lines) imprinted on the material every 4" (102 mm), all the way across the width of the sheet. (See Figure 1)

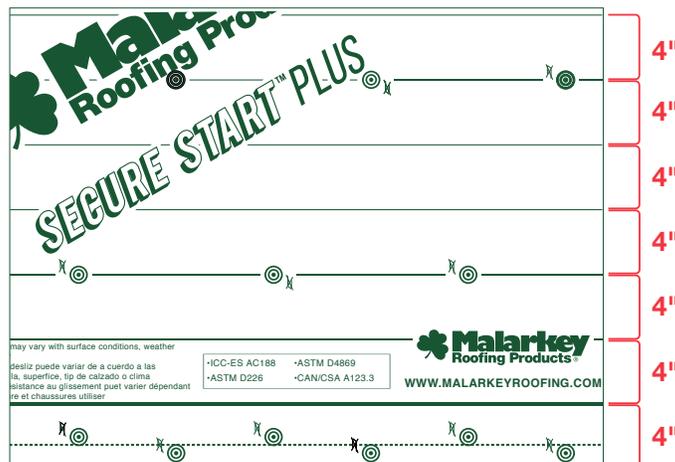


Figure 1 - SecureStart™ Underlayments Have Course Lap Guide Lines Every 4" (102 mm)

**Precautions:** SecureStart™ underlayments require dry, well-ventilated storage and protection from the weather.

Roof decks should be sound, smooth (free of protrusions), and meet adopted building code requirements. Sweep dirt and debris from the roof deck.

Minimum approved slope is 2" (51 mm) per 12" (305 mm).

Install SecureStart™ underlayments with the printed-side up, and lay underlayment courses parallel to the eaves. Cut the material with straight edge blades or scissors; do not use hook blades.

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

SecureStart™ underlayments are not intended as a permanently-exposed roofing surface 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.

## APPLICATION

**Drip Edge Flashing:** In accordance with 2018 International Building Code, Section 1507.2.8.3, and 2018 International Residential (Building) Code, Section R905.2.8.5, *drip edge flashing* (drip edge, eave or rake metal) is required on the eave and rake edges of shingle roofs.

Install drip edge first along the eaves, and later on the rakes once the field underlayment has been applied.

## UNDERLAYMENT FASTENING INSTRUCTIONS

The extent to which SecureStart™ underlayments must be fastened is determined by several factors, and our instructions address these:

- Your climate region and related wind speeds
- Performance expected of the underlayment should a blow-off of the primary roof covering occur
- Degree of roof slope
- How long the underlayment will remain exposed before the primary roof covering is applied
- Safety

Malarkey recommends *plastic cap fasteners* with a nominal cap diameter of 1" (25 mm). Do not use staples without caps.

Circular/bullseye imprints on the material act as guides to aid fastening. Designated fastener spacing on side laps is staggered, 6" O.C. (152 mm), and 12" O.C. (305 mm) in each of three rows on the field of the sheet. The field rows of fasteners correspond with marked lay lines and are 12" (305 mm) apart. (See Figure 2)

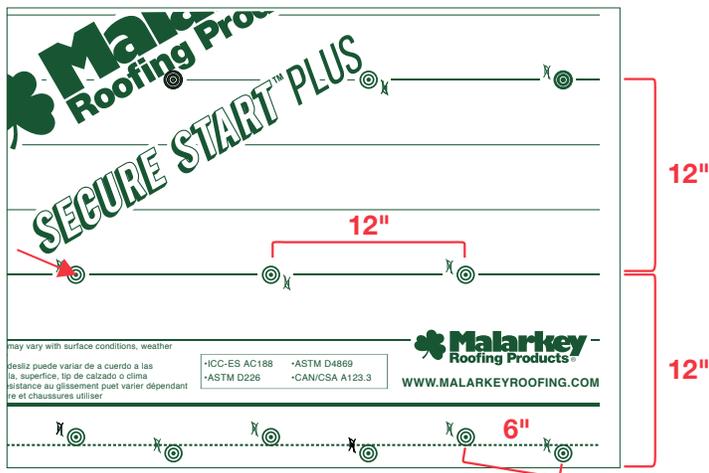


Figure 2 - SecureStart™ Underlayments Have Bullseye Imprints That Guide Fastener Placement

**Limited Exposure:** In temperate weather conditions with expectation SecureStart™ underlayments will only have limited exposure prior to same or next day application of the primary roof covering, install enough fasteners to hold the underlayments firmly in place in order to work safely (or per adopted building code) until shingles can be applied.

Malarkey recommends this be accomplished by fastening at *every other* imprint on the sheet, meaning side laps with fasteners 12" O.C. (305 mm) and the field fastened in staggered rows, 24" O.C. (610 mm).

**Extended Exposure:** For added leak protection in coastal regions, other areas of wind-driven rain or when SecureStart™ underlayments are left exposed for an extended period of time (days or weeks) prior to application of the finished roofing materials, *drive fasteners in each of the imprints*.

**Optional High Wind Installation:** For additional protection along with *Extended Exposure* fastening, it is recommended laps be taped or sealed with approved sealants.

**In all instances, in every application of SecureStart™ underlayments,** vertical end laps in the same course should

be 6" (152 mm), fastened every 6" (152 mm), and staggered 6' (1.8 m) apart in subsequent courses.

Extend SecureStart™ 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 fasten.

Once an expanse of roof is covered by underlayment up to the ridge, apply drip edge flashing to the rakes, over the ends of underlayment.

## INSTALLATION IN NON-ICE DAM REGIONS

### Roof Slopes 4:12 and Greater

A single layer of SecureStart™ underlayment is all that's required for slopes 4:12 (4" [102 mm] per 12" [305 mm]) and greater.

Install the initial, full-width course at the lowest point of the roof deck, flush to the rake and along the eave; overhang the eave drip edge 1/4" - 3/4" (6-19 mm).

Continue working up the roof, subsequent courses overlapping at side laps 4" (102 mm). (See Figure 3)

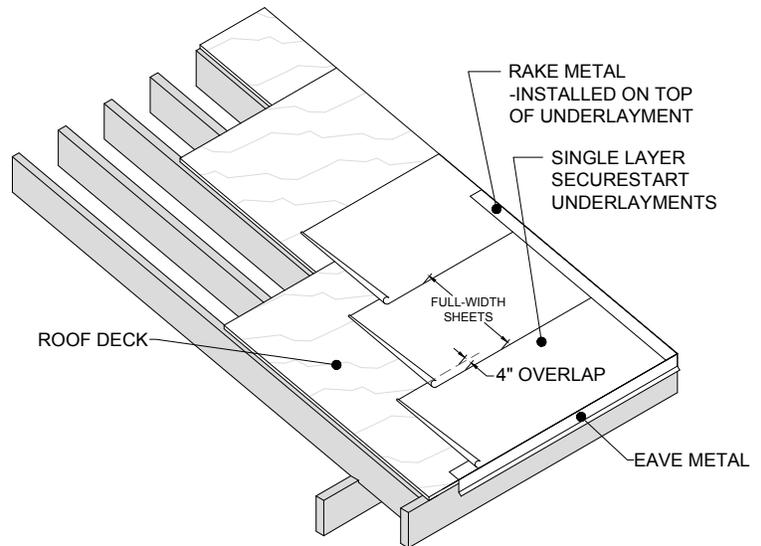


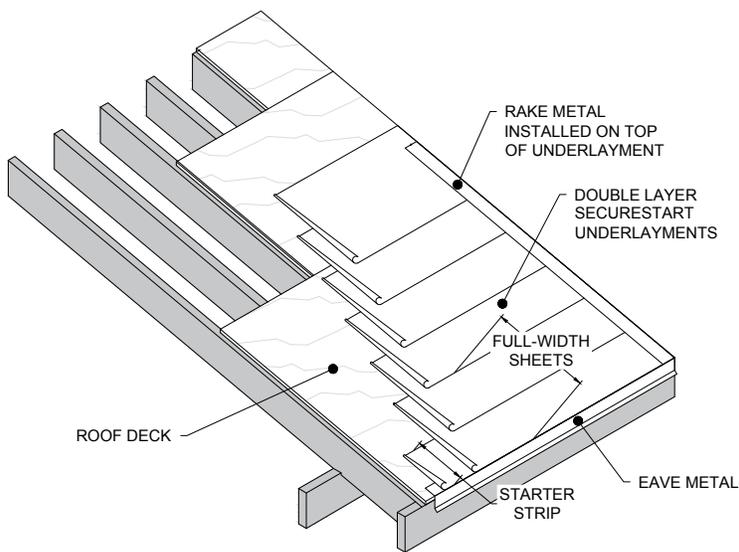
Figure 3 - Application of SecureStart™ Underlayments on Roof Slopes 4:12 and Greater (Non-Ice Dam Regions)

### Roof Slopes 2:12 Up to 4:12

SecureStart™ underlayments are installed in a *double layer* for slopes 2:12 (2" [51 mm] per 12" [305 mm]) up to 4:12 (4" [102 mm] per 12" [305 mm]).

Begin by fastening a half-width *starter strip* of SecureStart™ underlayment directly to the roof deck along the eaves. Overhang the drip edge 1/4" - 3/4" (6-19 mm).

Courses to follow are all full-width, the first course completely overlapping the starter, and followed by courses half-lapped over preceding courses, on up the roof. (See Figure 4)



**Figure 4 - Application of SecureStart™ Underlayments on Roof Slopes 2:12 Up to 4:12 (Non-Ice Dam Regions)**

**Optional installation for low slope roofs:** For superior protection in coastal regions, areas of wind-driven rain, or homes with double-slope construction, the roof deck can be covered with a double layer of Malarkey Arctic Seal® self-adhering underlayment or equivalent conforming to ASTM D1970.

When choosing this option, make sure proper ventilation and moisture control issues are addressed.

### INSTALLATION IN ICE DAM REGIONS

In cold weather climates that produce ice dams, SecureStart™ field underlayments should be used in combination with self-adhering underlayments, Malarkey's Arctic Seal® or SecureStart™ HT products (or equivalent conforming to ASTM D1970), to provide maximum ice and water protection<sup>1</sup>. Their use is subject to local building codes so installation could be required.

Installation instructions for both product lines can be found at [WWW.MALARKEYROOFING.COM](http://WWW.MALARKEYROOFING.COM).

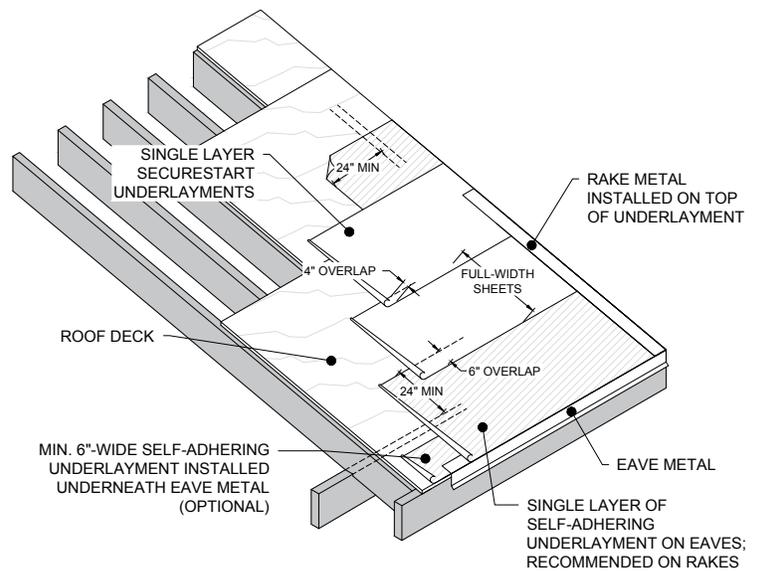
### Roof Slopes 4:12 and Greater

Instead of SecureStart™ underlayment along the eave, install a full-width sheet of self-adhering underlayment. It will not have an overhang but be flush with the drip edge.

Continue installation up and out onto the roof as necessary to a point not less than 24" (610 mm) past the interior warm inside wall of the house or above the expected level of ice dams or according to building code requirements.

If additional courses of self-adhering underlayment are necessary to reach that point, *course lap guide lines* (lay lines) on the sheets show how far to lap the material. Firmly hand-roll these overlaps to ensure a complete, watertight bond.

Once past 24" (610 mm), follow with full-width courses of SecureStart™ underlayment, the first lapped 6" (152 mm) over the termination of self-adhering underlayment, and the rest with 4" (102 mm) side laps, on up the roof. (See Figure 5)



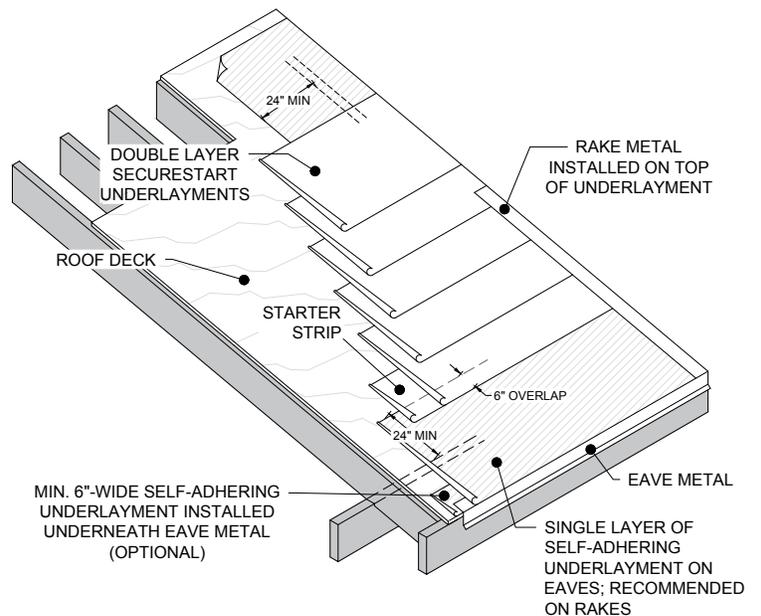
**Figure 5 - Application of Self-Adhering Underlayment and SecureStart™ Underlayments on Roof Slopes 4:12 and Greater (Ice Dam Regions)**

### Roof Slopes 2:12 Up to 4:12

At the eave, install a full-width sheet of self-adhering underlayment. Continue installation up and out onto the roof as necessary to a point not less than 24" (610 mm) past the interior warm inside wall of the house or above the expected level of ice dams or according to building code requirements.

Once that point is reached, switch to *double layers* of SecureStart™ underlayment, the first course a half-width *starter strip* lapped 6" (152 mm) over the termination of self-adhering underlayment.

Succeeding courses are full-width, the first course completely overlapping the starter, and followed by courses half-lapped over preceding courses, on up the roof. (See Figure 6)



**Figure 6 - Application of Self-Adhering Underlayment and SecureStart™ Underlayments on Roof Slopes 2:12 Up to 4:12 (Ice Dam Regions)**

<sup>1</sup> For ice and water protection under metal roofing, use SecureStart HT™ rather than Arctic Seal®. It is high-temp tolerant and made for those conditions.

**Roof Valleys:** Following the installation of a self-adhering membrane *valley liner* like Arctic Seal® or SecureStart™ HT, SecureStart™ field underlayments can be laced across roof valleys and up the adjacent roof a minimum of 6" (152 mm) or lapped 6" (152 mm) over each edge of the valley liner.

Do not fasten closer than 6" (152 mm) from the valley centerline.

SecureStart™ field underlayments can help waterproof a valley but should not be the sole underlayment. Valley liners of self-adhering membranes or strips of roll roofing should be applied to the roof deck first, whether or not an open metal valley is also constructed.

#### **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 Time. You can also email us at [technicalinquiries@malarkeyroofing.com](mailto:technicalinquiries@malarkeyroofing.com). Thank you.



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**Rev. 4/19**