

INSTALLATION GUIDELINES FOR WATER-RESISTANT UNDERLAYMENTS

** For ice dam leak protection, the equivalents to WinterGuard include:
1) waterproofing shingle underlayments meeting ASTM D1970; and
2) two layers of 36" (915 mm) wide felt shingle underlayment lapped 19" (485 mm) and fully adhered to each other with asphalt roofing cement meeting ASTM D4586 Type II. Shingle underlayment should meet ASTM D6757, ASTM D4869 Type I or ASTM D226 Type I.

VALLEY FLASHING (CLOSED-CUT AND WOVEN VALLEYS): Line valley by centering 36" (915 mm) wide CertainTeed WinterGuard, or equivalent,** in the valley and applying directly to deck. Consult the WinterGuard and individual shingle application instructions for details.

*** For valley liner, the equivalents to WinterGuard include:

- 1) waterproofing shingle underlayments meeting ASTM D1970;
- 2) one layer of 50 lb. or heavier asphalt coated roll roofing;
- 3) one layer of mineral-surfaced roll roofing; and
- 4) two layers of 36" (915 mm) wide felt shingle underlayment. Coated roll roofing should meet ASTM D224; shingle underlayment should meet ASTM D6757, ASTM D4869 Type I or ASTM D226 Type I.

WATER-RESISTANT UNDERLAYMENTS

Water resistant underlayment is a product that consists of organic felt impregnated with asphalt saturant. Some water-resistant underlayments, such as CertainTeed's Roofers' Select, also contain a fiber glass reinforcement which increases tear strength and reduces wrinkling.

Water-resistant underlayment was originally invented to keep the roof decking dry until shingles could be applied. Applying this underlayment was originally called "drying-in the roof." It was also useful as a separation sheet between the roof sheathing boards (before OSB and plywood sheets were used as roof decking) and the asphalt shingles. This was important because resin pockets in the pine planks caused the asphalt to degrade prematurely unless the underlayment separated the resin and asphalt from each other.

Water-resistant underlayment is made to shed most of the water that falls on it unless it is torn or punctured. Its ability to be water-resistant is temporary. As the sun degrades the exposed asphalt the materials begin to dry, absorb more moisture, lose its strength and eventually begin to tear. The less asphalt used to saturate the underlayment sheet during manufacturing, the shorter its life. Since asphalt is the most expensive component of shingle underlayment, lower priced materials will have less asphalt and a shorter life when exposed to the sun. Lower priced shingle underlayment, for the same reason, is also subject to severe wrinkling when it gets wet or even just damp.

Underlayment is used under asphalt shingles for a variety of reasons, such as providing:

- ◆ Backup for water-shedding protection of the deck if shingles fail from wind-driven rain. The lower the slope, the more important underlayment is, since water flows more easily under shingles on low slopes.
- ◆ A protective barrier to the elements between the time the old shingles have been torn off and prior to the new shingle being applied. However, the underlayment should not be relied on as a temporary roof system, especially when the drip edge flashing is not yet in place. It is unlikely to prevent leaking in the event of heavy wind and rain.
- ◆ An agent to hide minor imperfections of the decking material and reduce "picture framing" of deck panels.
- ◆ Fire ratings (Class A or C) when used in conjunction with shingles.

The following is a general guide for the installation of water-resistant shingle underlayment. These guidelines can be used regardless of the weight of the underlayment. However, always be sure to consider the local codes.

OVERNIGHT EXPOSURE

If underlayment has been exposed overnight, moisture from dew should be allowed to completely dry before shingling over. If this does not happen, the moisture will become trapped beneath the shingles. Wrinkling can telegraph through the shingle and make a good shingle job look terrible. The worse part is that the job can look good when you leave in the evening but the wrinkles can reappear the next morning when the homeowner will notice them.

While we've discussed underlayment being exposed overnight, it is highly recommended that the roofing contractor only tear off what he can shingle over that same day. This prevents the most common underlayment installation problems.

FASTENER TYPE

CertainTeed recommends using nails rather than staples. Nails provide more resistance against underlayment tear out. It is very important, whether hand nailing or using a pneumatic gun, that the fasteners be driven flush.

INSTALLATION METHOD:

When applying underlayment the key is to keep the product as wrinkle free as possible.

1. Unroll the underlayment parallel with the eaves. The eaves edge of the underlayment should go **OVER** the drip edge eaves flashing, but go **UNDER** the drip edge flashing along the rake.

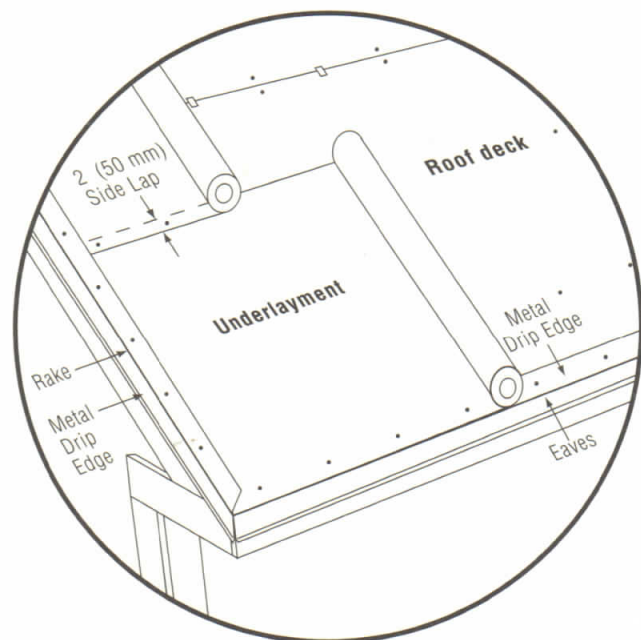


Figure 5-1: Applying Water-Resistant Underlayment Along The Eaves And Rake