



technical bulletin

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Preventing Damage from Ice Dams

Snow and ice formations on roofing structures can create ice dams at the roof eaves. Ice dams are typically formed by the continual thawing and freezing of melting snow or backing up of frozen slush in gutters. When ice dams occur, water can be forced under the roof and may cause damage to a home's ceilings, walls and insulation, and long-term damage to structural components.

The installation of eave flashing is the recommended method for preventing leakage from ice dams. In climates where icing along the eave is anticipated (where the average January temperature is 25°F or less), eave flashing must be installed to ensure maximum protection against ice dam damage. The appropriate selection of flashing material and the flashing strip width will depend on the roof slope and the severity of icing conditions anticipated.

I. New Construction

Low Slope Application:

On pitches 2 in. per foot to 4 in. per foot, cover the deck with a self-adhering waterproofing underlayment. These underlayments come in various widths and lengths. Begin by applying the self-adhering underlayment along the eave flush with the drip edge. All succeeding courses will be overlapped according to the manufacturer's instructions. In all applications the product should be extended a minimum of 24 inches inside the interior wall line of the building.

As an alternative on pitches 2 in. per foot to 4 in. per foot, cover the deck with two

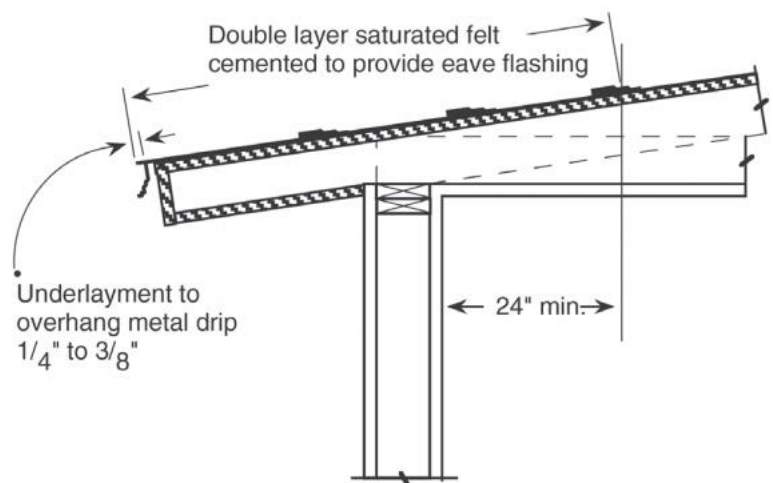


Figure A: Eaves flashing for low slope using asphalt saturated felt

layers of asphalt saturated felt. Begin by applying the felt in a 19 in. wide strip along the eaves and overhanging the drip edge by $\frac{1}{4}$ to $\frac{3}{4}$ in. Place a full 36 in. wide sheet over the 19 in. wide starter piece, completely overlapping it. All succeeding courses will be positioned to overlap the preceding course by 19 in. If winter temperatures average 25°F or less, thoroughly cement the felts to each other with plastic cement from eaves and rakes to a point of a least 24 in. inside the interior wall line of the building.

Normal Slope (4" per foot or greater):

In areas where ice builds up along the eave or a backup of water from frozen or clogged gutters is a potential problem, self-adhering underlayments (or any specialty eave flashing product) may be applied to eaves, rakes, ridges and valleys, and around chimneys, skylights or dormers to help prevent water damage. Start the first course at the eave, applying flush with the drip edge. Apply the self-adhering membrane to a point at least 24" inside the interior wall line.

If self-adhering membranes are not available, install a course of smooth, coated roll roofing, not less than 50 pounds, and parallel to the eave. This course should overhang both the underlayment and the metal drip edge by $\frac{1}{4}$ to $\frac{3}{4}$. Starting at the eave, apply the roll roof flashing strip to a point at least 24" beyond the interior wall line. If a second flashing strip is required to reach that point, locate the lap in front of the exterior wall line. Overlap the flashings at least 2" and cement the horizontal joint over its entire length. End laps should be 6" and cemented. See Figure B.

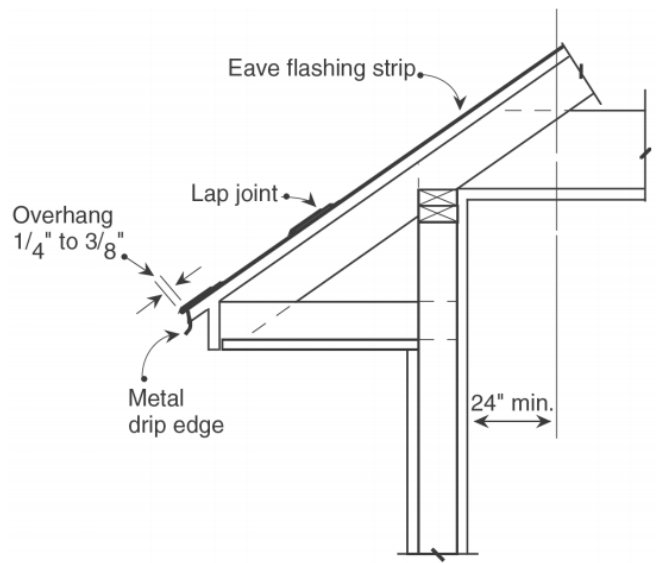


Figure B: Eaves flashing for normal slope using asphalt saturated felt

II. Reroofing and Repair

When repairing or reroofing over an existing roof, remove the old roofing to a point at least 24" beyond the interior wall line and follow the application instructions above for the appropriate roof slope.

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