

Ice Damming

eNewsletter Homeowner Tips

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Ice formations at the edge of the roof and gutters may look impressive; however, they can be signs of serious problems to come. These winter sculptures are typically the result of ice damming or clogged gutters.

What are ice dams?

An ice dam is a ridge of ice that forms at the edge of a roof and prevents melting snow (water) from draining off the roof.

Think of shingle roof system as tiny umbrellas, designed to direct water from the high points of the roof to the shingles below where it should exit the roof, preferably into a gutter drainage system. Shingle roofs are not designed to hold water or prevent water that runs uphill from entering.

What causes ice dams?

There is a complex interaction among the amount of heat loss from a house, snow cover, and outside temperatures that leads to ice dam formation. For ice dams to form there must be snow or ice on the roof, and, at the same time, upper sections of the outside roof surface must be above 32° F, the point at which water melts, while lower surfaces at the eaves are below the freezing temperature. When I say temperatures above or below 32°F, I am talking about average temperature over sustained periods of time.

The snow or ice on a roof surface that is above a freezing temperature will melt. As melted water flows down the roof it reaches the portion of the roof that is cold and then refreezes. An ice dam is formed. The dam grows as it is fed by the melting snow or ice from above, but it will limit itself to the portions of the roof that are below freezing.

Also, blocked gutters can cause water to freeze faster than it would if the gutters were clean. As with a flowing mountain stream, moving water tends not to freeze. Therefore, blocked gutters can create ice dams.

Implications of Ice Dams

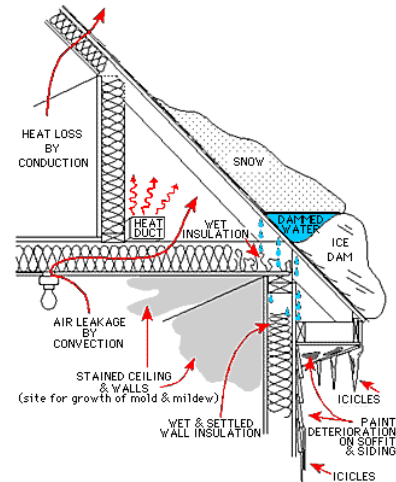
Now that ice dams have formed, the water above backs up behind the ice dam and remains a liquid. This water finds openings in the exterior roof covering and flows into the attic space. From the attic it can penetrate walls and ceilings. This reservoir of water behind the dam that finds its way into a home will cause damage to walls, ceilings, insulation, wood framing and/or cause mold related issues.

Prevention

- Make sure your attic area has adequate insulation. Increase the attic insulation to cut down on heat loss.
- Make sure your attic insulation does not cover your soffit air intake vents. Add soffit vents if your home currently does not have any.
- Make sure your attic area has sufficient air exhaust outlets. The proper number of roof vents is important as roof ventilation is needed to maintain uniform roof surface temperatures.
- Maintain gutters regularly to ensure effective roof drainage.

+ SAFETY NOTE:

Always use safe methods and other protective practices while cleaning and performing maintenance on your home. As these are general guidelines, consult or contact qualified contractors to safely perform these tasks .



Heat loss can cause ice dams

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