

## **Solution for icy gutters**

With winter's storms comes the problem of ice buildup on the roof. No one relishes the thought of dragging out a ladder and trying to get all that ice out of the gutter. But if you allow it to build up in there, you are essentially forming the foundation that an ice dam will start building on, and once the ice dam takes hold it's a lot harder to get rid of.

The best solution is to be proactive and attack the ice before it actually becomes ice. That means taking some precautions to keep all that water from freezing in the first place.

There are several steps you'll need to take, starting in the fall with cleaning out the gutters. Keeping your gutters and downspouts free of leaves and pine needles should already be an essential part of your fall chores, and it's also an essential part of keeping that ice from building up.

Anything designed to catch the leaves and needles and keep them from getting into the gutters can also be a problem when it comes to ice buildup. Those barriers can create a number of small crevices that trap ice and snow, making it difficult to keep them clear and the water running through them freely during the winter. If you live in a cold climate, any type of leaf barrier on your gutters is probably not a great idea.

### **Heat tape in gutters and downspouts**

Once the gutters are clean and barrier free, heat tape is the easiest way to keep them free of ice. Heat tape is simply a long strip of electrically heated, rubberized cable, available in different lengths. It has a grounded (three-prong) plug at one end, and is plugged into a properly grounded, GFCI-protected electrical outlet (GFCI is an acronym for ground-fault circuit interrupter).

The tape is laid in the bottom of the gutter, or it can be clipped so that it hangs along the sides of the gutter, near the bottom. A strip of heat cable is also extended down the inside of each downspout. Most heat cables are safe for use with both metal and plastic gutters.

There are different types of controls available for activating the heat tape. The best is a thermostat control, which will activate the tape when the outside air temperature falls to a certain level, typically around 35 to 40 degrees. This will allow the tape sufficient opportunity to prevent the ice from forming as the temperatures continue to drop.

And since the operation is automatic, it eliminates the worry of you having to activate anything. Remember that the tape is designed to prevent the ice from forming -- it's not there to melt the ice after it's already in place.

## **Heat tape on the roof not as effective**

You will also sometimes see heat tape recommended for use on the roof itself, installed in a zigzag pattern along the eaves, on top of the roofing. The theory is simple. The electrically heated cables melt the snow as it falls, creating channels around the cables that allow for drainage, keeping the roof clear.

No snow buildup means no ice, which means no ice damming. But there are some mixed opinions on just how effective this method actually is.

For one thing, there is the initial cost of all that cable, and the cost to operate it. Heat cable uses about 5 watts of electricity per foot, so a 100-foot cable is the same as having five 100-watt light bulbs burning. A typical house can require several hundred feet of heat cable on the roof, so that's a lot of additional utility bills.

In areas with a lot of snow, there's also evidence that the snow buildup is simply too great around the cables to make the cleared paths very effective. Freezing happens a short distance away from the cables, and the ice dams occur anyway.

Perhaps of greatest concern is the potential for fire danger. I personally have seen several roof fires over the years that have been started by heat cables on the roof that that have malfunctioned, that have been damaged somehow, or that have simply worn out.

All in all, using the heat tape to keep your gutters and downspouts free of ice and snow, then taking other precautions such as good insulation and ventilation in the attic, will be better long-term solutions to ice damming than the installation of heat tape on the roof.

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