



Rotten Sheathing

Q. *We recently encountered crumbling waferboard sheathing, which had been installed right down to grade. This sheathing wicked water about two feet up the wall of an enclosed porch. The clapboards and sills were so rotten they fell apart in our hands, but the rest of the wall appears sound. If the edges are protected from water, can we leave the old sheathing in place? Also, the framing and rim joist behind the rotted sheathing appear solid, though the surface of the lumber is black. Is this discoloration a type of rot?*

A. *Henri de Marne responds:* The black discoloration is probably a mold. This is a surface mold; it does not have roots that penetrate into the wood, but it is a precursor to true rot. If the wood is still solid, you should be okay if you treat the lumber with liberal doses of a copper-based wood preservative, such as Cuprinol Green (Cuprinol Products, a division of Sherwin-Williams; 800/424-5837).

As for the sheathing, if it is truly waferboard and not OSB, it is not a structural panel. However, it might be all right for a porch wall. Cut the damaged sheathing back to good wood, and replace it with pressure-treated plywood after you have treated the framing with the wood preservative.

You can also install 15-lb. felt over the pressure-treated sheathing before replacing the clapboards. I have gone back to installing 15-lb. felt for this type of application, rather than housewrap, after I inspected several condominiums with rot problems caused by rain splashback under the drip line. The sheathing on these units was covered with a housewrap, which was black, and the underlying sheathing and framing were completely rotted out at the base of walls.

I was told by DuPont (the maker of Tyvek) that housewraps are "water repellent" — that is, they will shed water due to occasional wetting. But if soaked for a long time, the housewrap

will become porous and allow water to seep through. I have yet to see an instance where 15-lb. felt absorbed enough water to become porous.

Before replacing the clapboards, treat them with the same wood preservative used to treat the framing. Apply it on all surfaces, and dip the cut ends in the bucket of preservative for about 10 seconds, if the clapboards will be painted. If there is a skirtboard, consider using pressure-treated wood, and flash over the top of it with aluminum Z-flashing.

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The Ins and Outs of Door Swing

Q. *Why is it that most exterior doors swing in rather than out? I can think of several reasons why they should swing out: (1) It is more difficult for the wind to get around a door that swings out since it is pressing the door against a seal rather than away from it. (2) An out-swinging door can overlap the sill at the bottom so the water can't get in, and (3) an out-swinging door can be pushed open easier from the inside in an emergency.*

A. *Gordon Tully responds:* There are many reasons for having in-swinging exterior doors on homes. First, let me respond to your remarks.

1) When winds blows over the roof of a house, it creates negative wind pressure on the lee side (opposite the windward side). This negative pressure is just as strong as the positive pressure on the windward side.

2) A door that overhangs the sill would be difficult to seal against air leakage. A properly detailed door has a bulb weatherstrip at the bottom resting on a projecting sill that slopes away from the house. The only advantage of an outswinging door (and it is a real advantage on occasion) is that there is less sill surface exposed to the weather.

3) Out-swinging doors with "panic hardware" are required by commercial

codes. But on homes and small offices, most codes allow egress doors to swing inward, because they have few occupants, most of whom use the place often enough that they will habitually expect the door to open in.

Here are a few additional reasons I tend *not* to use outswinging doors:

1) An outswinging door must either be specially finished at the top, or protected by a deep porch. Otherwise, it will quickly deteriorate in the weather.

2) Outswinging doors can be a hazard and a maintenance problem. It is easy for the wind to rip an outswinging door off its hinges. If the door opens off a small porch or stoop, an outswinging door could tip a visitor back down the front stair, especially if the wind catches it.

3) In many climates, you need a screen door, so you will have one door opening in and one opening out. Since the screen door is designed to shed water, is more transparent to the wind, and has less impact if it should hit a visitor or slam against the wall, it should be the one to open outward.

4) In snowy climates, you can easily be trapped in the house because you can't open the door against the snow or ice (it has happened to me). I would consider an unprotected outswinging door to be a lethal hazard in a snowy climate (the same can be said for outswinging storm doors).

5) Finally, it is easier to pry open an out-swinging door than an in-swinging one since there is no stop protecting the lock. Also, since the hinge pins are on the outside, you can simply knock out the pins and remove the door unless you use special hinges with non-removable pins. ■

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