

August: Weatherize Windows and Doors



Task: Stop air leaks around windows and doors with caulking and weather stripping.

Windows provide views, sunlight, ventilation, and solar heating, but they also let 10% to 25% of your heating leak outside.

--<http://www.ecomii.com/building/weatherize-windows-and-doors>

Advanced: If your windows and doors are already well sealed, improve insulation, windows, or other problem area in your home. Invest in thermal window coverings.

Caulking

You can use a caulking compound to seal leaks in a variety of places throughout your home, including around windows and door frames. In addition to plugging air leaks, caulking can also prevent water damage inside and outside of the home when applied around faucets, ceiling fixtures, water pipes, drains, bathtubs and other plumbing fixtures.

Caulk forms a flexible seal for cracks, gaps, or joints less than $\frac{1}{4}$ inch wide. Most caulking compounds come in disposable cartridges that fit in half-barrel caulking guns (if possible, purchase one with an automatic release). Some pressurized cartridges do not require caulking guns. When deciding how much caulking to purchase, consider that you'll probably need a half-cartridge per window or door and four cartridges for the foundation sill.

Caulking compounds can also be found in aerosol cans, squeeze tubes, and ropes for small jobs or special applications. Water-based caulk can be cleaned with water, while solvent-based compounds require a solvent for cleanup. Caulking compounds also vary in strength, properties, and prices. See Table 1 (included in Toolkit) for a description and comparison of the common caulking compounds.

Application. Although not a high-tech operation, caulking can be tricky. Read and follow the instructions on the compound cartridge. And save yourself some trouble by remembering a few important tips:

- Clean all areas to be caulked for good adhesion. Remove any old caulk and paint, using a putty knife or a large screwdriver. Make sure the area is dry so you won't seal in moisture.
- Hold the gun at a consistent angle. Forty-five degrees is best for getting deep into the crack. You know you've got the right angle when the caulk is immediately forced into the crack as it comes out of the tube.
- Caulk in one straight continuous stream, if possible. Avoid stops and starts. Send caulk to the bottom of an opening to avoid bubbles.
- Make sure the caulk sticks to both sides of a crack or seam.
- Release the trigger before pulling the gun away to avoid applying too much caulking compound. A caulking gun with an automatic release makes this much easier. If caulk oozes out of a crack, use a putty knife to push it back in.
- Don't skimp. If the caulk shrinks, reapply it to form a smooth bead that will seal the crack completely.

Weather stripping

Selection. Weather stripping can seal leaks around movable joints, such as windows or doors.

- You need to choose a type of weather stripping that will withstand the friction, weather, temperature changes, and wear and tear associated with its location. For example, when applied to a door bottom or threshold, weather-stripping could drag on carpet or erode as a result of foot traffic.
- Weather stripping in a window sash must accommodate the sliding of panes up and down, sideways or out. The weather stripping you choose should seal well when the door or window is closed while allowing it to open freely.
- Choose a product for each specific location. Felt and open-cell foams tend to be inexpensive, susceptible to weather, visible, and inefficient at blocking airflow. However, the ease of applying these materials may make them valuable in low-traffic areas. Vinyl, slightly more expensive, holds up well and resists moisture. Metals (bronze, copper, stainless steel, and aluminum) last for years and are affordable. They can also provide a nice touch to older homes where vinyl might seem out of place. You can use more than one type of weather-stripping to seal an irregularly shaped space. Take durability into account when comparing costs.
- To determine how much weather stripping you will need, add the perimeters of all windows and doors to be weather stripped. Then add 5 to 10 percent to accommodate any waste. Also take into consideration that weather stripping comes in varying depths and widths.

Application. Weather stripping supplies and techniques range from simple to the technical. Consult the instructions on the weather stripping package. Here are a few basic guidelines:

- Weather stripping should be applied to clean, dry surfaces in temperatures above 20° F (-7° C).
- Measure the area to be weather stripped twice before you cut anything.
- Apply weather stripping snugly against both surfaces. The material should compress when the window or door is shut.

What else you can do:

- Try Seal & Peel Caulk (<http://planetgreen.discovery.com/home-garden/green-your-home-for-winter-wea.html>) This looks especially good for windows that you don't expect to open until spring. Some customers warn of a noxious odor when applying it, and recommend putting it in while it's still warm enough for plenty of ventilation.
- Put up [insulating curtains](#) or window quilts to stop heat loss across glass.

For more information, see these sites:

<http://www.doityourself.com/stry/weatherstrip>

<http://www.consumerenergycenter.org/home/tightenup/caulking.html>