



Green Sense 10/20/13

## Sealing Home Air Leaks

Last week's column described ways to check if your house suffers from air leaks. Air infiltration through leaks can account for a significant amount of heat loss, and drafts can make a home feel uncomfortably chilly. Now that you've found those leaks, it's time to seal them!

Exterior doors and basement and attic doors are common offenders when it comes to air leakage. Weatherstripping leaky doors can reduce your heating bills and diminish uncomfortable drafts. Weatherstripping also works to seal drafty windows.

The type of weatherstripping to use depends on the type of door and frame you have and on how much time and effort you want to put in. The weatherstripping you choose should seal well when the door or window is closed but allow it to open freely.

Here are some tips on weatherstripping from [energy.gov/energysaver](http://energy.gov/energysaver):

Choose a product for each specific location. Take durability into account when comparing costs.

- Felt and open-cell foams are less expensive, but are susceptible to weather and inefficient at blocking airflow. However, the ease of applying these materials may make them valuable in low-traffic areas.
- When using self-adhesive foam strip, make sure the jamb is clean so the adhesive will stick well.
- Vinyl, which is slightly more expensive, holds up well and resists moisture.
- Metals (bronze, copper, stainless steel, and aluminum) last for years.

To determine how much weatherstripping you will need, add the perimeters of all windows and doors to be weatherstripped, then add 5% to 10% to accommodate waste (note that weatherstripping comes in varying sizes and you can use more than one type of weatherstripping to seal an irregularly shaped space). Consult the instructions on the weatherstripping package.

Basic guidelines for weatherstripping are that it should be applied to clean, dry, surfaces in temperatures above 20°F and it should fit snugly against both surfaces. The material should compress when the window or door is shut.

When weatherstripping:

- At the bottom of doors, use door sweeps and thresholds.
- Weatherstrip the entire door jamb, applying one continuous strip along each side and making sure the weatherstripping meets tightly at the corners.
- Use a thickness that results with the weatherstripping pressing tightly against the door when the door closes without making it difficult to shut.

- For windows, apply weatherstripping between the sash and the frame. The weatherstripping shouldn't interfere with the operation of the window.

For other cracks, gaps, or joints less than 1-quarter-inch wide where you have air leaks, but no moving parts, caulk is a flexible material used to seal those leaks. Most caulking compounds come in disposable cartridges that fit in half-barrel caulking guns (if you need to buy a caulking gun, purchase one with an automatic release). Caulking compounds can also be found in aerosol cans, squeeze tubes, and ropes for small jobs or special applications.

When deciding how much caulking to purchase, you'll probably need a half-cartridge per window or door frame and four cartridges for the foundation sill of an average home.

Although not a high-tech operation, caulking can be tricky. Follow the instructions on the package, and remember these tips from [energy.gov/energysaver](http://energy.gov/energysaver):

- For best results, apply during dry weather when the outdoor temperature is above 45°F.
- For good adhesion, clean all areas to be caulked. Remove any old caulk and paint, making sure the area is dry so you don't seal in moisture.
- Apply caulk to all joints in a window frame and between frame and wall.
- 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, avoiding stops and starts, making sure the caulk sticks to both sides of the crack. If caulk oozes out, 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.

For visual D-I-Y, use [www.YouTube.com](http://www.YouTube.com), search on "weatherstripping".

Good luck and stay warm!

A column by Reading Climate Committee members Gina Snyder and Michele Benson