



CAULKING AND WEATHERIZATION

Autumn may be a confusing time of year if you need to seal up your house for the coming winter. Where do you use caulking? Weatherstripping? Glazing? How are they different?

Don't feel alone in your confusion. There are a lot of products available, and the differences among them, where you use them, and how you use them would likely confuse many home builders as well. Let's see if we can make some sense of them. Refer to the chart on page 3 for a guide to the different products and some tips regarding their use.

First, you need to keep in mind just what you are trying to achieve – that is, to seal the exterior of your house to keep out water and cold air. The main thing to remember when you are sealing two different types of materials together is that each material will expand and contract at its own rate. So, you need a sealant that will flex with the seasons and bond to the specific surface(s) you are sealing.

Glazing putty is used to seal glass to the wood sash frame. If the putty is cracked or missing, cold air will bleed around the glass panel. It's easier to work with glazing putty during warm weather, but you can work indoors if it's cold outside. (*See separate handout on "Window Glazing" for how-to instructions.*)



Spray foam is the best product for filling a hole or crack larger than 5/8th of an inch. Modern spray foam sealants not only expand to fill up the hole, but also have insulating value. They will bond very well to just about any surface – including your hands (so wear gloves when you use them!) The foam can be trimmed easily when hardened, but will need to be painted if exposed to daylight. Plan to use the spray foam all at one time, as unused foam will harden in the can.

Caulking (which usually comes in a cartridge-type container, but is occasionally found in squeeze tubes,) is used to fill long, narrow gaps between similar or dissimilar materials. It comes in a variety of colors and is rated by the number of years it will stay flexible. You shouldn't cut costs and get a less expensive caulk, because you'll end up doing the job again in a year or two. Caulks with a polyurethane or acrylic-silicone base are the best all-around caulks available. Many now have a rated life expectancy (the period of time they will bond and stay flexible) of 20-30 years.

Where to Seal Your House: Exterior

Sealing exterior gaps and seams is important home maintenance. It will reduce drafts, dirt, and moisture infiltration into the house walls and contribute to lower heating and cooling costs. You can use **caulk backer rod**, a kind of Styrofoam rope (*right*) to fill gaps, so that you won't need to use as much caulk to close the opening.



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You may need to use a combination of products to seal your house for the winter. Check the following areas on the outside of your house for places where cold air can enter:

- Where the chimney and siding meet
- Joints between eaves and gable molding
- Where the window trim (casings) and siding (or masonry) meet
- Inside corners formed by siding
- Door frames and threshold
- Where the siding meets the foundation
- Joints between masonry or concrete elements (steps, porches, etc.) and the main part of the house
- Where wires, cables, conduit, and garden hose spigots pass through the siding.

Where to Seal Your House: Interior

Sealing each room on the inside is the only way to prevent blasts of air from entering. Even with sidewall insulation, a lot of air will leak into a house. A good caulking job will increase the comfort of your home considerably. You may find gaps so wide that caulk backer rod will be required. You can tape a piece of tissue or plastic wrap to a pencil and check the following places for air leaks:

- Where window trim meets the plaster
- Where pipes pass through walls
- Where dryer or exhaust vents exit
- Door trim (casings) and threshold
- Where baseboards meet the floor
- Outlet and switchboxes on exterior walls: **Gaskets** for outlet and switch cover plates can help prevent air leakage through the walls. If there is a gap between the box and the wall, fill the gap with caulk (It's a good idea to turn off electricity to the box to prevent a shock hazard.)

How to Caulk:

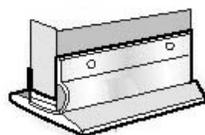
The best time to caulk an exterior joint is in the spring or fall, since extreme heat or cold may affect curing. A standard 10.5-oz. cartridge will usually produce enough caulk to seal two or three windows or doors, if the gap is not too large.

Before applying the caulk, make sure the surface is completely dry. Use a putty knife or old screwdriver to remove any dirt or loose debris, paint build-up, or old caulk from the area; you may need to use a solvent. If you are using a caulking gun, cut off the tip of the cartridge, pierce the foil seal, pull the handle back to its furthest extent and insert the cartridge. As you press the trigger repeatedly to apply the bead, pressure is applied to the end of the cartridge to expel the caulk. When you want to stop applying the caulk, turn the handle 180° to relieve the pressure.

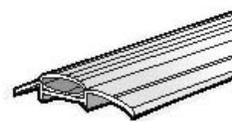
Drawing a good bead of caulk will take some practice. Make sure the caulk overlaps both sides of the gap for a tight seal. You can smooth the bead with a wet finger, with a damp sponge or lint-free rag, or with a special tool made for that purpose.

Weatherstripping Doors:

A quarter-inch gap under a door is equivalent to a four-inch diameter hole in a wall. So, you should always make the door as airtight as possible – not only at the bottom, but all the way around. There are a variety of systems you can use to seal around your door. The old-



Door sweep with vinyl flap

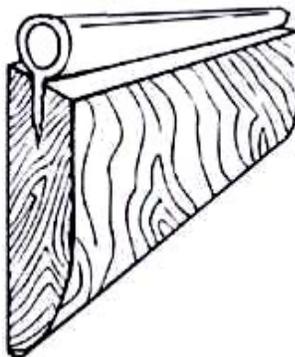


Threshold with vinyl gasket

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fashioned method of **door weatherstripping**, with a metal channel and metal strip that fits into it, is still the most effective. (A full-service lumber-yard or store specializing in doors and accessories are your best bets for locating this type of weatherstripping.) While some of the new plastic systems may not work as well, they will nevertheless reduce air intrusion.

Replacement doorstops with a spongy rubber-bulb weatherstripping will help seal a wood exterior door. They are nailed to the doorjamb and will work on a door that is slightly warped. Pre-hung steel doors have a thermal break and magnetic weatherstripping (much like the door seal of a refrigerator) that work well to seal out the cold. Remember that, with use, the strip along the door bottom in many systems can wear away, so you will need to check it periodically and replace it when necessary. You may also want to look for a system that will allow you to adjust the bottom weatherstripping to keep it snug as seasons change.



There are literally hundreds of ways to seal up your home. The chart below explains some of the products available and where they should be used. (See also our separate handout on "Weatherizing Windows.")

PRODUCT NAME	APPLICATION & USE	COMMENTS
Glazing Compound	Comes in can. Apply with putty knife. Seals glass to window sash frame.	Doesn't store for too long. Replace after one year on shelf.
Latex Caulk	Comes in caulking tube. Bonds wood to wood (to seal around door frame, fill cracks in wood siding, etc.)	Inexpensive. Won't seal two different materials. Works best on wood. Easy to clean up. Paintable. Has a tendency to shrink. Does not remain flexible.
Silicone and Siliconized Acrylic Caulk	Comes in caulking tube. Best all-around caulk. Bonds to almost all dry surfaces. Long-lived; remains flexible.	Fairly long shelf life. Use paint thinner or similar product to clean up tools. Pure silicone is not paintable, and will remain sticky. Paintable silicone caulk will be less sticky after it cures.
Vinyl Spackling	Comes in can. Apply with putty knife. Use for patching holes or cracks in wood.	Easy clean-up. Not a sealer, but a hole-filler.

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Spray Foam	Comes in spray can. Use to fill larger cracks, holes or cavities. Bonds easily to almost all surfaces. Use "low expansion" around window or door frames where swelling could move the jambs out of position; use "regular expansion" where the foam needs to swell to fill the space.	Stiffens as it cures. Once it has hardened, can be trimmed easily Must be painted if exposed to daylight.
Water Putty	Comes in can as a dry powder. Mix with water to plaster-like consistency. Dries very hard. Works well for patching or filling larger holes.	Strong, long-lasting product. Not a sealer, but a hole-filler.
Wood Hardener	Liquid used to reinforce soft wood fibers (i.e., rotted window sills) to form solid base for filling.	Dries clear. Paintable after it cures.
Wood Filler	Comes in can. Paste used to fill holes in wood trim.	Dries light brown. Paintable after it cures.
"V" Plastic Weatherstrip	A self-adhesive plastic weatherstrip adhesive to seal around doors. May also be used on most windows.	Easy to install. Fairly inexpensive. Seems to last 2-3 years.
Metal Channel Weatherstrip	A two-piece metal system used to seal doors. One piece goes on the door; the other, on the door frame. The two pieces interlock.	Long-lasting. Takes 1 to 2 hours per door to install. Positive seal to keep out cold air.
Door Stop with Rubber Weatherstrip Nailed to Door Jamb.	A wood trim piece with rubber weatherstrip attached, used to seal doors.	Easy to install. Lasts about 5 years. Can be used if door is warped.