

Sealing your Home with Caulk

A home that is not sealed for air infiltration will be uncomfortable due to drafts and will use about 30% more energy than a relatively air-tight home. In addition, good caulking and sealing will reduce dust and dirt that can enter homes through cracks and holes.

THE NEED FOR CAULKING

Small, air-leaking cracks at first may not seem to be a substantial problem. But left untreated these tiny gaps can cost homeowners significantly in utility expenses. For example, a quarter-inch opening between a 6-foot 8-inch high pair of doors or two average-sized, double-hung windows equates to a 20-square-inch opening.

LOCATING AIR LEAKS

The first step is locating the air leaks in your home. Several may be quite visible; others may not be as obvious. Some good places to inspect include electrical outlets; door and window frames; switch plates; mail chutes; electrical and gas service entrances; baseboards; cable TV and phone lines; weather stripping around doors; outdoor water faucets; fireplace dampers; where dryer vents pass through walls; attic hatches; bricks, siding, stucco and foundation; air conditioners, and vents and fans.

WHICH CAULKING TYPE IS BEST TO USE?

The next step is selecting the proper compound to use. Look for materials that can expand and contract. Additionally, the material you choose should be resistant to weather, cracking, shrinkage, water and mildew.

Caulking varies in strength, properties and prices.

Silicone is flexible, allowing for joints to stretch or compress after application, and adheres well to painted surfaces. Its cost is high.

Polyurethane, which applied as a spray-foam quickly expands to fit larger areas, is priced moderately high and is the best choice for outdoor areas. Over time, this compound can become dry and powdery.

Water-based foam sealants are best utilized around window and door frames. They must be exposed to air to properly dry (which takes approximately 24 hours). Their expansion rate is only about 25 percent, making this a good choice for new home constructions.

Butyl rubber can seal dissimilar materials (such as glass, metal, plastic, wood and concrete) and is durable for a 10-year period. It has a tendency to shrink, and often requires two applications. This compound also does not adhere well to painted surfaces.

Latex is the choice when sealing joints around tubs and showers. It can also be utilized to fill cracks in tiles, plaster, glass and plastic, and is excellent to fill nail holes. Moderately priced with easy cleanup, its durability varies from around two to 10 years. It will not adhere to metal and must be painted when used on exterior surfaces.

Oil or resin-based compound forms an excellent seal for exterior seams and joints on building materials. Of all the types, this is the least expensive. Because oils dry out and cause material to harden and fall out, its durability rate is only one to four years. Also, it will not adhere to porous surfaces such as masonry and has a limited temperature range.

HOW DO I APPLY THE CAULKING?

Though most caulk is sold in tubes that require a caulking gun, it's also available in handy squeeze tubes for smaller projects and pressurized cans which can be used for large gaps such as around door frames and windows.

Caulking guns consist of a cradle that holds the tube, a plunger to push the caulk out, and a trigger to control the flow. They range in price from under \$2 for bottom of the line models to over \$200 for battery powered ones that work at the push of a button. Those in the \$10 to \$20 price range feature notable improvements such as:

- **Dripless** – The flow stops when the trigger is released without having to manually disengage the plunger.
- **Cutter** – Used to trim the tube nozzle to size.
- **Seal Punch** – Punctures the aluminum seal in caulking tubes.
- **High Ratio** – More thrust in the plunger results in less hand fatigue

Once you've chosen the appropriate compound, you're now ready to apply the caulking. Some tips to keep in mind for a good application:

Before you apply new caulking, remove any existing sealing material. The area should be cleaned with the appropriate solvent to remove grease or debris that would prevent the compound from adhering to the surface. Be sure to use only fresh caulk. When in doubt squeeze a little out and let it dry overnight to see if it hardens properly. Caulking is an acquired skill that takes a bit of practice to master, so practice on scrap until you get the hang of it.



Start by cutting the nozzle at a 45 degree angle equal in width to the gap you plan to fill. Cutting too wide a hole not only wastes caulk but makes the bead more noticeable and harder to smooth out. Only about a quarter-inch of the tip should be removed which will leave an opening of one-eighth to one-quarter inch in diameter. This amount will create the correct amount of bead large enough to fill most cracks.



Puncture the seal on the tube using the punch on the caulking gun or a nail.



Place the tube in the gun and push the plunger up snug. Squeeze the trigger until caulk starts to come out of the nozzle. Put the nozzle in the gap and pull the gun slowly toward you at a 45 degree angle while pushing the trigger. The bead should contact both sides of the joint and fill the gap. Apply the caulk at the bottom of the seam so it fills completely and prevents bubbling.



Use a clean wet finger, damp rag, or special caulk smoothing tool to even out the bead before it skins over

Wear disposable gloves to keep your hands clean when using silicone and other solvent based caulks.

To make a straight line, use strips of painter's tape on each side of the gap. After applying the caulk and smoothing it out, peel off the tape.

DO NOT SKIMP! Be sure to use enough caulk to completely fill the seam.

Should the caulking shrink after the first application, reapply additional compound.

Here is a nice short video to help you:

<http://www.videojug.com/webvideo/how-to-remove-and-replace-exterior-caulk#>