

SERVICE

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Caulking cracks and openings in the home

Lloyd Walker^{1/}

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Quick Facts

Air leakage can be a major factor in heat loss from a house; caulking will seal these cracks and reduce air leakage.

Caulking is a low-cost energy conservation measure which can quickly pay for itself in energy savings.

Such areas as between windows and siding, doors and siding, at corners, at breaks in the outside house surface, where chimney or masonry meet siding, and similar areas should be caulked.

Caulking compound is available in oil- or resin-based caulk, latex-, butyl- or polyvinyl-based caulk, and elastomeric caulks; they vary in price and durability.

Estimating the number of cartridges of caulking compound required is difficult, since the number needed will vary greatly with the size and amount of cracks to be filled.

Air leakage can be a major factor in heat loss from a house. Cracks can develop wherever two different materials or parts of the structure meet. Caulking will seal these cracks and reduce air leakage.

Caulking is an easy do-it-yourself project and requires a minimum of simple tools and no specialized skills. It is a low-cost energy conservation measure that can pay for itself quickly in energy savings.

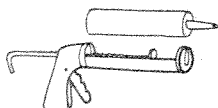
Where Caulking is Needed

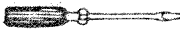
Caulking is necessary in the following locations:

- Between window drip caps (top of windows) and siding.
- Between door drip caps and siding.
- At joints between window frames and siding.
- At joints between door frames and siding.
- Between window sills and siding.
- At corners formed by siding.
- At sills where wood structure meets the foundation.
- Outside water faucets or other special breaks in the outside house surface.
- Where pipes and wires penetrate the ceiling below an unheated attic.
- Between porches and main body of the house.
- Where chimney or masonry meet siding.
- Where storm windows meet the window frame, except for drain holes at window sill.
- And if there is a heated attic, where the wall meets the eave at the gable ends.

Tools Needed

- Ladder
- Caulking gun
- Caulking cartridges



- Oakum, glass fiber strips, caulking cotton or sponge rubber.
- Putty knife or large screwdriver 

Safety Precautions

The person doing the caulking will need a ladder to reach some of the areas which need to be caulked. Safety measures need to be observed.

Level and block the ladder in place; have a helper hold it if possible. Don't try to reach that extra little bit—get down and move the ladder. The caulking gun should be carried in a sling so that both hands can be used to climb the ladder.

Materials Needed

Caulking compound is available in these basic types:

• Oil- or resin-based caulk; readily available and will bond to most surfaces—wood, masonry and metal; not very durable but lowest in first cost for this type of application.

• Latex-, butyl- or polyvinyl-based caulk; all readily available and will bond to most surfaces; more durable but more expensive than oil- or resin-based caulk.

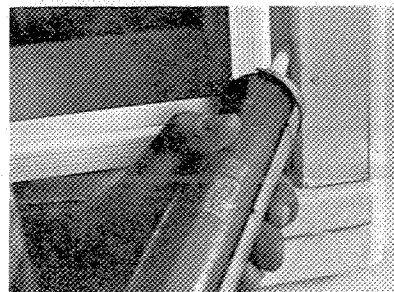
• Elastomeric caulks; most durable and most expensive; includes silicones, polysulfides and polyurethanes; the instructions provided on the labels should be followed.

• Filler; includes oakum, caulking cotton, sponge rubber and glass-fiber types; used to fill extra wide cracks or as a backup for elastomeric caulks.

Estimating the number of cartridges of caulking compound required is difficult, since the number needed will vary greatly with the size and amount of cracks to be filled. Rough estimates are:

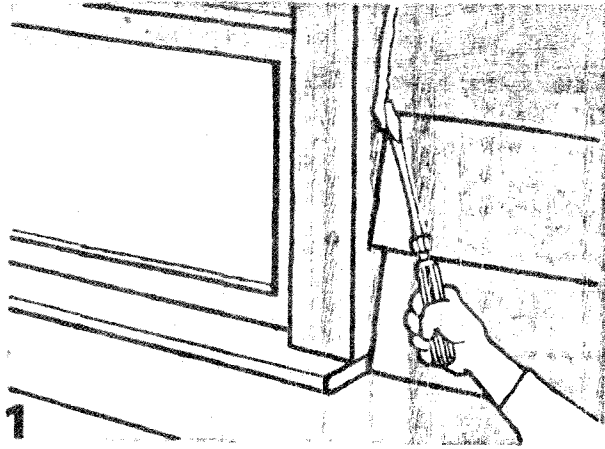
- 1/2 cartridge per window or door
- 4 cartridges for the foundation sill
- 2 cartridges for a two-story chimney

If possible, it is best to start the job with a half-dozen cartridges and then purchase more as the job continues and they are needed. It is important to follow temperature requirements for application of caulking material.

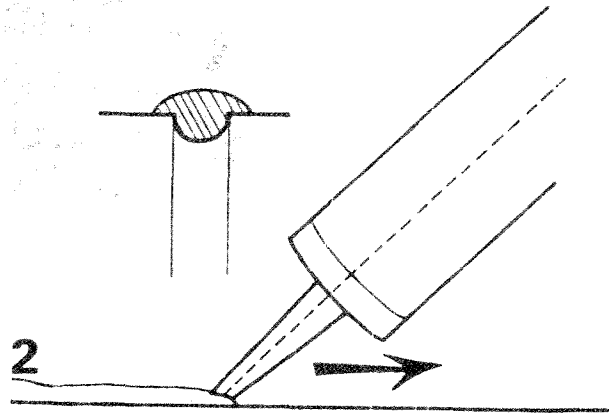


^{1/}Lloyd Walker, CSU research associate, agricultural engineering; fact sheet adapted from "In the Bank... or up the Chimney," U.S. Department of Housing and Urban Development (revised 6/15/82)

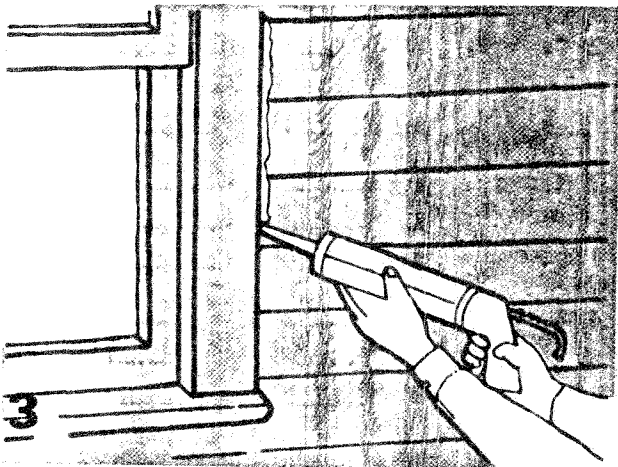
Installation



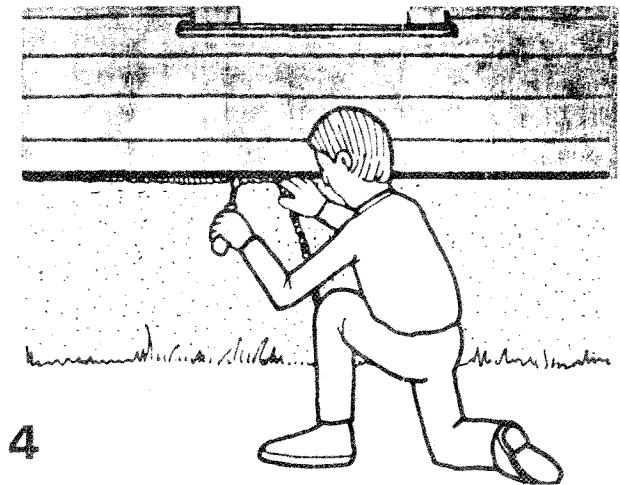
Before applying caulking compound, clean area of paint build-up, dirt or deteriorated caulk with solvent and putty knife or large screwdriver.



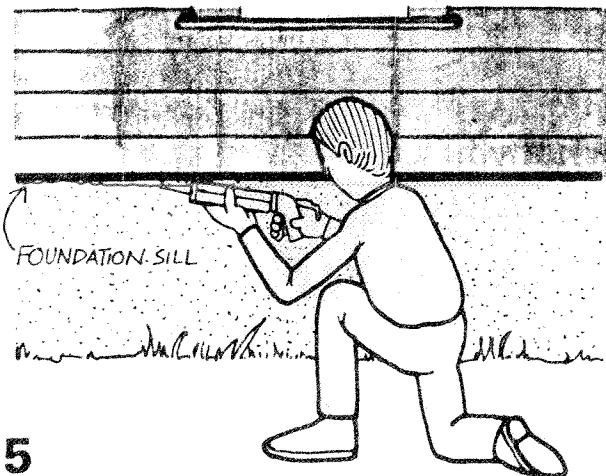
Drawing a good bead of caulk will take a little practice. First attempts may be a bit messy. Make sure the bead overlaps both sides for a tight seal.



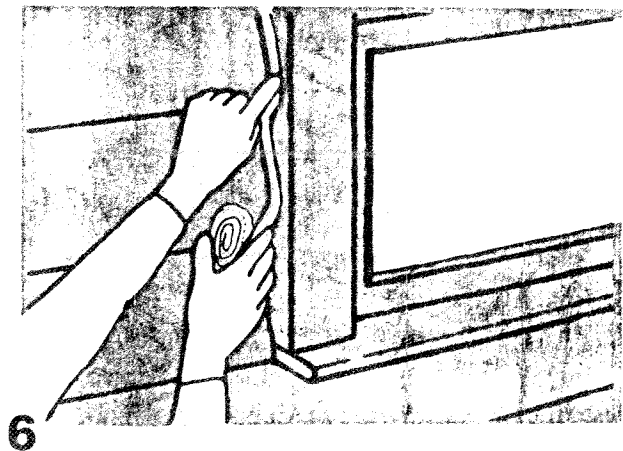
A wide bead may be necessary to make sure caulk adheres to both sides.



Fill extra-wide cracks like those at the sills (where the house meets the foundation) with oakum, glass-fiber insulation strips, etc.



In places where you can't quite fill the gaps, finish the job with caulk.



Caulking compound also comes in rope form. Unwind it and force it into cracks with your fingers. Extra long cracks can be filled easily this way.