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HEG82-158 Weatherizing Your Home-- Weatherstripping

Kathleen Parrott

University of Nebraska-Lincoln, homes@vt.edu

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Weatherizing Your Home-- Weatherstripping

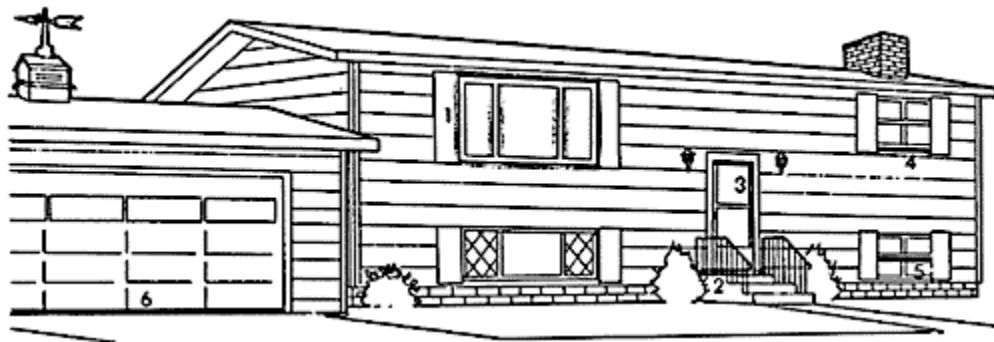
This guide discusses the practice of weatherizing your home through weatherstripping. Selection of materials, types of weatherstripping and buying and installing these products are discussed.

Kathleen Parrott, Extension Specialist (Housing/Interior Design)

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Insulation is not the whole story for energy conservation! Even if your home is well-insulated, energy may be wasted through air infiltration. Air can leak around doors and windows, foundations, chimneys, exterior plumbing, etc. In the winter, air heated by your furnace is lost to the outside; in summer, hot outdoor air puts an extra load on your air conditioner. If your home is typical, one-half to three-quarters of your fuel bill is the result of air infiltration.

Weatherizing your home by caulking and weatherstripping can effectively reduce energy waste. In fact, the cost of caulking and weatherstripping can usually be paid back in energy savings in less than one year. This makes weatherizing one of your best investments in energy conservation. Even better, it is something that you, the homeowner, can do!



Weatherstrip around moving parts such as doors (2, 3, 6) and windows (1, 4, 5).

Caulking seals cracks and joints in the house. *Weatherstripping* reduces air infiltration around moving parts of the house, such as doors and windows. This NebGuide discusses weatherstripping. Ask your Extension Agent for a copy of *Weatherizing Your Home--Caulking* (HEG 82-157) to learn about caulking.

Selection of Weatherstripping

There are many types of weatherstripping on the market, each designed for a different type of application. Some factors to consider are:

- Resistance to wear by abrasion or friction. For example, the bottom of a door will receive more wear than the bottom of a window sash.
- Exposure to weather. Some types of weatherstripping will deteriorate when exposed to moisture and are best for interior use.
- Material to be weatherstripped. Will a self-adhesive weatherstripping work, or must it be nailed in place?
- The size of the gap. Some types of weatherstripping are not suitable for large gaps.
- Evenness of the gap. Will you need a type of weatherstripping that will adapt to uneven gaps?
- Appearance. Some types of weatherstripping are hidden after installation; other types may look "added on."
- Durability. A more expensive type of weatherstripping that will last can be the most economical choice.
- Ease of installation. Are special tools required?

Weatherstripping Materials

Most weatherstripping is made of sponge, foam, felt, vinyl or metal, or a combination of materials. These materials vary in cost and durability.

Sponge or foam is inexpensive, but not very durable. It tends to deteriorate when exposed to weather and is not suitable for applications where there is friction or abrasion. Neoprene sponge or vinyl foam is more durable than sponge rubber or polyurethane foam.

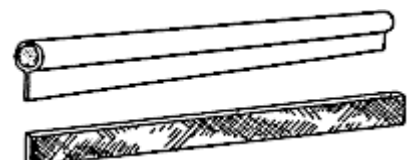
Felt is also relatively inexpensive, but not very durable. Do not use felt where it is exposed to the weather or moisture. Felt tears easily and requires care in installation. It should not be used where there is friction or abrasion. All-wool felt is more durable, but is also more expensive.

Vinyl is used in many types of weatherstripping. It is generally a durable product and resistant to moisture. It is usually more expensive than foam or felt.

Metals, such as bronze, copper, stainless steel and aluminum, are used in weatherstripping. Metal weatherstripping tends to be low cost and durable. Aluminum is frequently used for reinforcing other weatherstripping materials.

Types of Weatherstripping

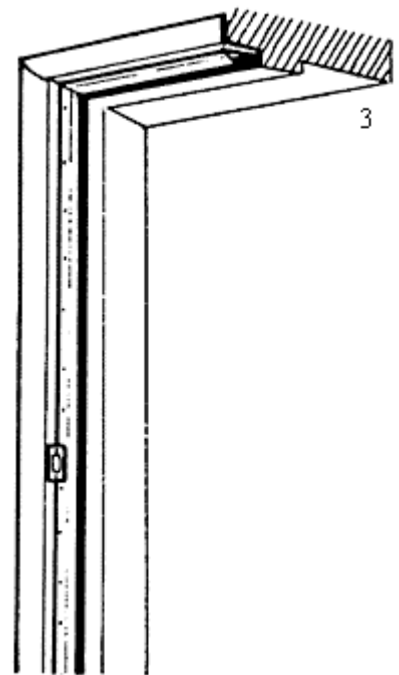
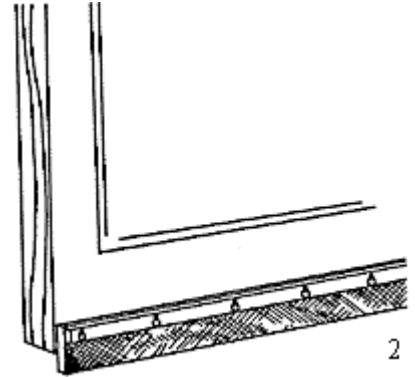
1. *Pliable gaskets* -- foam, felt or vinyl.
 - *Use*
 - door and window stops
 - bottom or top of window sash



- *Advantages*
 - easy installation
 - low cost
- *Disadvantages*
 - durability varies with material, generally low
 - self-adhesive strips may not work on metal
- *Comments*
 - foam and felt should be considered as temporary.

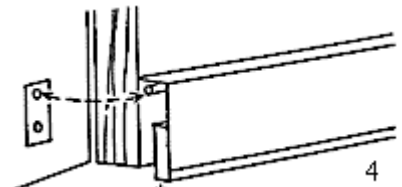
2. *Rigid strip gasket* -- vinyl, felt or foam attached to wood or metal strips.

- *Use*
 - door or window stops
 - bottom or top of window sash
 - bottom of door
- *Advantages*
 - rigid strip can be painted to reduce visibility
 - easy installation
- *Disadvantages*
 - durability varies with material used
 - visible when installed
- *Comments*
 - some types of rigid strip gaskets have slot holes for fasteners to allow for adjusting as weatherstripping wears.



3. *Spring, tension or folded strips* -- bronze, copper, aluminum, stainless steel, or vinyl.

- *Use*
 - window sash channels
 - between door and jamb
- *Advantages*
 - durable
 - cannot be seen when door or window is closed
- *Disadvantages*
 - may make opening and closing of door difficult
 - not suitable for uneven gaps
 - somewhat difficult to install in double-hung windows
- *Comments*
 - some manufacturers include an extra piece for striker plate when weatherstripping a door
 - self-adhesive vinyl available



4. *Door sweep* -- aluminum or stainless steel, with sponge, vinyl, felt or plastic brush.

- *Use*
 - bottom of interior side of in-swinging door
 - bottom of exterior side of out-swinging door

- *Advantages*

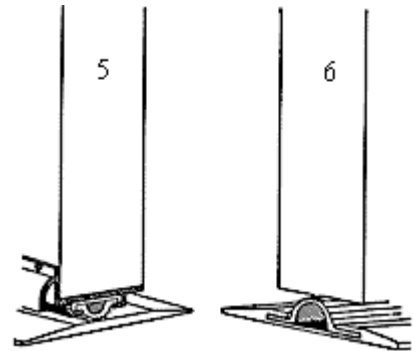
- most can adjust to uneven threshold
- relatively easy installation

- *Disadvantages*

- exposed to view
- may drag on carpet

- *Comments*

- select a door sweep with slot holes to adjust height of sweep as it wears
- automatic sweep retracts as door is opened, is more expensive and difficult to install, but more durable as sweep does not drag on floor.
- automatic sweep may require brief pause after door is unlatched to allow time for retraction



5. *Door shoe* -- aluminum with vinyl insert.

- *Use*
 - fits over door bottom and screws into face

- *Advantages*

- durable
- can be used with uneven opening
- drip cap on exterior to shed rain

- *Disadvantages*

- relatively expensive
- installation can be difficult
- may require planing of door bottom

- *Comments*

- some door shoes have replaceable vinyl inserts for longer durability

6. *Bulb threshold* -- vinyl bulb and aluminum.

- *Use*
 - door thresholds

- *Advantages*

- combined threshold and door weatherstrip
- available in different heights

- *Disadvantages*

- vinyl bulb wears from foot traffic
- relatively expensive

- *Comments*

- choose a threshold with replaceable vinyl bulb for increased durability

Buying and Installing Weatherstripping

Weatherstripping is sold by the linear foot. Measure around the door or window to be weatherstripped to determine the total length needed. It is also advisable to measure the width and depth of the gap. Some types of weatherstripping come in different widths and thickness. If the weatherstripping is too thick, it

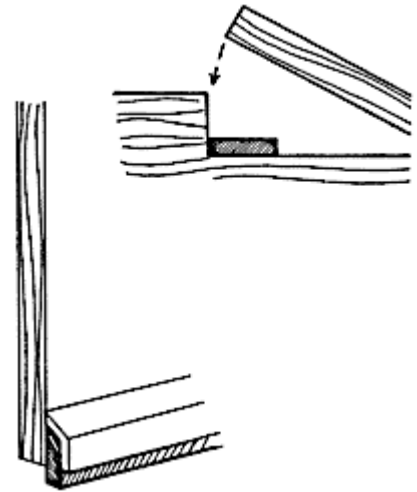
may interfere with the latch or locking mechanism on the door or window. If it is too narrow, it will not be effective.

Most weatherstripping is easy to install. Self-adhesive weatherstripping requires a clean, dry surface. Other types are held by tacks, nails or screws. These fasteners are sometimes included with the package of weatherstripping. The weatherstripping may also have pre-punched holes for easier application.

Some types of weatherstripping are attached to the frame, while others are attached to the door or window sash. Follow the manufacturer's directions for the correct location.

Weatherstripping is an effective way to reduce air infiltration around doors and windows. It also has the added benefit of helping to stop dust, dirt and insects from entering the house.

For more information on ways to conserve energy around your home, contact the Cooperative Extension Service Office in your county.



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