Weather Stripping and Caulking

Jesse B. Brooks

University of Kentucky, College of Agriculture, Cooperative Extension Service

Agriculture, Home Economics, 4-H, Development

WEATHER STRIPPING

There is a variety of weather stripping materials on the market. A few types are shown and described below. Cost, ease of application, appearance, and lasting qualities of these materials should be considered in their selection. Installation instructions are usually shown on wrappings, packages, or containers of the items. Kits may also include brass or aluminum screws or other water-resistant fasteners.

Waterproof Weather Strip Tape—Self-sealing, transparent, durable poly-tape for sealing cracks in any location. Easy to use by pressing to a clean and dry surface. For windows, tape should be applied half on stop and half on sash. Some tapes may pull off paint when removed.

Felt Weather Strip—Low cost material in various widths and thicknesses. Fasten to wood by tacking or stapling and to metal with carpet taping or other good adhesive. Must be applied to door stop or jamb and window stop, sill or sash, so it fits snug against other member. Easy to apply, inexpensive, tears easily during use, not as effective when wet.

Self-Adhesive, Press-On Foam Tapes—Made of high grade resilient sponge rubber or vinyl with paper or vinyl backing in thicknesses up to 3/8" and widths up to 3/4". Backing is peeled off as tape is pressed in place on door and window jambs, stops or sash. Surfaces must be clean and dry; should be applied at room temperature for best adhesion. Low cost, easy to install; foams tend to deteriorate when exposed to weather, may last only one season. Paint not affected when removed.

Vinyl Weather Strip—General purpose moisture and temperature resistant strip easily applied to wood or metal with tacks, staples, screws or good commercial adhesive. Tube shaped for a tight fit, with extended strip for stapling or bonding to door and window jambs, stops or sash. Wood mould may be used over strips. Easy to apply; durable.

Metal and Felt Strip—Aluminum or other metal strip crimped to thin felt strip provides added strength for attaching to door jambs and window stops. Felt may tear during normal use, especially on doors; felt not as effective when wet.

Metal and Vinyl Strip—Aluminum, brass, or other metal strip crimped to vinyl strip with one edge thickened for snug fit between the two members, allowing for expansion and contraction of members. Durable, fairly easy to apply on door and window jambs.
Sponge Rubber Neoprene Coated Strip—Round, high quality, durable sponge rubber with a spring steel reinforced strip for attachment providing exceptional holding strength when tacked or stapled. For bottom of door, fasten to door; for sides, fasten to door jamb. Also used on windows by fastening to appropriate frame, stop and sash. Easy to install.

Cushion Weather Strip—Thin bronze, aluminum, or other metal strip in various widths with one side flared out. Strip is tacked to door jamb so when door is closed it presses against the flared side making a tight fit. Also used for casement windows; not suitable for double hung windows except at top and bottom. Low cost, easy to install, durable, not affected by moisture or temperature.

Metal and Vinyl Door Bottom Strip—Brass, plated steel, aluminum, or other metal crimped to felt or vinyl strip. Fasten to lower edge of door with screws or small nails. Easy to apply, vinyl more durable; felt tears easily and is not as effective when wet.

Sponge Rubber Door Bottom Seal—Mainly for garage doors, a blend of high quality sponge rubber that stays flexible at extremely low temperatures. Normally applied to bottom of door with wide lip outside; wide lip inside if garage floor is lower than driveway.

Weather Strip and Caulking Cord—Five or six caulking cords in a strip for sealing cracks in windows, doors, around room air conditioners. Applied by pressing in place. Cord stays pliable and adheres to any surface. Low cost, easy to apply, durable, not affected by moisture.

Air Conditioner Weather Strip—Rectangular poly foam that press-fits between the top frame of lower sash and upper pane to seal off the air spaces between window and air conditioner. Low cost, easy to install.

Fiber Glass Insulation Strip—Insulation strip in various sizes used with waterproof tape for closing large cracks around basement and garage doors, windows and other cold air leaks. Also wrapped around hot water pipes for insulation.

CAULKING

Caulking around windows, door frames, and other places to prevent air leakage is usually done by the painting contractor in finishing up a new house. The life expectancy of the job will depend upon the quality of materials used and the workmanship of the contractor. Sealing around plumbing pipes that extend through floors and walls is generally the job for the plumber.

Upon visiting suppliers, do-it-yourselfers will find many caulking materials available at quite a variance in price. Most materials are packed in cartridges and can be easily applied with a caulking gun. For large jobs, 5-gallon containers of gunnable materials are used. Manufacturers usually print on each cartridge a description of the material, its performance quality, and directions for application.

Caulking materials should be selected on the basis of their ability to adhere to other materials such as wood, glass, metal, plastic and masonry, since these materials expand and contract. Resistance to weathering, cracking, shrinkage, water and mildew are also of importance. Some manufacturers will state the life expectancy of their product if properly installed inside or outside the home.

Caulking compounds of highest quality and longest life expectancy are generally highest in cost. Assuming that the caulking material is to be used outside, within its limits of movement and exposure, the following years of useful life may be expected: Silicone—30; polysulfides, polyurethanes, neoprene, acrylic (solvent release), Vulcanized butyl rubber—20; acrylic-latex, butyl rubber, and synthetic caulking compounds—8 to 10, cheaper caulking compounds—3 to 5 years. This is only a partial list of materials available and the list is not meant to exclude any product.

Caulking should not be applied at temperatures below 40°F. Actually, contractors and do-it-yourselfers are encouraged to install caulking in the 45°F to 55°F temperature range. At these temperatures expansion and contraction at joints are at a midway point.

Surfaces to be caulked should be clean, dry and grease-free. Remove dust, loose particles and old caulking. A steel brush is a good tool for cleaning joints. Refer to the manufacturers recommendations for caulking cracks that are unusually wide or deep.