

Weatherproofing a window means closing two things in order: the gaps in the frame, then the seals on the parts that move. Which fix you use after that, temporary or permanent, depends on how often you open the window, not just the season.

What Is Window Weatherproofing?



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Window weatherproofing is the process of sealing a window so air, rain, and moisture can no longer pass through it. It differs from weatherstripping, which is one material you use inside that process. It also differs from replacing the window, a separate and larger decision covered later in this article. You can weatherproof a window completely and it will still be an old, single-pane window. Weatherproofing fixes leaks, while replacement changes the window itself.

How Do You Find Where a Window Is Actually Leaking?

First of all you have to inspect for gaps in the windows, and after that you can deal with the moving parts. That order matters because the two problems have different causes and different fixes. Treat them as one job and you will likely fix the easy problem while missing the one actually costing you money.

Start with the frame. Run your hand along the trim and the jamb on a windy or cold day and feel for air movement. A held-up tissue or a lit incense stick works the same way. Watch for movement in the smoke or paper near the frame's seams, not the glass itself. This is the same air-leak test ENERGY STAR recommends for windows and doors in its [DIY sealing guide](#). If the smoke pulls toward the window or drifts sideways at one point, that spot has a static gap in the frame or trim. It is not a problem with the sash.

Then check the moving parts separately. Open and close the window and feel for looseness, rattling, or resistance. Check any weatherstripping already in place. Compressed, cracked, or missing material along the sash or track means that seal

has failed, even if the frame around it is solid. These are two different repairs. Confusing them is the most common reason a DIY weatherproofing job fails to stop the leak.

How Do You Seal Gaps Around a Window Frame?



Caulk seals frame gaps. Apply it to the stationary joints where the frame meets the wall or trim, never to the parts of the window that open and close. Use silicone or polyurethane caulk on the exterior, since both hold up to weather exposure. Use latex caulk on the interior, since it applies cleanly and paints over well.

Before applying anything, remove old caulk, paint flakes, and debris from the joint with a putty knife or sandpaper. Let the surface dry completely. A clean, dry joint is what makes caulk adhere. Skipping this step is the most common reason caulk fails within a season. Apply a continuous bead along the joint and smooth it with a putty knife or a gloved finger before it skins over. Let it cure fully, following the product's instructions, before painting it or exposing it to rain.

Once you seal the stationary gaps, the moving parts of the window are next.

What Type of Weatherstripping Does Your Window Actually Need?

The exact type of weatherstripping depends on the window's style and condition. Answer that question before you buy anything. The wrong material for the window type will fail quickly or will not seal at all.

Double-Hung Windows

Double-hung windows need weatherstripping at both the sash and the jamb, since both surfaces move or slide against each other. V-channel is also called V-strip or tension-seal weatherstripping. It fits into the jamb channel and compresses as the sash slides past it. Pile weatherstripping, a brush-like strip, works well along the meeting rail where the upper and lower sashes overlap.

Casement Windows

Casement windows swing outward on a hinge rather than sliding. They only need foam tape along the stops, the parts of the frame the sash presses against when closed. The compression from closing the window against the foam is what creates the seal.

Sliding Windows

Sliding windows use a pile weatherstripping strip in the track, similar to the meeting-rail strip on a double-hung window. The sash slides horizontally rather than vertically. The strip needs to sit flush in the track without bunching, or the window will drag or fail to close fully.

In all three cases, condition matters as much as style. A frame that is warped, swollen, or has soft or rotted wood will not hold weatherstripping evenly, no matter which type you use. That kind of damage usually points back to moisture as the underlying problem. Address it before any weatherstripping goes in.

Why Rain and Moisture Should Be Fixed Before

Cold Air



Rain and moisture are a bigger issue than just cold air, so they take higher priority when deciding what to fix first. A cold-air leak raises your energy bill. A water leak rots the frame. Repeated moisture exposure also raises mold risk, and the EPA's guidance on mold prevention treats moisture control as the first step, not mold cleanup after the fact ([EPA: A Brief Guide to Mold, Moisture and Your Home](#)).

Treat a window with visible water staining, soft wood, or a musty smell at the sill before a window that is simply drafty. Weatherstripping and caulk can wait a season without doing structural damage. A wet sill that keeps getting wet does not improve on its own.

Rain intrusion around a window causes the same kind of long-term damage as a poorly maintained roof. For the roof side of this problem, see our guide on [roofing maintenance for rainy seasons](#).

Temporary or Permanent — And Should You DIY

It?

If you rarely use a window, live somewhere the weather barely changes, or keep a storeroom closed for years, choose a permanent solution. If it's urgent, or you have to use that window again, use short-term tools instead.

That's the decision in practice. A rarely opened window in a stable climate, or a storage room that stays sealed year-round, is a good candidate for a permanent fix. Weatherstripping, caulk, or a storm window works well here: install it once and leave it alone. A window you still need to open, or a leak you need stopped today, calls for a temporary tool instead: window film, a draft stopper, or a removable interior storm panel. These go up in an afternoon and come off again without damaging the frame.

For homes in more extreme or variable climates, this calculation shifts. See our guide on [structures for extreme climates](#) for how climate stability changes these decisions.

Whether to do the work yourself follows the same priority as the moisture question above. If it's just about air, or it's a short-term fix and you have time, DIY is fine. Weatherstripping, caulking, and film installation are all straightforward with basic tools. If the problem involves water intrusion or rot, or the frame is already damaged, get help from a window professional instead. The same applies if you don't have time to do the job properly.

For more on sealing a home's envelope beyond windows, see our full [Architecture](#) and [Home Improvement](#) hub.

[IMAGE: simple decision flowchart — usage frequency and urgency on one axis, temporary vs. permanent outcome on the other]

FAQ

How do you weatherproof windows from the outside vs. from the inside?

Exterior and interior work target different problems. Exterior caulk and trim sealing stop wind-driven rain at the joints. Interior weatherstripping stops conditioned air from escaping at the sash and jamb. Most windows need both, done as separate steps rather than one combined job.

Does window weatherproofing plastic actually work, and when should you use it?

Plastic film kits create a sealed air pocket over the window, using shrink film and heat. They do reduce drafts for the season you install them. They work best as a temporary, removable fix for a window you don't plan to open, not as a substitute for weatherstripping on a window you use regularly.

How do you install weatherstripping on sliding windows specifically?

Clean the track thoroughly before you start, since dust and old adhesive residue keep new weatherstripping from sitting flush. Measure and cut a pile strip to match the track length, then press it into the track edge where the sash slides past. Test the slide action before you call the job done, since a strip set too high will cause the window to drag.

Do windows need weatherproofing for summer too, or is this just a winter job?

Summer weatherproofing addresses the same gaps as winter weatherproofing, since an air leak lets cool conditioned air out just as easily as it lets warm air out. The added factor in summer is solar heat gain through the glass itself, which is usually addressed with shades or solar window film rather than caulk and weatherstripping.

How long does DIY window weatherstripping actually last before it needs redoing?

Lifespan depends on the material and how much the window is used, since foam compresses and degrades faster than rubber or pile strips. A window opened daily also wears its seal faster than one left closed.

About the Author

Hamza is the founder of Home Narratives, a home-improvement content site he runs as a solo operator. His background is in web development, SEO, and content strategy rather than hands-on trade work, and this guide reflects research and editorial judgment rather than on-site experience. For hands-on diagnosis or repair, consult a licensed window or weatherization professional.