What Causes Window Seals to Fail?

Naturally, efficient window seals are a top priority for both residential and commercial building occupants. Without window seals, homes and business buildings are much more costly, drafty, and uncomfortable places. We all know how to correct the problem after window seal failure occurs — by replacing the seal. But, why do window seals fail? Knowing how we can prevent window seal failure empowers us to fix the problem before it happens, and keep your beautiful windows well sealed.

Contents on this blog :

What Have We Got To Lose From Neglecting Window Seals?

Failed window seals undermine the purpose of your commercial and residential windows. Much of the overall energy-efficient windows depend on the usefulness of the seal. Still, we're busy with lots of competing priorities, so understandably inspecting window seals might drift to the bottom of the list. But, here are some reasons to avoid neglecting window seal maintenance:

- *Drafts:* A well-working window seal is necessary to prevent outside air from flowing in with all its uncontrolled temperature variations and moisture from flowing into your interior space.
- *Money:* The seal is also the only line of defense between you and potential bills for residential window repair or replacement due to weather-damaged windows, sills, frames, ceilings, walls, floors, furniture, electronics, artworks, and other possessions.

- *Waste:* It prevents the excessive amounts of heating and cooling loss that cause discomfort and escalating electric bills.
- *Comfort:* The window seal is also the front line protector of your comfort year-round, no matter what kinds of weather events are battering your home's or your business's exterior.

So, What Are the Causes of Window Seal Failure?

There are countless potential contributors to the dislocation or deterioration of window seals. These can include regional climate, location of windows on the building, landscape elements around the windows, interior and exterior activity in the urban or rural environment around the structure, choices of window treatments, and so on and on. But, here are some of the most common reasons for window seal failure:

Temperature Extremes

The defender of your home's interior against the brutal cold and blazing hot temperatures outside is the humble weather seal material around your stunning energy-efficient windows. Walls, roofs, doors, windows, and frames are rigid, not flexible. So, weather seals are the protective materials doing all the work of expanding and contracting along with the seasonal extremes in temperatures, atmospheric pressure, and moisture. Prolonged exposure to heat and cold can cause window seals to shrink, stretch and sag, crack, become brittle and disintegrate, and start to separate from the frame or other surface, weakening weather protection.

Elements Breaching the Window Seals

Window seals are manufactured to withstand the punishments that the weather elements hit them with in the various North American climate regions. However, even the strongest and most ideally installed window seal material has its limits. In coastal areas where window seals are frequently bombarded with hard rains, the same water that carves canyons can likewise wear on your window seals. Then wind and water can flow through. Mold, wood rot, metal rust, and all manners of corrosion predictably follow.

Mold Growth

Around windows in locations that invite frequent large amounts of condensation, the window seal, along with the frame and sill and other parts can develop mold, if not wiped dry promptly. In addition to its other damaging and destructive qualities, mold is very effective in obliterating the integrity of surfaces, adhesive properties, finishes, etc. Window seals, often made of rubber or composite material, like many other structural and finish products, are vulnerable to the impacts of mold growth. If you detect mold, remove it immediately using a cleaning agent designed to eradicate mold spores.

Poorly Fitting or Dislodged Window Seal

If a window seal does not fit properly or has become separated from the surface on which it's installed, it cannot work efficiently for weatherizing. Possible causes are window seals that are cut too short for a complete seal, grease from hands or tools on the seal backing, which can compromise the integrity of the seal. Other issues are strips that are too narrow in width, or too thin in-depth, or that are configured inappropriately for the gap, or that have missing or improperly installed fasteners. Routine inspections of your windows and seals can expose needs for fit corrections or other remedies.

Aging or Outmoded Window Seals

Window seals normally do not have an indefinite life expectancy. So, there comes a time when aged windows with old seals require an evaluation and maybe need to be removed from the recycling bin. It's the right way to preserve the integrity of the windows and protect your investment in your asset and comfort levels for occupants. Inferior or outdated weather seals do not provide optimum protection from elements. Replacing window seals with upgraded versions ensures effective performance.

Deferred Maintenance

Follow the manufacturer's instructions for proper maintenance of window seals. Of course, such instructions can tend to go sailing into wastebaskets unread. But, reading the care instructions is a practical step toward extending the life of window seals and keeping them functioning optimally. Whether the seal is rubber, plastic, metal, felt, or some bonded combination of these or other materials, following the instructions for care is usually simple. Typically, the point is to keep seals dry and clean them using whatever cleaning agent the manufacturer recommends. Beyond that, check for needed adjustments or replacements.

Filler Gas Leaking

Today's triple and double pane gas filled windows are frequently filled with argon or krypton gas, used to minimize convection in the window and thereby maximize the energy efficiency of the window. Double or triple-pane windows filled with argon, krypton, or other fill gas can be expected eventually to leak up to about 1% per year, according to some industry estimates.

The amount of gas leaking from your krypton or argon gas-filled windows depends on the quality of the windows and installation, the amount of sun exposure the windows receive, the altitude of your area, climate, and other factors. The good news is that gas-filled windows normally will continue to perform well even though many years of gradual gas loss. If around 80% of the fill-gas remains in a window, the gradual leaking does not significantly affect the window's effectiveness. So, at 1% gas loss per year, after 20 years, the window will still be energy-efficient.

But, in the case of a major breach of the window's thermal barrier resulting in loss of too much or all of the insular fill-gas, window replacement may become necessary. Signs of leakage include a foggy appearance indicating condensation is forming between the

window panes and has been replaced by moist air.

First, wipe both sides of the window, to ensure that the moisture you see is actually inside the window. Then, contact your window manufacturer or the company that sold you the windows and installed them. Their technician can use gas-detection equipment to confirm that there is a gas leak and that window replacement is necessary.

Homeowners should be confident that argon and krypton gases are harmless and that leaking these gases presents zero health hazards to any occupants of your home.

How to Prevent Broken Window Seals

By using a few basic precautions, you can protect window seals against breakage and maintain optimum energy efficiency throughout the lifetime of your beautiful high-performance windows:

- Inspect your windows at least once each year, ideally before winter, to locate and caulk any gaps between glass panes and the window sash, for added protection.
- Don’t pressure wash windows for exterior cleaning. Extreme water pressure can cause water to work into the window sash and potentially cause damage to the seal.
- Do not use a heat gun for stripping paint, lacquer, varnish, or other finishes from window frames, to avoid the risk of damaging seals and potentially causing them to fail.
- Don’t apply chemical paint or varnish strippers to remove window finishes. Chemical strippers can be safely used on some areas of windows, but on the sashes near the window panes, remove finishes by manual sanding instead.
- Some manufacturers may assert that adding reflective window film can damage the seals. Read your window warranty before you add reflective film to the window glass, to make sure that your window manufacturer will still honor the warranty if issues arise after the film is applied.

WINDOW SEALING

BENEFITS OF WINDOW SEALING

- Increased Energy Efficiency and More Money Saved
- You Feel More Comfortable
- Longer Window Life
- Reduce Allergens and Bugs

SEAL AND INSULATE YOUR

Window Maintenance and Seal Preservation

It's fair to say that few parts of a building's construction deliver a greater value for the investment in installation and maintenance than window seals do. The thin strips protect the building structures and interior contents of our homes and businesses.

That's a lot to expect, especially in exchange for the comparatively small cost of window seals. So, clearly, bumping window seal maintenance up your priority list is the smart move. With a little routine cleaning and adjustment, as needed, you can expect your window seals to perform efficiently for much longer.

Advanced Window Products, Salt Lake City Utah

We are Utah's leading window company. We offer Utah homeowners great prices on top-quality energy-efficient vinyl windows, French doors, sliding glass doors, and pet doors installed in patio doors. We sell our beautiful, high-efficiency windows and provide house windows installation directly from our factory for our customers — eliminating mark-up and common warranty issues.

All our installers are lead-safe certified as well as NFRC, AAMA, and Energy Star Certified. Our team is deeply committed to exceptional customer service for vinyl window repair, replacement, and other needs of our valued customers.

For more help correcting window seal failure or with energy-efficient replacement windows, call Advanced Window Products, Salt Lake City UT at (801) 505-9622, or use our online contact form.

Advanced Window Products is a green business. We are also a socially responsible company, supporting numerous charities, including Habitat for Humanity and the Utah Make A Wish Foundation. We participate in Buy Local First Utah.
