# Vinyl or Aluminum Windows – Which is Better?

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Today's state-of-the-art energy-efficient replacement windows are offered in a vast range of options for everything from aesthetic styles, to framing materials, to finishes. The standard wooden window frames are now mostly found on older homes, often with a lot of traditional charm and even more old-fashioned inefficiency. In all types of replacement windows, highly popular vinyl and aluminum framing materials have emerged as more practical long-term choices than wood, but which is best — vinyl or aluminum?

## But, Which Window Frame is Best – Vinyl or Aluminum?

Both vinyl and aluminum window frames are typically less expensive, more durable, and require less maintenance than conventional wooden alternatives, however, there are pros and cons to each. When choosing the best window framing material for your home or business, you'll probably want to factor in price, energy efficiency, durability, maintenance needs, insulation value, and other considerations.

Here are five major differences between the two currently most popular window framing materials, aluminum, and vinyl:

#### Insulation

For maximum effectiveness, only choose energy-efficient replacement windows with the EPA's logo indicating that the product has been Energy Star® rated. Windows and doors that are qualified for this rating can reduce heating and cooling bills by as much as 30%.

- Vinyl frames are supreme window insulators because they minimize heat transfer. The <u>best vinyl window manufacturers</u> build high-quality replacement windows that rival wood frames for window insulation value.
- Aluminum window frames readily conduct heat and cold, so they are not as energy
  efficient as vinyl alternatives. Some more advanced aluminum versions are
  designated as "thermally improved." These models have "thermal breaks," which are
  layers of vinyl installed inside the aluminum frame as an insulator against loss of
  thermal energy.

### **Durability**

Overall, aluminum frames are stronger than vinyl, and both aluminum and vinyl window frames are highly resistant to cracking, scratching, or superficial damage. However, for measures included in assessments of overall durability, the comparisons strongly favor vinyl framing.

- Vinyl windows offer greater durability against chipping, denting, or fading. Because vinyl frames are made of the same material throughout the thickness of the frame, they do not show scratches or chips.
- Aluminum frames are much more vulnerable to dents, corrosion, and chipping, and
  their enamel finishes are highly susceptible to fading. Additionally, the steel
  fasteners on aluminum windows can corrode and become pitted. If the finish on an
  aluminum frame becomes damaged, the raw aluminum underneath becomes
  exposed.

Still, in homes with unusually large windows, aluminum framing is normally used. The greater structural strength and impact resistance of metal makes aluminum ideal for supporting extremely large glass panels.

High-impact-resistant vinyl window frames are available at a price around 20% to 30% higher than comparably impact-resistant aluminum alternatives.

#### **Appearance**

Vinyl and aluminum window framing materials are both available in both single- and <u>double-hung window</u> designs, and in single-, double-, and triple-pane energy-efficient windows. Both also come in virtually any kind of finish and in any color, you may want. But, available specifications can vary between manufacturers.

Vinyl window frames can be fashioned into any style, from the most traditional
looks otherwise only available in wood framing, to the sleekest of modern designs.
Vinyl window frames are generally thicker than aluminum alternatives and can
support textured smooth, or even very convincing wood-look textured finishes.
Vinyl is popular with homeowners who want windows with a wood-look but want
the greater longevity and durability of modern framing material.

• To achieve an appearance somewhat resembling wood using aluminum window framing would mean applying a coating, basically painting on a wood finish, which does not look very realistic.

The comparatively thin aluminum frames are usually finished with powder-coated enamel, either smooth or textured, to produce a sleek appearance that fits well into more modern architectural designs.

#### Cost

Estimates vary between industry experts, however, generally speaking, vinyl replacement windows cost around 30% less than comparable aluminum models.

- Six replacement windows with vinyl frames cost an average of around \$3,150
- Six replacement windows with <u>aluminum frames</u> cost an average of around \$4,660.

Whichever of the two framing material options you select — aluminum or vinyl — installing <u>new replacement windows</u> in your home helps protect your real estate investment and maximize your property value.

#### **Maintenance**

Many frame finishes, including paints and other coatings, do not bond well to either aluminum or vinyl window framing material and are likely to be susceptible to cracking, flaking, and peeling.

- <u>Maintenance for vinyl window frames</u> is minimal, far less than any other window frame type. Because the vinyl is one color throughout the thickness of the frame, there is rarely a need to paint it. (Painting vinyl frames may void the warranty, so check with the manufacturer prior to painting.)
- Aluminum window frames are more susceptible to accumulating condensation,
  which promotes mold and rust. Aluminum windows require routine cleaning with a
  cleaning product made especially for use on aluminum. The frames must then be
  rinsed and dried. Aluminum window frames also need routine lubrication of moving
  parts, in order to prevent excessive wearing of the mechanisms. Enamel paint can be
  used to cover chips or scratches on aluminum frames, but precisely matching the
  original finish may be difficult.

### **Advanced Window Products, Salt Lake City Utah**

We are Utah's leading <u>manufacturer of energy efficient windows</u> and glass doors. All our high-quality windows and doors are built from the highest grade of materials available. We sell factory-direct to our customers and perform all our own <u>window installations</u>. That means there is no retail markup and no typical warranty issues. All our installation specialists are NFRC, AAMA, NFRC, Energy Star, and lead-safe certified.

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