



WHY ALUMINUM?

Choosing the type of window & glass door system you want to use for your project is not as easy a task as it used to be. Just a few short years ago it was as simple as choosing between wood or metal framed windows and glass doors. At that time life-cycle costs, energy ratings or “green” considerations were not even a factor. We now live in different times.

To start with, all windows and glass doors use the same sources for glass in different combinations depending on your needs and the project specifications. The type of glass you select for your project is the #1 energy performance based decision you will need to make. Since the glass choices are the same for all brands of windows and glass doors the only other consideration left is what type of frames to use.

It seems that all manufacturers have jumped on the energy & green train as a sales tool for promoting their respective products. None, however, can match our total life-cycle savings. So, here are a few simple points to keep in mind when making your choices.

Vinyl: Plastic window frames are relatively new to our planet and they were developed as a cheap alternative to aluminum, wood and steel and they have taken a fairly large share of the tract housing and retrofit replacement market because of their low price compared to the other higher quality options. All plastic, vinyl and PVC based products are petroleum based and are toxic to our health, environment and landfills and, thus, our water tables. There are now quite a few green rating groups offering credits for PVC free building projects. We are now being told not to drink plastic bottled water or use plastic shopping bags. Another consideration is that plastic windows also create extremely toxic smoke during fires and because of this some fire departments have moved to put code restricting bans on vinyl window use in their jurisdictions.

Plastic is cheaper than your other options and it does have fairly good thermal barrier properties but keep in mind that the framing is a very small percentage of your window and door openings. Once again, glass is the most important choice to be made for your energy performance needs, not the material used for frames.

Wood: The last we checked, approximately only 8% of the total wood window & door industry product lines are made with farmed trees and all the rest of their products are from mature forests both in soft and exotic hardwoods. Rainforests and old growth forests are still being cut down to make wood windows and doors. If selected and harvesting is performed correctly, the forests can return after many years of re-growth but that is not the common method the lumber industry uses to commercially harvest trees to be used in manufacturing or construction. Clear cutting is still the lumber industry’s most employed harvesting method.

Wood windows and doors need to be painted and/or sealed to protect them from the environment. That adds to their total lifecycle cost and even with all of the maintenance effort, they can still swell, warp and crack with age. Because of the nature of wood, it will require regularly scheduled high maintenance costs and frequent resealing with paint or clear coats to help stave off rapid aging over the entire duration of its useful lifetime.

Wood products simply don’t perform as well over their environmental lifespan as aluminum products do. In fact many wood sash companies offer aluminum exterior cladding as an upgrade option against the ravages of seasonal weather because they know it is unbeatable for longevity and freedom from painting with just minimum cleaning maintenance.

Aluminum: If you start with premium quality, solid aluminum frames and a high quality finish you will be eliminating years of cost and time consuming maintenance.

Aluminum is an abundant resource that makes up 8% of the earth's crust. It is simple to mine, smelt and use and it is one of the most recycled materials on the face of the planet. It is generally accepted that recycled aluminum will have a life span of centuries in its different product uses. Aluminum framed windows and doors don't make it into landfills. Aluminum's high salvage/recycle redemption value makes it something that is sought after and easily salvaged.

Nothing beats aluminum for lasting strength through extremes of heat and cold. Ounce for ounce, aluminum is the strongest building material you can buy for a window or door frame today. It is also extremely stable through the wide ranging temperatures of the extreme climates of both the most northern and southern regions of our world. While other window frames stretch and shrink, bend and warp through every year of freezing cold and baking hot summers – aluminum consistently holds its shape.

In your home or business, the rigidity of aluminum means your windows and doors are more resistant to deformation caused by climatic change and building movements that occur over time. It's researched and reported that aluminum is 43 times stronger than wood and 340% stronger than vinyl. Aluminum windows and doors resist expansion and contraction 2.6 times better than vinyl frames and they resist swelling and shrinking far better than all wood frames. Because of this, aluminum frames will keep their fit in the window and door openings, and so will the weather seals that keep your home and business comfortable and energy-efficient. In the long run your windows will last longer and require very little, if any maintenance, so the return on your investment will always be considerably better with aluminum than the alternatives.

Remember, we don't cut down trees or use petroleum products to manufacture the best possible choice for your window & door needs.

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