



Aluminum in buildings: Frequently asked questions

Q. Is aluminum used throughout the building and construction industry?

A. You don't have to look far to see the vast uses of extruded aluminum profiles in the construction industry. Aluminum covers a wide range of products, for example, railings, bridges, light poles, stadium seating, and of course, windows, doors and curtainwall structures. The versatility of aluminum for configurations, security and durability, offers advantages over other materials in the building and construction industry.

Q. Does aluminum have good structural longevity?

A. Aluminum is one of the most structural and stable materials available for the construction industry. Aluminum has consistent and predictable properties which do not change with time – aluminum is not affected by temperatures or climate changes, it does not absorb moisture, it does not shrink or swell, split or rust. It does not change shape and maintains its physical properties for the life of the product.

Q. Is designing with aluminum difficult?

A. Not at all. Aluminum is very malleable. The aluminum billet is heated and extruded through a pre-designed die into almost any shape the architect or designer desires and can be adapted to any look or finished configuration required for the building. Aluminum is well-suited for heritage building preservation where historical details need to be retained.

Aluminum will maintain its superior strength over that of other materials regardless of the window shape required. The superior properties of this metal allow for narrow sightlines which optimize the vision area for increased aesthetics.

Q. Can I design with aluminum to meet any appearance requirements?

A. The architect, designer and building owner are offered an array of aluminum finishes in a wide variety of colors, including custom color and finish options. Aluminum will accept any modern durable finish including—powder coat, polyvinylidene fluoride (PVDF), epoxy and anodize. Any finish treatment for aluminum is tested for permanence through many testing bodies under the most extreme conditions to last for the life of the structure.

Q. Will I be able to meet today's energy codes with aluminum?

A. Most definitely! Although aluminum is a highly conductive material, the extruders of today utilize state-of-the-art technology to produce thermal barrier fenestration products. Differing methods to thermally break the aluminum make modern fenestration energy efficient. Thermally efficient frames can also accept all forms of glazing options from dual to triple glazing to further increase the thermal efficiency and condensation resistance of the final product to meet and exceed any current and future energy codes. With aluminum maintaining its shape and characteristics under all climates and stresses, it also allows the fenestration products to maintain tight tolerances to prevent air leakage over time.

Q. Is aluminum considered a green product?

A. For a material to be considered green, it must have a low impact on the environment and help to conserve our natural resources. Aluminum is truly a cradle to cradle product. Aluminum is proven as a sustainable material with the ability to be recycled indefinitely. Aluminum will maintain the original properties while using less than 5 percent of the energy initially used to smelt the metal from bauxite. The lightweight nature of aluminum allows it to be transported with less energy consumption. Its versatility allows it to be assembled on site.



Aluminum Extruders Council

AEC Industry Buyers' Guide
Aluminum Extrusion Showcase

Website: www.aec.org

Email: mail@aec.org

Extrusion Technology for Aluminum
Profiles Foundation (ET)

Website: www.etfoundation.org