

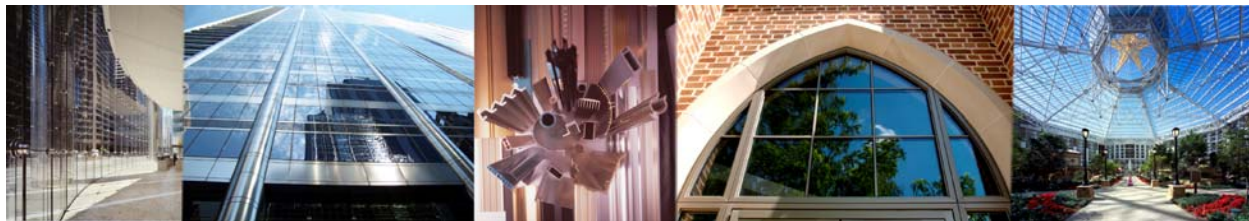


www. AEC.org

Extruded Aluminum: Today's Material of Choice for Greener Buildings

Aluminum's superior recyclability and inherently cost-effective characteristics make it the ideal sustainable material for 21st century building and construction projects. Combined with the extrusion process, extruded aluminum offers unparalleled production efficiencies that yield quantifiable results through design flexibility, product performance, cost savings, and eco-friendly features.

Extruded aluminum defines sustainability, durability throughout a long life cycle, structural strength, and recyclability, making it a truly versatile building material for the sustainable design of green buildings.



100% Recyclable

Aluminum is virtually 100% recyclable and may be re-used in building components without any degradation or loss in quality or physical characteristics. In a Delft University of Technology study, experts examined a cross-section of commercial buildings in six European countries and found the collection and recovery of aluminum during the demolition process to be between 90 and 98%. The study concluded that recycling aluminum from demolished or deconstructed buildings was economically viable, environmentally sound, and significantly contributed to resource sustainability for future generations.

Recycling is the key reason why aluminum has such an incredibly long life cycle, making it the most efficient and economical choice for commercial construction. The sustainable benefits of recycling are multiplied each time an aluminum building product is recycled.

Economical

Lower environmental impact goes hand-in-hand with lower operating and occupancy costs for energy and maintenance. While aluminum extrusions are associated with lower construction costs, shorter planning and building times, owners and developers see the investment in sustainable technology paying off in lower operating costs.

Structural Integrity and Longevity

Aluminum extrusions offer designers and manufacturers choices and combinations of useful characteristics unmatched by any other material:

- Aluminum's structural stability is consistently strong, even under extreme conditions and temperature changes, in terms of elastic modulus/stiffness.
- Aluminum's tensile strength and structural stability and rigidity mean that extruded aluminum building components are more resistant to deformation caused by climate changes and building movement over time. Aluminum's unique enduring properties guarantee long-term performance with minimal maintenance.
- Aluminum resists the forces of time. It's impervious to rust, humidity, temperature, warping, or becoming brittle, and that translates to longer service life. In terms of appearance, aluminum's corrosion resistance means that a building's façade will retain the finishes and visual appeal envisioned by the designer through decades of wear.

Energy and Thermal Efficiency

Energy efficient products are more important today than ever before. The combined properties of energy efficiency, structural integrity, light weight and low cost, is what sets aluminum apart from all other materials. Modern glazing units mounted with extruded aluminum framing now use advanced thermal barrier technologies engineered to exceed today's most stringent building standards.

LEED® (Leadership in Energy and Environmental Design) Certification

Aluminum extruded products are often used as building materials due to their characteristics to earn LEED® points related to the use of recycled content materials (Credits MR 4.1 and 4.2 – Recycled Content), and indigenous resources by being recovered and manufactured within the region where the projects are being built (Credits MR 5.1 and 5.2 Regional Materials).

Energy Bank

Vast reserves of recycled aluminum constitute an energy bank... aluminum is a material that can be used over and over again, retaining 95% of its original energy. Aluminum commands a tremendous relative energy cost advantage in its reusable form, compared to steel or plastic. The high aluminum collection and recycling rates confirm the potential of an energy bank, and its invaluable contribution to sustainable development in the built environment.

End of life

Aluminum maintains its value as a building material during all stages of its life cycle. No other building material can be reused and recycled to this extent. Recycling aluminum greatly reduces the energy and resulting emissions needed to produce aluminum from bauxite. At the end of its useful life, aluminum retains its value. In addition to new construction, more and more buildings are being deconstructed and retrofitted to improve their energy performance. Deconstruction of aluminum building products means less debris in our landfills, and maximizes reuse of all recycled aluminum materials.

Aluminum Is Green!

The mission of AEC's "Aluminum is Green" initiative is to raise awareness of the many sustainable aspects and benefits of extruded aluminum building products for commercial construction. For more information, visit us at www.aec.org.



The Aluminum Extruders Council Is Your Resource

The Aluminum Extruders Council (AEC) is an international association dedicated to helping engineers, architects, designers, and others to discover why aluminum extrusion is the preferred material process for superior, sustainable products. The inherent adaptability of aluminum extrusion opens itself to countless applications that span all market sectors: building and construction, transportation, and industrial products. Visit the AEC website at www.AEC.org for a wealth of information including technical details, extrusion basics, market applications, publications and much more.

AEC Buyers' Guide

The AEC *Buyers' Guide* is an invaluable reference and informational guide to support the work of product designers, architects, engineers, educators, and others. This comprehensive directory lists contact and capabilities information supplied by AEC members, along with editorial content and photos featuring sustainable, innovative uses for extruded aluminum. Visit www.AECguide.org to download your **FREE** copy!

Aluminum Extrusion Showcase

From building and construction to automotive to aerospace and beyond ... learn how aluminum extrusions are shaping our world by reading the *Aluminum Extrusion Showcase* e-magazines filled with facts, photos and project details highlighting the aluminum extrusion advantage.

ET Foundation

The ET Foundation is the non-profit educational and scientific organization of the aluminum extrusion industry. Learn more at www.etfoundation.org.

