

ALUMINIUM **a question** **of gray matter**

(and 100% recyclable, wich kind of turns it “green”)



Well informed professionals choose aluminium

8% of the Earth's crust is made of aluminium.

Did you know? Keep on reading.

Aluminum, with more than 4.5 billion years of age, is the most abundant metal and the 3rd most abundant element on Earth and it's 100% natural. 128 years ago, in 1885, the technology to process aluminium industrially was discovered and 75% of all aluminium produced since then is still being used. Aluminium is 100% recyclable and recycling it reduces in 95% the energy used for its production as well as it reduces the emission of greenhouse effect gases when compared to the production of primary aluminium.

According to some studies, the amount of aluminium cans recycled in one year is equivalent to removing 1.5 million cars from the streets during a year which brings huge advantages in economics, public healthcare and to planet earth. Used in all imaginable areas, from medicine to astronautics, aluminium revolutionized transports, construction, packaging, pharmaceuticals, computer manufacturing, telecommunications, and an infinite list of things.

The world and even civilization are what they are today a lot due to this superpower metal.

Besides being abundant and recyclable, aluminium is a low weight (low density) metal, versatile (moldable and formable), resistant when in alloys and a good conductor.

These properties allow it to be used in industry and construction. Industrially produced profiles can be produced from alloys with different chemical composition appropriated for final uses, together with forms and shapes easily obtained by hot extrusion, allow endless, resistant, low weight, strong and aesthetically pleasing applications. In construction thermal rupture systems (TRS) can be developed for frames with high acoustic and thermal performance.



Aesthetics

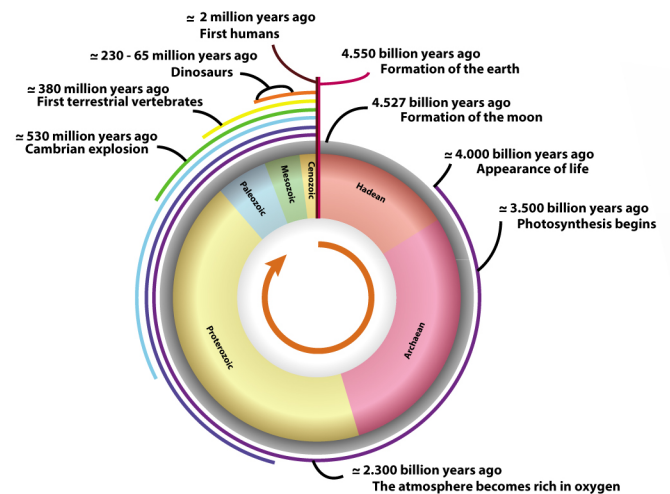
Aluminium provides a wide range of quality trims (anodized, coated, and coated with decorations wooden like imitation), certificated by International Certifying Bodies. (Qualanod for anodized products, Qualicoat for coated products and Qualideco for wood decoration).



Durable? A lot more than you think.

Durable?

The aluminium used in your house windows is billions of years old.



Aluminium is very easily moldable either melting into molds, either by tension (method used, for instance, to mold car panels) or by extrusion which consists, basically, in a high pressure passage of a heated aluminium alloy billet through a matrix (or mold), thus obtaining a profile with the desired shape.

This characteristic makes aluminium suitable for almost anything, from planes to computers, kitchen utensils to tools, food packages to fashion accessories, making it the material chosen by designers, planners, engineers, etc.

It is so easy to apply diverse trims to aluminium products that there are endless aesthetic solutions available, capable of satisfying the most exquisite taste.

It needs to be very resistant to survive in such an aggressive environment as space.



Projectiles that move at thousands of miles per hour, extreme temperatures, solar radiation and a lot more make space a terribly demanding place for materials used in space ships, probes, satellites, etc. If we think about the properties of aluminium, we can easily understand why it is used in this state of the art technology territory. Particularly its light weight and resistance. With 1/3 of steels weight and highly resistant, aluminium is an excellent option for scientists and engineers that develop these highly sophisticated equipments. For the same reasons aluminium is increasingly used in the automotive industry, in the manufacturing of parts and passive safety systems because, despite being resistant, it deforms, dissipating energy more efficiently than steel.

When diving with sharks, for instance, protection cages are made from aluminium as well as the protections for vehicles used for safaris.

Resistance, strength and low weight are the main arguments for choosing aluminium in manufacturing these equipments.



learn more in :
www.aluminio100porcento.com/en



Sustainable construction

The reduction of energy consumption in houses was the main reason for the technological progress of aluminium in architecture.

From thermal rupture systems to shading and lining systems, all of them evolved for a higher contribution in sustainable construction, being aluminium the number one choice.

The evolution in aluminium systems for architecture had also positive repercussions in the house acoustic performance, resulting from a high level of sound insulation and increase in comfort.

It is ductile, therefore, very useful.

RESISTANT – great durability of the profiles produced with aluminium alloys for multiple applications.

LOW WEIGHT – has innumerable advantages, namely in transports, making them lighter, therefore, less energy consuming.

VERSATILE – moldable, formable, it is easy to obtain diverse shapes from aluminium alloys, allowing several design solutions.

GOOD CONDUCTOR.



Silence is aluminium.

The use of thermal rupture or double glazed frames, harnessing the existing, allows us to obtain excellent values of thermal and acoustic insulation currently certificated by the CE Label/Marking tests of the frames.

Tax advantages (IMI and IRS).

(see the table presented in the back cover)



Qualities of aluminium for the sustainable building renovation	
ENERGY CONSERVATION / THERMAL INSULATION	
ACOUSTIC	Excellent results in building certifications
NON FUEL	In case of fire, it doesn't burn or release toxic substances to the interior or exterior environment.
HEALTHY	No odor or dangerous compounds for health and easy to clean.
RESISTENCE	The framing systems and interior solutions are durable, and its resistance can be indefinitely extended with appropriate surface treatment.
AESTHETICS	Wide range of architectonic solutions and aesthetically pleasing. Possible to customize color and aspect.
VERSATILITY	It is easy to change it in the future, more immediately with some systems, but always possible.
ECONOMIC EFFICIENCY	Excellent price/quality ratio.
SUSTAINABILITY	Material abundant in nature, recyclable and produced with increasingly economic and ecoefficient processes.
RESISTENCY / DURABILITY	Surface treatments provide an undefined maintenance of the frames a spect or profiles used in construction, as long as applied suitable and certified solutions for each case.

With knowledge comes the power and with power comes the great responsibility to change, shape and preserve the world.



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